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UNDP | SUSTAINABLE DEVELOPMENT GOALS

Feasibility Study on Accelerating Community Development, The Gambia

Version FINAL

Deloitte & Touche Ghana

1. Acknowledgements

Producing this Feasibility Report was truly a collaborative effort with tremendous contributions from the formal and informal sector and institutions. What is captured in this report does not fully encapsulate all the diverse ideas and collaborations that went into its making. These acknowledgments will endeavour to recognise all that used their time and energy to produce the Gambia's Feasibility Report – with apologies and recognition to those that we have failed to be included. In total, over 100 stakeholders were consulted, every one of them deserves thanks.

Our first word of thanks goes to H.E The President of The Gambia, Adama Barrow, for his leadership, guidance, and unwavering commitment to the pursuit of the PUDC program and this feasibility process.

Secondly, to all other Ministers and government officials that played an integral role in helping us gain key information to complete numerous sections of this report, especially with regards to the costing information, your inputs are greatly appreciated. Contributions from local council officials that openly helped on our field visits around selected communities should also have special recognition.

Thanks go to the Regional Governors from the Western, Upper River, Lower River, North Bank and Central River Region who gave up time to attend the validation workshop.

Appreciation is also extended to the UNDP for providing key advisory and strategic direction on the process. Thanks is also extended to Mr. Mamour Alieu Jagne (UNDP assigned local consultant team leader) who helped us considerably with connecting us to key stakeholders, amongst many other things.

A number of private companies also demonstrated their commitment to the study by providing specialised sectoral insight.

Much appreciation is owed to our Local Consultants at DTT Associates who provided us with in-country knowledge and helped us find our way around.

2. Forewords

2.1 Secretary General, Office of the President

The beginning of the "new Gambia" in 2016 reflects the determination of our citizens, and efforts of the Government to move on the path of development. This Government has undertaken many measures to stabilize the economy, restore public confidence and strengthen democratic institutions. Today, our country presents strong prospects for sustained growth, as is evident from an increase in the growth rate, drop in inflation and increase in gross official reserves over the last few years. This remarkable progress has been achieved through the government's efforts to stabilize the economy with support from international development partners, private sector participation and Gambian diaspora.

Our economy, being heavily dependent on tourism and traditional agriculture, is highly vulnerable to external shocks. Whether it is recurring seasons of low rainfall, the Ebola crisis or the current COVID-19 pandemic, our country, especially its rural communities continues to face serious challenges in the tourism sector, agricultural production, trade and in movement of goods and people.

One of the major initiatives undertaken was to draw up the National Development Plan ("NDP") 2018-21 with the aim to deliver good governance and accountability, social cohesion and national reconciliation. The NDP aims to revitalize and transform our economy for the wellbeing of all Gambians through its eight strategic priorities and their critical enablers that lay the foundations for a modern democratic state, and address the most pressing economic and social ills. The objectives of the NDP are in line with the country's global and regional commitments including the Sustainable Development Goals (SDGs) and African Union Agenda 2063. Notwithstanding Government's efforts to improve the lives and livelihoods of all living in the country, majority of our rural populations still lack basic infrastructure and services such as electricity, safe drinking water, access roads and labour-saving equipment for post-harvest processing in comparison to the urban areas.Therefore, there is the urgent need to accelerate the development of our rural communities by looking for successful models elsewhere in the region. One such example is the Emergency Community Development Project (PUDC - Programme D'urgence De Dévelopement Communautaire) successfully implemented in neighbouring Senegal. In June and July of last year, the Government of The Gambia sent two teams (Technical Expert committee and a High Level Ministerial Delegation) on a visit to Senegal to understand the implementation of the development model and its applicability in our local context.

The Government of The Gambia, with support from the UNDP, has launched the feasibility study of PUDC in The Gambia to provide holistic development across different sectors of the country and draw learnings from successful implementations in other countries like Senegal and Togo.

Whilst this was going on, the Government initiated a process to replicate the PUDC development model in The Gambia. This process culminated in the conceptualization and development of the Programme for Accelerated Community Development (PACD), a model that a uses multi-sectoral approach to address the persistent and serious disparities between urban and rural areas in terms of access to basic services including water, energy and road infrastructure on similar lines of PUDC. The Government has allocated D250,000,000 in the 2020 budget for the implementation of PACD during the 2020 financial year focusing on five priority areas of improving access to portable water, rural electrification, rural access roads, food security (provision of labour-saving equipment and exotic livestock breeds for milk production) and sustainability of assets and services. The feasibility study report not only revealed the need for such accelerated programmes for our country but also brought out the priority areas which are critical for development. I am pleased to know that these identified sectors were aligned to the NDP priorities emphasizing an integrated and all-rounded approach to development. The study also highlighted an implementation approach keeping the community at the centre with the support from key line departments. We hope that the dialogue initiated during the preparation of this feasibility analysis will pave the way for a strengthened partnership between The Gambia and the UNDP in meeting the goals of the NDP and expediting the infrastructure development in the Gambia.

Despite the challenges that the country faces during these unprecedented times under COVID-19, I am very optimistic about our younger generation, for whom we aim to improve the quality of life and create opportunities across sectors. Together, we can realize the country's vision of tomorrow where everyone has the opportunity to pursue their dreams so that no one is left behind.

Finally, I would like to thank UNDP and Deloitte Team (Ghana and India) which has completed the feasibility study, and came out with valuable recommendations and implementation approach. I am highly hopeful that our country can strive for inclusive and sustainable growth especially for rural citizens and become a model for other developing nations to follow.

Mr. Noah Touray
Secretary General & Head of the Civil Service
Office of the President
Banjul

2.2 UNDP Resident Representative

UNDP has been supporting vulnerable people in 170 countries and territories around the world to come out of poverty and lead a decent life. We continue to push the envelope on all corridors of development to accelerate the Sustainable Development Goals (SDGs) set forth by United Nations for the achievement of 2030 agenda. UNDP has been constantly striving to promote good governance, eradicate poverty, violence, hunger and translate economic growth into long-lasting and inclusive human development.

Having understood that weak infrastructure is a critical barrier to accelerating growth, enhancing regional integration and reducing poverty, we tend think on alternate paths for sustainable development. One such success model namely, PUDC - Programme d'Urgence de Dévelopement Communautaire) has been tested in Senegal and Togo with the active participation from the respective Governments. The PUDC model provides a holistic and multi-sectoral approach to address poverty and inequality at the community level and assist the government to respond to social demands.

With the interest and commitment shown by the Governments of The Gambia, Liberia and Sierra Leone, UNDP facilitated experience exchange for High-Level Delegations from these countries to Senegal to understand the model. Having received positive responses from the respective Governments, UNDP launched the feasibility study in these three countries.

I am encouraged by the commitment given by the Government of The Gambia in adopting the principles of PUDC and launching a Programme for Accelerated Community Development (PACD). Earlier, the government had formulated National Development Plan 2016-21 in complete alignment to the SDGs. The study has been actively discussed with all relevant stakeholders including community interactions across the five regions.

The feasibility study clearly outlines needs for the PUDC model for accelerating the development in rural Gambia and hence bridging gaps in development and reducing inequalities. I understand that the recommendations target 25 districts having a poverty rate of more than 60%, thereby impacting more than 850,000 individuals. Focus is given for the priority sectors including roads, electricity, agriculture, and water.

Emphasis has been made on the sustainability of the program by focusing on inclusive participation and involvement through community ownership. Investments needed for the implementation would come partly from the Government's commitments and remaining to be mobilized from Development partners active in the region. Private sector partnership will be emphasized over the selected priority sectors.

We are encouraged and optimistic with the results of this study and the overall overwhelming support received from the Government of The Gambia, development partners and other stakeholders. We are steadfast in our resolve and commitment to work with the Government and see the successful implementation of PACD in The Gambia.

Aissata De

UNDP Resident Representative

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Notice to the reader

Deloitte & Touche, Ghana (Deloitte), has been engaged by United Nations Development Programme, Gambia (UNDP) to conduct a Feasibility study for implementation of PUDC in 3 countries namely, The Gambia, Sierra Leone and Liberia. As part of the agreed deliverables, Deloitte has prepared this draft feasibility study report ("report").

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Glossary of Terms

Terms	Details
ACE	Africa Coast to Europe
AfDB	African Development Bank
ADF	African Development Fund
ANRP	Agriculture and Natural Resources Policy
CBG	Central Bank of The Gambia
CLTS	Community Led Total Sanitation
CMDP	Community Managed Dairy Production
CMVG	Community Managed Vegetable Garden
COVID-19	Coronavirus Disease
CSO	Civil Society Organization
CRR	Central River Region
CSR	Corporate Social Responsibility
DFID	Department for International Development
DOSE	Department of State for Education
DTL	Deloitte & Touche
ECD	Early Childhood Development
EDF	European Development Fund
EU	European Union
FAO	Food and Agriculture Organization
FDI	Foreign Direct Investments
FY	Fiscal Year
GBoS	Gambia Bureau of Statistics
GBA	Greater Banjul Area
GDP	Gross Domestic Product
GERMP	Gambia Electricity Restoration and Modernization Project
GHIF	Global Health Investment Fund
GII	Gender Inequality Index
GIS	Geographical Information System
GIZ	German International Development Cooperation
GMD	The Gambian Dalasi
GNI	Gross National Income
GoTG	Government of The Gambia
HCI	Human Capital Index
HDI	Human Development Index
HFO	Heavy Fuel Oil
HLPS	Household Levy Poverty Survey
HNP	Health Nutrition and Population
IDA	International Development Association
IDB	Islamic Development Fund

Terms	Details
IDO	International Development Organization
IDFI	International Development Financial Institutions
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IHS	Integrated Household Survey
IPP	Independent Power Producers
JICA	Japanese International Cooperation Agency
KfW	Kreditanstalt für Wiederaufbau (Credit Institute for Reconstruction)
kWh	Kilowatt Hour
LADEP	Lowland Agricultural Development Project
LFO	Light Fuel Oil
LGA	Local Government Administrations
LRR	Lower River Region
M&E	Monitoring and Evaluation
MoBSE	Ministry of Basic and Secondary Education
MoFEA	Ministry of Finance & Economic Affairs
MoH	Ministry of Health
MoHERST	Ministry of Higher Education, Research, Science and Technology
MICS	Multiple Index Cluster Survey
MOU	Memorandum Of Understanding
MTEF	Medium Term Expenditure Framework
MW	Megawatts
NAPHS	National Action Plan for Health Security
MFI	Microfinance institution
MN	Million
NAWEC	National Water and Electricity Company
NBR	North Bank Region
NGOs	Non-Governmental Organisations
NDP	National Development Plan
NRA	National Revenue Authority
NTP	National Transport Policy
OMVG	Organisation de Mise en Valeur du Fleuve Gambie (Gambia River Basin Development Organization)
PACD	Project for Accelerated Community Development
PAGE	Programme for Accelerated Growth and Employment
PAPD	Pro-Poor Agenda for Prosperity and Development
PPA	Power Purchase Agreement
PPP	Purchasing Power Parity
PPP	Public Private Partnership
PSC	Project Steering Committee
PUDC	Emergency Community Development Project

Terms	Details
QCBS	Quality Cost Based Selection
RoI	Return of Investment
RREA	Rural Renewable Energy Agency
SDG	Sustainable Development Goals
SIDA	Swedish International Development Cooperation Agency
SME	Subject Matter Expert
SOP	Standard Operating Procedures
SPDWS	Solar Powered Drinking Water System
SPFS	Special Programme for Food Security
STEM	Science Technology Engineering and Mathematics
ToR	Terms of Reference
UN	United Nations
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
UNV	International UN Volunteers
UPE	Universal Primary Education
URR	Upper River Region
USAID	United States Agency for International Development
USD	United States Dollar
VGC	Vegetable Garden Committee
VHW	Village Health Workers
VISACAs	Village Savings and Credit Associations
VfM	Value for Money
WASH	National Water, Sanitation and Hygiene Commission
WB	World Bank
WCR	West Coast Region
WMC	Water Management Committee
WTO	World Trade Organisation

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4. Executive Summary

The Emergency Community Development Project (PUDC - Programme D'urgence De Dévelopement Communautaire) is a Regional Bureau for Africa Flagship project, which aims to reduce poverty and growing inequalities between regions by providing rural communities with basic socioeconomic infrastructure. The PUDC model provides a vehicle for large-scale, multi-sectoral approach to addressing poverty and inequality at community level, and can help the government to respond to social demands through partnership with a delivery agency that helps to ensure accelerated, multi-pronged, participatory, and accountable delivery of services, particularly to hard-to-reach populations.

The Gambia has already initiated Programme for Accelerated Community Development (PACD), which is founded on the principles of the PUDC. This report builds on the foundation of the PACD and presents a comprehensive view on the applicability, effectiveness, and proposed implementation of a PUDC model over a five year time period.

Senegal Model

The first implementation of the PUDC was in Senegal. It was launched as an 'emergency project' defining the rural population's socio-economic situation as "in a crisis or after a crisis situation" after independence 60 years ago. This enabled UNDP as the implementing partner to leverage its fast track procurement process with proven transparency.

UNDP was approached by the office of the President to assist in the apolitical implementation of the programme to transform the needs of the disadvantaged rural communities into a programme (the PUDC). The original funding requirement was $800m overall. The Government committed $200m for phase 1 which ended in 2017, with Phase 2 due to start with $600m of funding from IDOs. At the beginning of Phase 1, the public were critical about the Government giving $200M to UNDP for the implementation. However, after three years of implementation the results obtained by the PUDC in Senegal constitute a significant contribution to the Senegalese National development plan and sectoral targets. The program, by all accounts has successfully become a means of accelerating access to basic social services and reducing inequalities in rural areas.

The Gambia

The Gambia is one of the poorest countries in West Africa. According to the most recent poverty survey, the share of the urban population in poverty fell from 33.4 percent to 31.6 percent, but the share in rural areas rose from 64.2 percent to 69.5 percent. The depth and severity of poverty increased in rural areas. From 2010 to 2016, extreme poverty rose by 17 percent from 350,000 to 400,000 households. With respect to the sectors: Almost 88% of rural villages in The Gambia are not electrified as of 2019; The National Transport Policy (2018) highlighted that due to the lack of rural roads there were numerous isolated Regions within the country and a huge gap in transport infrastructure spending; the majority of villages do not have access to potable drinking water and; irrigation infrastructure and investment is very limited, leaving the country's agriculture almost entirely dependent on rainfall, while inefficient local dairy cows are being used by the majority of the rural population.

There is a clear need for urgent and swift intervention in the rural communities.

PUDC in The Gambia

The uniqueness of the PUDC is its integrated and systemic approach to improving socio-economic development by the improvement of rural infrastructure. The approach combines development interventions into a package and encourages sectoral and holistic responses to the problem. The PUDC is also allied with the eight strategic priorities. Overall mapping of the Gambia SDGs to the PUDC areas of implementation shows direct links with 15 of the 17 SDGs.

The selected areas for the initial implementation of the PUDC are feeder roads, electrification, agriculture and livestock and water. The National Development plan also places similar emphasis on an integrated and all-rounded approach to development to these sectors and therefore the PUDC aligns well in delivering the NDP objectives. These sectors have been suggested because they form the basis for any further socio-economic development in the community; this has been validated with poverty data and community visits.

Proposed Geographies

The Central River Region (Both Kuntaur and Janjanbureh) have the highest incidence of poverty in the country in terms of both absolute and extreme poverty (71% of 2.2 million people are poor). Similarly, the regions of Lower River Region, North Bank Region and Upper River Region have also witnessed comparatively high poverty levels hovering around 60%.

However, whilst this study costs the investment into sectors on the basis of the 25 poorest districts with poverty rates over 60% it is acknowledged that the actual selection of communities needs to occur at a more granular level to that of district. If District is used, it could ignore a very poor and isolated village in a relatively better off district. Therefore the selection of actual communities is left for the PUDC programme team to decide after the new Household Level Poverty survey funded by the World Bank.

High Level Costs

The current proposed 5 year cost of the PUDC is **$415.09m**, this is broken down by sector and region below:

Sector totals	Amount
Roads	$98.64m
Electricity	$44.96m
Agriculture	$10.92m
Equipment	$159.52m
Water	$29.46m
Sub total	**$343.49m**
Corporation Capacity Building	$20.07m
Further Capacity Building	$6.87m
M&E	$10.30m
Proj. Mgmt.	$34.35m
Total 5 year PUDC Cost	**$415.09m**

Region Total (Sectors only)	
WCR	$56.65m
NBR	$43.22m
LRR	$23.77m
CRR	$134.07m
URR	$85.77m
Total	**$343.49m**

Benefits

At a minimum the estimated number of households impacted across 5 years of the PUDC programme will be **40,110** equating to **c.280,000 individuals**. At the higher end the estimated number of households to be affected will be **124,220** equating to **c.869,000 individuals**.

Sector		Metric
Roads	*Feeder Road kilometers*	786
Electricity	*Villages Electrified*	573
Water	*Villages connected to water supply*	273
Agriculture & Livestock	*Villages with Gardens*	125
	Villages with Livestock	125
Equipment	Villages with equipment	375

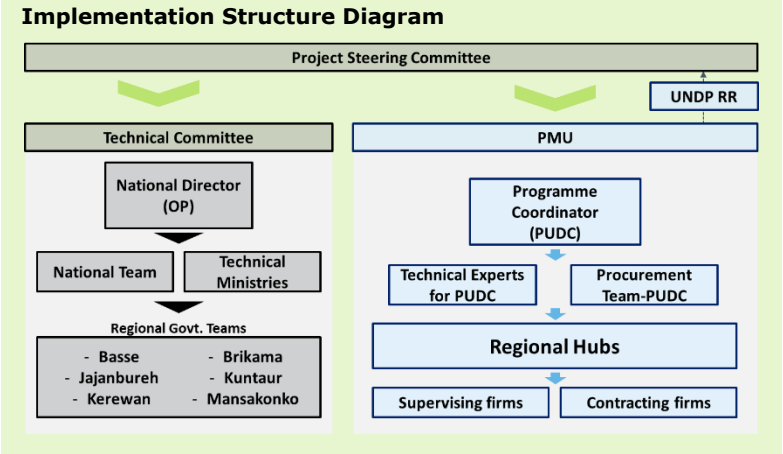
The Government will also see returns, directly in the form of tariffs where c.20,000 households will be connected to the national grid or indirectly through the increase in GDP. For example the WHO estimates that for every US$1 invested in water and sanitation, there is an economic return of US$4. Indeed, studies show that increased transportation infrastructure (e.g. roads) accounts for more than half of Africa's recent economic growth.

It is also well understood that a boost in targeted assistance for agriculture leads to a permanent boost in agricultural productivity. This agricultural productivity has a knock on effect, boosting savings from the increase in disposable income, leading to increases in GDP growth.

Sector	Investment	Estimated Economic Return
Roads	$159.52m	$957.12m
Water	$29.46m	$117.83m
Electricity	$98.64m	+4-6% economic growth over 5 years

Implementation Mechanism

The project implementation will be monitored by the Technical Committee, but overseen by the Steering Committee, which is co-chaired by the Office of the President and UNDP Resident Representative. The Technical committee should prepare quarterly progress reports on the physical implementation of the project. The project's impact, effects and outcomes will be monitored through the results framework indicators.



Technical Ministries (across each of the sectors) involved in the PUCD and the Steering Committee will regularly monitor the project's achievements in the field. The national team along with the technical ministries would link into the regional governance team, especially the sectoral elements of the LGA. They should also interact with the District, Ward and Village Development Committees.

The chosen implementing partner (presently assumed to be UNDP) would operate the project management, procurement, operations and financing of the PUDC and where the government might be constrained or lack some technical capacities the implementing partner should be able outsource the engineering work to an expert firm.

Sustainability

It is suggested that these elements are integrated in the project design for ensuring long-term sustainability:

- Capacity building of the community members
- Community participation and involvement
- Community ownership through innovative institutions
- Robust implementation architecture
- Active involvement of staff
- Responsiveness or adaptability
- Availability of resources / funding
- Availability of data / information
- Private sector partnership
- Asset transfer and maintenance

Recommendations

- Innovative and strengthened community institutions
- Ensuring community ownership through wide-spread sensitization
- Continuous Capacity building of all stakeholders
- Effective Project implementation
- GIS based decision support solutions
- Continued Political buy-in and Government funding
- Robust policy guidelines / SOP
- Involvement of private sector

5. Engagement scope

5.1 Objectives of the study

The overall objective for this feasibility study (separate to the PUDC wide objectives outlined in Section 6) is to:

1. Establish the rationale and relevance of a PUDC type model in The Gambian context, including its alignment with the government's current national development plan and long-term vision as well as areas (cities and villages) of interventions.

In meeting this objective, the study will attempt to:

a. Examine current institutional settings, propose optimal institutional oversight with defined roles and responsibilities and capacity needs of key national and sub-national stakeholders that will ensure sustainability of the PUDC interventions.

b. Develop a cost-benefit analysis highlighting the likely benefits and outcomes for the countries and the communities, specifically the economic and social returns from the PUDC.

c. Identify potential partners and implementation modalities including targeting and exit strategy.

d. Consult key stakeholders, especially at the community level, including beneficiaries, local and central government officials, and community groups to gather the necessary information and data that will uphold the relevance of PUDC interventions.

e. Develop a detailed costing of the PUDC interventions disaggregated at regional and local levels including detailed budgeting for all interventions such as rural roads, off and on grid energy solutions, water provisions, agricultural equipment where needed, markets, and educational and health facilities. The costing should include all direct and indirect costs for servicing and sustaining the infrastructure including strengthening local capacity for operations and maintenance.

5.2 Scope of the Feasibility Study

With the objectives as outlined above, the activities in scope were defined and conducted. The completed activities are as follows:

- Conducted a desk review of critical documents (project documents, periodical reports, etc.) and visited the ongoing PUDC project in Senegal to inquire about/analyse the PUDC's concept.
- Conducted in-country mission and interviews with key stakeholders.
- Designed and conducted a financial feasibility study for the PUDC model.
- Developed a sustainability plan for new and existing installations, taking into account environmental and gender awareness.
- Developed a disposal plan with clear guidelines for decommissioning, disposal, and/or repurposing of key system components.
- Assessed current institutional arrangements, and identified options to accelerate scale-up of PUDC and clear exit strategy with roles and responsibilities of key stakeholders.
- Identified potential local and international funders targeting community development.
- Provided technical recommendations to the key governmental institutions in each country and to UNDP on funding sources for the PUDC including how the Private sector could get involved.
- Facilitated national workshop for the launch and dissemination of the findings from the feasibility study.
- Drew on best practices for rural infrastructure development in the region and globally.

5.3 Methodology for the PUDC Feasibility Study

The objectives the PUDC feasibility study require more than mere compilation of theoretical concepts. It requires the design of a better framework for the provision, enhancement, financing and implementation of physical rural infrastructure projects, in a sustainable manner, which would help to better the lives of rural population in the three countries designated.

Henceforth, as an independent entity, Deloitte has suggested specific approaches to be used. The suggestion is based on a review of the countries' development frameworks, their overall rural infrastructure gaps and the understanding of the current poverty indices in the rural areas. This method will provide the

necessary information needed for a robust, time sensitive and result oriented framework for implementation of the PUDC project.

5.4 Overall Approach

Since the feasibility is intended for three countries, it is important to establish a general methodology for the study. This has allowed Deloitte to streamline the activities to be considered as well as to deploy well-developed standard parameters for the collection and analyses within the study. In the general approach, peculiarities will be earmarked on the broader level and a deeper dive in the detail cause and effects analysis. Moreover, the study has considered unique scenarios in each country, which help to bring to bear the necessary recommendations. Notwithstanding each country's individual national development agenda, the general approach will allow an overall examination of the policies and plans of each country and it's potential for rural community empowerments in the immediate, medium and long-term.

Therefore, the study on a general level has been undertaken in the context of the seven major activities below:

a. Extensive review of National Development agenda, plans and other necessary policies, development documents from the government and map the national and international stakeholders. The review will be keen on the prospects of rural livelihood enhancement as outlined in the national plans.
b. Community engagements and field surveys for the identification of potential rural economic growth stimulators. This entails a nationwide or prioritized communities' assessment of economic activities that are currently being undertaken by rural dwellers.
c. In-depth stakeholder engagements, at various levels, to strategically align the objectives of the PUDC with development efforts that are currently driven by international development organisations (IDO).
d. Identification of probable project areas, technical surveys, and costing for the provision of rural infrastructures. This are based on the field surveys and the detail understanding developed from the above activities. Series of quantitative questions such as: how much is needed to bridge the current gap in rural infrastructure? How much can be contributed for immediate intervention? Etc. will be developed from the exercise as an output. Preparation of Cost benefit analyses for the projects are planned.
e. Identification of institutional settings for project implementation including roles and responsibilities (and possibly job descriptions) and identification of implementation modalities
f. Preparation of Sustainability Plan including environmental and gender aspects, and assessment of capacity needs for sustainability. Including an identification of potential partners and funders for the projects planned under PUDC.

A collated report from the activities above will be used to develop the final feasibility study report and a series of inter-mediate reports, and slide decks for the stakeholder workshops.

5.5 Limitations to study

Although this feasibility study will be a useful tool for informing and helping stakeholders form opinions and have buy-in, it has its limitations. This feasibility study is not an academic or research paper but a pragmatic information and analysis document. This study should permit The Government of the Gambia to make informed decisions about the strategic issues of the PUDC implementation.

This feasibility study is not intended to identify new ideas or concepts but ascertain the likely costs and impact of the identified interventions at the beginning of the study. Therefore, this document is not suggesting any new interventions, but builds on those identified from the existing PUDC programmes. As with any study, assumptions have been used as the basis for many areas and the closer these assumptions are to the real world outcome, the more accurate the findings of this study will be.

This feasibility study is not designed to be the single document which will determine if a PUDC type project will be initiated, since that depends on the potential funding partners and institutions, who will invest in and become responsible for the project.

However, the information, data, and facts offered in this study, if the assumptions are realistic, provide the basis for decisions. Potential partners must decide if the benefits justify the risks involved in becoming engaged in the project and this study's findings will assist them in that assessment.

We tried to carry out the feasibility study of PUDC in The Gambia as stated below.

- Field visits were limited to one community per region and thus totalling five communities covering all five regions of the country., West Coast Region, North Bank Region, Central River Region, Lower River Region and Upper River Region. The assumption is that the rest of the intended project area have similar contexts and issues.
- The regions for the PUDC have been prioritized on the basis of available poverty indicators with the assumption that the poverty indicators have been based on factual and accurate data.
- Costing has been derived on the basis of the available data and information for each of the priority sectors i.e. Roads, electricity, water and agriculture. The assumption is that the data and information provided are accurate. Based on this assumption and costing, we tried to extrapolate the costing for the priority sectors for the selected geographies.

6. About PUDC

6.1 Introduction to PUDC

The Emergency Community Development Project (PUDC - Programme D'urgence De Dévelopement Communautaire) is a Regional Bureau for Africa Flagship project, which aims to reduce poverty and growing inequalities between regions by providing rural communities with basic socio-economic infrastructure, including, in some cases, health and education facilities. The PUDC model provides a special purpose vehicle for large-scale and multi-sectoral approach to addressing poverty and inequality at community level, and can help the government to respond to social demands through a partnership with UNDP that would ensure accelerated, multi-pronged, participatory, and accountable delivery of services particularly to hard-to-reach populations.

The first PUDC started in 2015 in Senegal, where UNDP delivered over USD 200 million in a three-year period fully funded by the Government. This was followed by Togo in 2016, which is currently underway. UNDP has engaged Deloitte to undertake a feasibility study in three countries, namely,

- The Gambia
- Liberia
- Sierra Leone

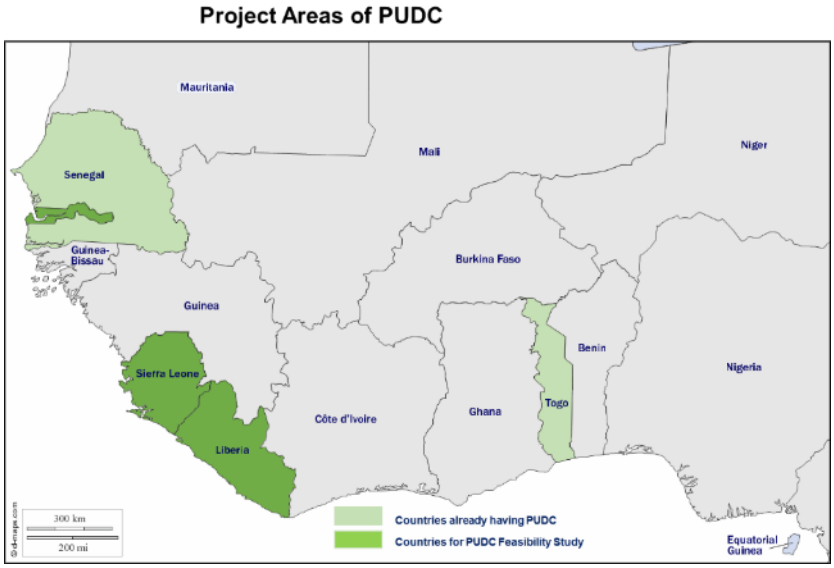


Figure 1: PUDC Project Areas

The PUDC (Emergence programme for community development) is a successful poverty alleviation model aiming at reduction of rural poverty and hence arresting growing inequalities between rural and urban regions. It also provides the platform for government to form collaborative partnership with UNDP and other development partners in response to social demands in rural communities. This model consists of four key components – the development of socio-economic facilities: improving the rural poor communities' access to basic socio-economic facilities such as water supply, energy, roads, health and education; the improvement of rural productivity, agriculture and livestock production: with focus on increasing the earning capacity and improving livelihood opportunities for youth and other beneficiaries; the capacity building of local actors, institutional capacities: with focus on empowering project beneficiaries through stakeholders compliance with UNDP requirements to strengthen donor confidence in supporting the project; and geo-referred information systems: focusing on capturing, storing, analysing and sharing of data.

The essence of PUDC as initiated in the development space in West Africa, is to capitalize on the opportunities available for effective and efficient resources mobilization to foster rural development. However, it requires full understanding by the respective government about the PUDC model, as well as the political and operational buy-in of major state actors who are responsible for driving development, particularly those focusing on rural development.

The objectives of the PUDC are broadly outlined below:

- Improve the populations' access to infrastructure and basic socio-economic facilities (rural roads; energy, clean potable water and agricultural production & processing equipment);
- Strengthen the capacities of professional groups and local actors in rural entrepreneurship, leadership and contracting/project management, and community management;
- Promote entrepreneurship, improve the productivity of the rural populations and develop agricultural production through access to production & processing techniques and the facilitation of access to financial services;
- Reinforce the local governance systems and processes towards a sustainable local economic development;

- Develop and set up a geo-referenced monitoring-evaluation-coordination system capable of providing information on the project's progress and used to steer the social policy of the Government.

6.2 Lessons learnt from PUDC – Senegal

Background to PUDC in Senegal

The Government of Senegal has fully embraced the ambition to use all available resources, public, private, domestic and international, to finance its development vision: "an emerging Senegal in 2035 with an inclusive society in a state of law."[1] This agenda aims to reduce social inequalities by correcting, among others, access to basic social services disparities. Despite efforts by the government and its development partners, rural populations continue to face disparities, mainly related to lack of access to basic social services and production factors, and restricted access to financing and low private sector participation in productive rural investments.

The achievement of the 2035 goal will be based on the implementation of a major investment program in thriving sectors, capable of stimulating strong and sustained growth momentum. The strategic orientations are based on three axes:

1. A structural transformation of the economy through the consolidation of the current drivers of growth and the development of new sectors that create wealth, employment, social inclusion and strong export and investment attraction capacity. This axis is part of a more balanced development option, the promotion of soils and viable economic clusters in order to stimulate the development potential of the entire territory (Axis 1);
2. A significant improvement in people's living conditions, more sustained effort against social inequalities while preserving the resource base, and promoting the emergence of viable territories (Axis 2); and
3. Strengthening security, stability and governance, protecting rights and freedoms and consolidating the rule of law in order to create the best conditions for social peace and to promote the full development of the nation’s potentials (Axis 3).

The PUDC fits in the axis 1 "Structural economic growth and transformation" and axis 2 "Human capital, social protection and sustainable development" of the emerging Senegal Plan.

Team members of the feasibility study visited Senegal from 15th – 18th December 2019 to study the PUDC model. Discussions were held with the PUDC Project Manager (Elhadj Diallo) and visited two of the sites/villages where PUDC intervention was implemented.

The PUDC was launched as an ‘emergency project’ defined as “in a crisis or after a crisis situation” in Senegal. This enabled UNDP to utilise a fast track procurement process. Primarily, the emergency was because of the rural areas that have been ‘left behind’ since the Senegal’s independence 6 decades ago.

The PUDC was conceived by the Hon’ble President Macky Sall over a series of village visits covering nearly 80,000 km across the country before he was elected. During this lengthy trip, he assessed the needs of the rural communities and identified lack of basic amenities or infrastructure as the most crucial issue in achieving a decent life, and promised to address them once he was elected as President.

A key challenge to addressing these priorities was to ensure that the initiative was free from political interference for efficient and swift implementation. Hence, UNDP was approached by the Office of the President, Senegal to thereby transform the needs of the disadvantaged rural communities into a programme, namely PUDC – Programme D’urgence De Dévelopement Communautaire.

The project started with a confirmation of needs, where UNDP contracted a national University (Université Gaston Berger) to validate the information gathered by the President. This involved meetings with Village councils, Mayors, Chiefs and Local/Regional Administrations. The information was also triangulated with the Regional Governors.

These priorities of the communities were reconciled with the Poverty Map for Senegal prepared earlier. When both were compared, there was almost 95% match and also revealed the actual needs of the villages and regions. It also provided an independent view.

One of the key benefits of having UNDP is its capacity to implement the project at an increased pace at which it was able to contract and subsequently deploy contractors to execute the identified projects with

[1] http://www.finances.gouv.sn/index.php/finances/136-resume-du-plan-senegal-emergent

reasonable accountability. The Government's public procurement processes would have taken too long, otherwise. The added value of UNDP was that it could run a faster process that had:

- Transparency
- Value for Money (VfM)
- Regular monitoring
- Reliable Reports

Financial Commitments:

We were informed that the impact after two years of the UNDP-implemented PUDC was greater than the previous 15 years' worth of development projects. Public awareness of the PUDC was great, with most ordinary workers (voters) knowing what the programme is.

The requirement from the assessment of needs was $800m overall. However, in Phase 1, the Government committed $200m to begin the project as it would have taken a much longer time to get international donors on board with the project. This meant that Phase 1 has been a 'pilot' to assess the viability of the programmatic interventions addressing poverty in rural areas. Phase 2 is due to start with $600m of funding from IDOs. Apolitical implementation was cited as one of the reasons for the success in attracting such large scale funding.

At the beginning of Phase 1, the public were critical about the Government giving $200M to UNDP for the implementation, and there were challenges for the Government in mobilizing and releasing the funds on time. However, now (post Phase 1), the President indicated that it was one of the defining factors in securing him a second term.

Selection of communities

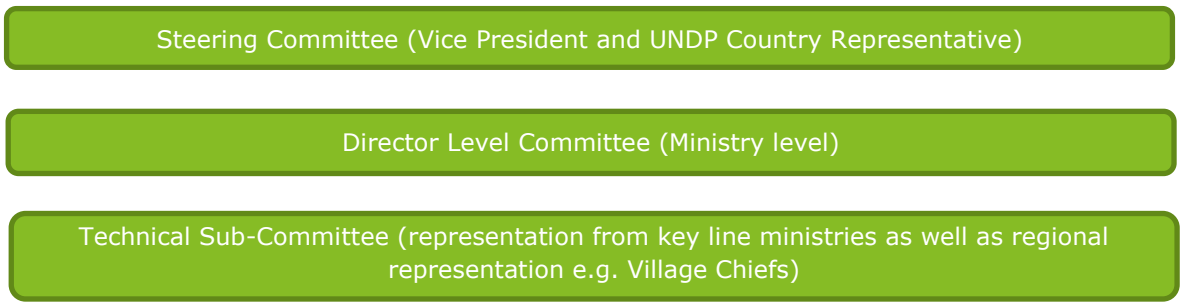
Selection of communities was done on a demand approach, based on the confirmation of needs conducted by the University and the Poverty Maps. Cost benefit analysis was also conducted to ensure best value for money.

For example, the cost of connecting a small village (c.20 pers), which required electricity, to a grid was too high compared to the benefit derived. Instead, the programme provided such small villages with solar kits while incurring the grid connection cost only for central, large villages. Return of investment (RoI) calculations and equitable approach to regions were kept in mind while deciding on appropriate interventions.

Similarly, large villages were provided with water towers with feeder pipe connections to surrounding smaller villages. Thus, interventions were strategic while keeping in mind, the needs, and cost-benefit analysis, RoI and multiplier effects.

Governance

Each Local Governor has her/his own priorities for her/his area. The interventions proposed for each area was routed through the respective Governor who vetted them and chose what was appropriate for the area. The proposals were put up to the Governors after going through three levels of evaluation and prioritization. The three-tier structure is illustrated below:



At the Technical sub-committee level, the aim was to build buy-in across the Ministries, and ensure that procurements/contracts were in line with any applicable technical national regulations. There was an initial challenge with Ministries regarding payment for the technical experts from their departments (UNDP was not able to pay for government employees' time). The sub-committee level also included UNDP professionals (procurement/contracting etc.). To complete the technical committee, external technical

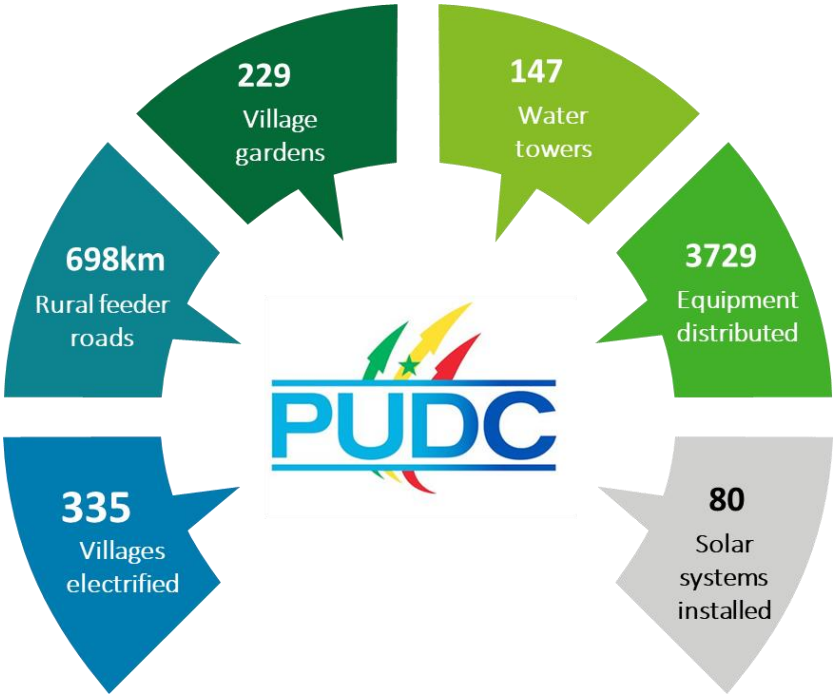
experts were hired by UNDP for each sector and procurement orders were released simultaneously across regions.

Procurement

Standard Quality Cost Based Selection (QCBS) was used and no preference was shown to local or international organisations other than meeting the selection criteria and the ToR. However, the subcontracted percentage was limited to 20%.

As mentioned, a fast track procurement process was used and in addition, the 'in country' approval amount for the field office was raised from $300,000 to $1 million considering it as an "Emergency procurement". To do this, the Senegal Field office had to meet certain criteria (e.g. certain level of procurement professionals).

Outcome



Monitoring

For implementation, across the 14 regions of the country, UNDP has created 5 regional hubs to manage the interventions. In addition to the contracted agencies for implementing the projects, UNDP also engaged various technical supervising agencies to monitor implementation and provide monthly reports on the progress of the respective contracts.

The five local hubs were made up of International UN Volunteers (UNV) with technical expertise hired by UNDP. Local hubs also involved the Regional Governors to whom the UNVs reported. These hubs were directly supervised by UNDP in Dakar. In Dakar there were appointed supervisors for each of the hubs, there is also a UNDP project manager who has overall oversight of the project.

The Government has deployed a National Director to oversee the overall implementation of the PUDC. The National Director is a civil servant, employed by the Government of Senegal. The Director sits within the PUDC organisation but is the link back to Government. Monitoring structure for PUDC in Senegal is displayed in Figure 2.

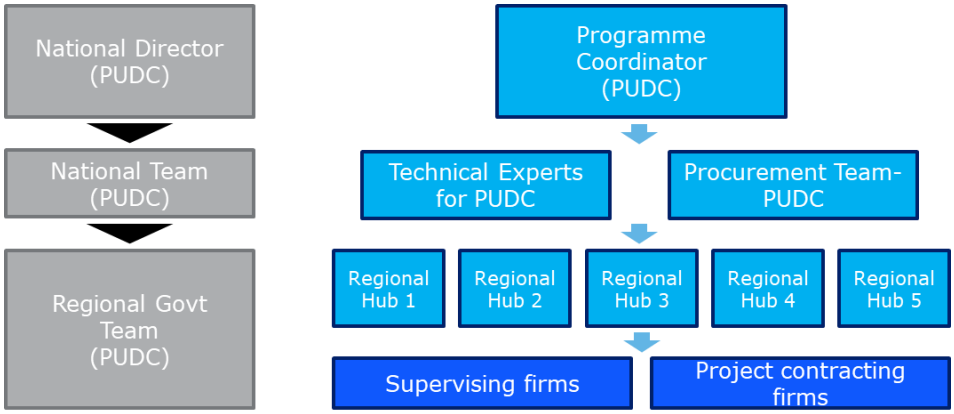


Figure 2: PUDC Governance

Evaluation

The midterm evaluation of PUDC was taken up by the same University that did the baseline. However, the draft report submitted by the University was not accepted by the Government.

The final evaluation report and is being initiated in January 2020. Initially there was a challenge because Government wanted a participatory evaluation whereas UNDP needs an independent one. However, the Government has agreed to an independent evaluation of PUDC.

Challenges

As mentioned earlier, UNDP faced a challenge in the payment schedule regarding the speed at which the Government of Senegal could mobilise the funds. It required "open and frank collaboration" with Government around the schedule of payment. In part this was due to the difference in accounting principles UNDP and the Government. Whereas UNDP would operate on 'Commitment Accounting'[2] the Government operated on a 'services rendered' approach, whereby the money is only required once the services have been rendered – there is no earmarking of funds as with commitment accounting.

One of the lessons to learn from this is for UNDP and the Government (if they are financing any part of the project) to have open and clear discussions about the schedule of payments. One option would be for the two parties to agree for release of a certain portion of the funds upon signature of the contract and for UNDP to maintain this buffer in subsequent requests for release of payments – to cover any delay in subsequent releases. Subsequent to the discussions, the contract should clearly reflect the agreements arrived at. Vendors must also be made aware of the payment challenges with doing business with Governments in this region.

One of the other challenges, once the President took office, was matching the Government's ambitious plans/desires for certain villages (and by extension, voters) to village needs and to the indications (feasibility and most beneficial) as per the poverty maps. A Government that wants re-election is likely to want ambitious, most visible and larger scale inventions in order to win greater public support – Senegal was no exception.

6.3 PUDC in Togo

Overview of PUDC in Togo

Whilst a field visit was not conducted into Togo, the following insights were obtained through documents review. Various reports from the World Bank and other development agencies show that poverty fell in

[2] Earmarking or setting-aside of funds in response to a purchase requisition. These funds remain committed (encumbered) until the purchased good or service is paid-for after its receipt, thereby converting the encumbrance into an actual expenditure.

Togo between 2006 and 2015 (58.3%). However, this positive dynamic was not equally felt across the country, especially in rural areas.

The PUDC in Togo was initiated by the Head of State, His Excellency Faure Gnassingbé on June 30, 2016.

The PUDC is an attempt to reflect the Government's will to address the socio-economic needs of the rural and most vulnerable population in order to accelerate the fight against poverty and rescue social inequalities. The implementation is done through the intensification of investments in socio-economic infrastructure base and development partnership.

The estimated budget for the three year programme of effort is around 155bn CFA (c.260m USD).

In the early 2000s the Togo authorities were struggling to meet the basic vital needs of the population, especially those in rural areas. There was extensive inadequacy in the state of the educational facilities, poor healthcare provision and very poor levels of access to clean, safe drinking water. In 2006, a national study revealed that only 17% of children aged 11 were enrolled in the last year of primary school, and that infant mortality was high, at 77 for 1000 births (DGCSN, 2006)

Figure 3: PUDC Logo for Togo

Set up of the PUDC in Togo

The UNDP's work in Togo is anchored by the PUDC. It was designed to complement the Government's efforts for improved access to and quality of health-care and educational services, clean water and energy through efficient service delivery and construction, provision and installation of infrastructure/equipment.

A beneficial element of using UNDP in collaboration with the Government means that it enhances the scope for increased public-private partnership in infrastructure. UNDP, through PUDC is working to build the capacity of grass-roots communities and civil society groups within the context of decentralization to achieve more effective management of these investments for their sustainability.

PUDC Phase 1

The first phase of the PUDC ended in June 2019. This phase has placed a large emphasis on the access to basic infrastructure, one of the main challenges facing phase two is the maintenance of the infrastructure that already exists. The Programme plans to develop rural entrepreneurship in the various zones, like in Senegal it will aim to build local skills and knowledge in the local (rural) populations so that they become their own actors of development.

Officials have commented that in Togo, the "fast track" procedures afforded by the makeup of the PUDC (namely the ability to utilize the UNDP processes) have made it possible to significantly reduce procurement times and thus speed up implementation, while ensuring transparency and the quality of results. The PUDC in Togo, according to the 2017 Technical Report, has helped to improve living conditions of about 25 per cent of the population through the health, education and transport facilitation sectors. New jobs created have been created based on installation and maintenance of infrastructure. It is foreseen that new equipment will generate economic dynamism and increase income for youth, women, farmers and artisans

2018 - 2022 National Development Plan (PND)

The overall objective of the National Development Plan is to "structurally transform the economy, for strong, sustainable, resilient, inclusive growth, creating decent jobs and leading to improved social well-being."[3]

The PUDC is aligned to all three of the National Development Plan's three axis, namely:

- Set up an excellence logistics hub and a world-class business centre in the sub-region.
- Developing agricultural processing, manufacturing and extractive industries.
- Consolidate social development and strengthen mechanisms for inclusion.

The PUDC also falls squarely within the four key guidelines that have driven the vision for the PND

[3] Plan National de Développement (PND) 2018-2022

- Strategic positioning around a very limited number of integrated cross-sector drivers for each focus (international and national);
- Public and private sector involvement to carry out targeted projects for strategic positioning and public-private partnership to lead flagship projects;
- Limited number of integrated flagship projects with growth and well-being;
- NDP development around a small number of strong and clear messages that define Togo.

Difference in funding approach for PUDC Togo

The main difference in the funding approach between the PUDC in Togo and Senegal is the extent to which The Governments committed domestic funds to the programme. As described the Senegalese administration were able to completely fund the pilot with $200m of government resources. However this was not possible for Togo. The total requirement was identified and estimated at 258 million dollars over three years, of which 30 million was for 2016 alone. A large proportion of this sum was provided with a loan from the IMF. This demonstrates that whilst it may be preferable for domestic funds to be raised and used it is possible in 'Phase 1' of the PUDC to reply on international finance.

7. About The Gambia

7.1 Demographic Profile and Poverty Status

The Gambia is the smallest country in the mainland Africa with a land area of 11,300 km^2 and is bordered by Senegal to the north, south and east, and by the Atlantic Ocean to the west. Its land area stretches 477km along The Gambia River which divides the country into two distinct parts - the North and South Banks. About 1,300 km^2 (11.5 per cent) of The Gambia's area is covered by water.

Demographics of The Gambia

The Gambia's population has been increasing at an approximate annual average of 4 percent in the urban area and 1.2 percent in the rural area (World Bank Data, 2019). After the 2013 census that recorded The Gambia population at 1.93 million, it increased to 2.08 million in 2015 and to 2.21 million in 2017. It is expected to reach 2.29 million by the close of 2018. The charts below show the trend and the components (female and male), as well as the population growth in The Gambia clearing underscoring the demographic potential, the country has got.

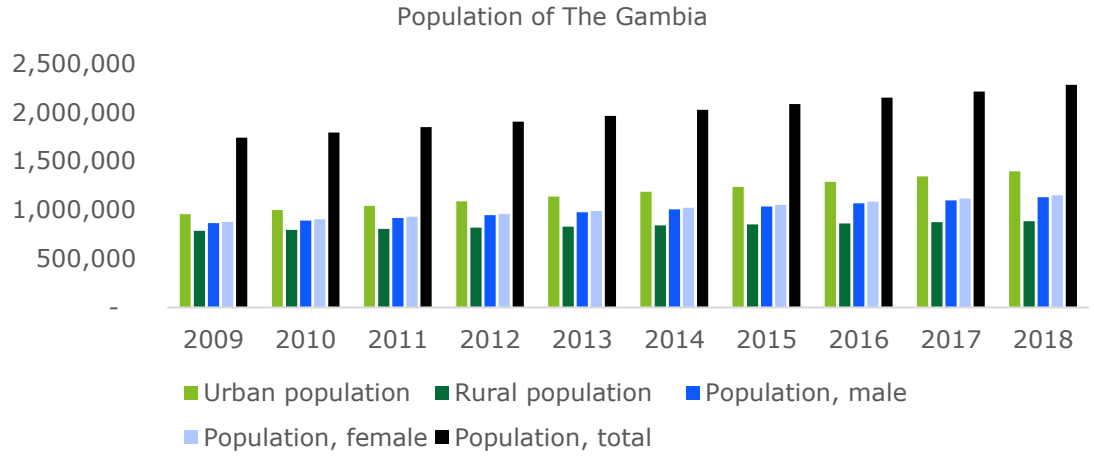


Figure 4: Population of The Gambia

Source: World Bank Data, World Development Indicators, 12/2019

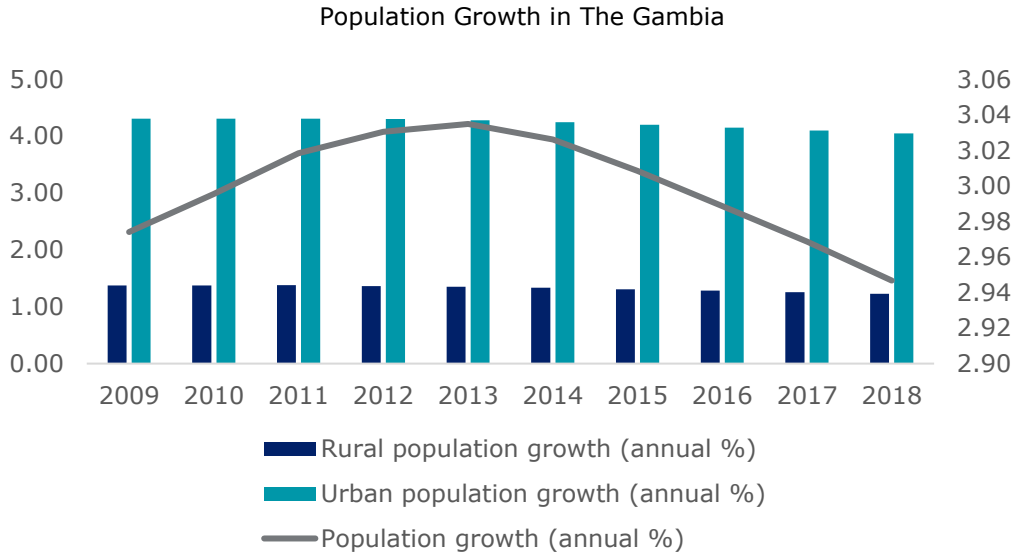


Figure 5: Population Growth in The Gambia

Source: World Bank Data, World Development Indicators, 12/2019

Another demographic factor is the population density prevailing in The Gambia. It is one of the highest in the mainland Africa – 176 persons per sq. km, making it 4th in the continent (Rwanda, Burundi and Nigeria). At the beginning of 2018, The Gambia's age population distribution was as follows: 44.01 percent under 15 years, 53.14 percent between 15 years and 64 years and 2.85 percent above 65 years. The total dependency ratio is 88.56 percent, child dependency ratio is 83.72 percent and the age dependency ratio 4.84 percent. Life expectancy is currently 62.08 for men and 62.84 for women whilst literacy rates stand at 61.77 and 41.58 percent respectively for men and women[4].

The Gambia being a young nation with majority of the population under 25, it can reap the benefits of this demographic dividend provided their basic needs in terms of infrastructure are addressed. From our field interactions, there was felt need for the amenities like roads, electricity and water amongst the communities which in turn can impact the youth positively.

Poverty Status

The Gambia is one of the poorest countries not only in West Africa but globally as well. According to the most recent poverty survey completed in 2015/2016 and published in 2017 (The Gambia Bureau of Statistics), the share of the national population living in poverty, based on the national poverty line, remained largely static at about 47-48 percent from 2010 to 2015, though the number of poor households increased from 790,000 to 930,000 due to population growth[5]. Over this period, the share of the urban population in poverty fell from 33.4 percent to 31.6 percent, but the share in rural areas rose from 64.2 percent to 69.5 percent. The share of poor households in Banjul was only 10.8 percent in 2016. The depth and severity of poverty increased in rural areas. From 2010 to 2016, extreme poverty rose by 17 percent from 350,000 to 400,000 households. Estimate suggests close to 55 percent of the population in 2015 were unable to meet their daily required minimum calories of 2,400, a sobering statistic which has been exacerbated by erratic rains affecting agriculture. Only five of ten The Gambians in the working age population are employed, and about 62 percent of youth have reported being unemployed. Real per capita GDP is estimated to have fallen by 20 percent from 2013 to 2016, suggesting that poverty may increase further. The Gini coefficient for The Gambia in 2015 was 0.359[6]. The chart below shows the poverty headcount ratio in various brackets in The Gambia.

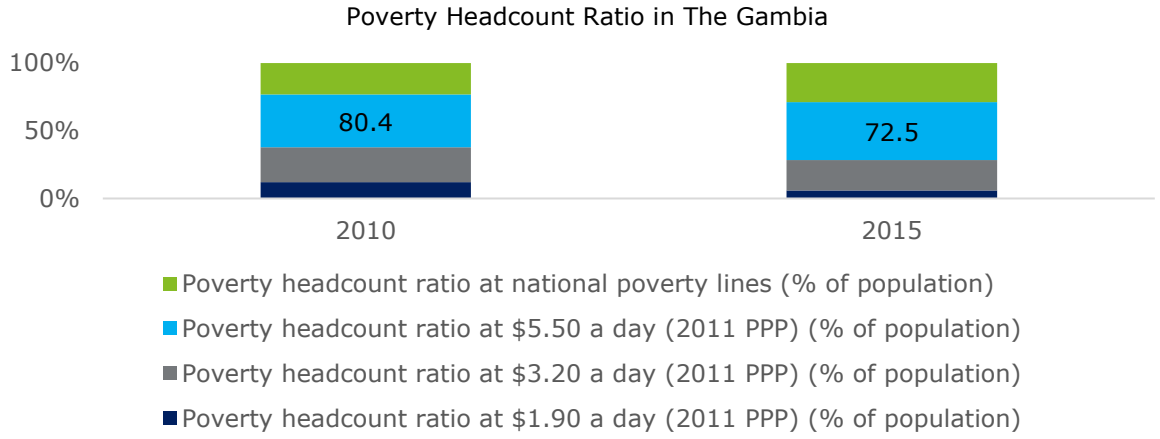


Figure 6: Poverty Headcount Ratio in The Gambia
Source: World Development Indicators, 12/2019

The 'back way' to Europe

Recently one of the main challenges The Gambia has faced is the migration of young (mainly males) people to Europe in search of better jobs.

Until recently, The Gambian migration was to a large extent the result of repressive government policies and the lack of political and civil rights. The democratic election of a new government in December 2016, means that the prospects for The Gambians are much brighter now. Nonetheless, The Gambians are still choosing to leave the country. Young people are leaving because of the lack of jobs and opportunities in rural and urban areas, the lack of adequate support to farming which is being badly affected by climate

[4] World Bank Data, World Development Indicators, 12/2019
[5] Integrated Household Survey 2015/16, Volume III, Prevalence and Depth of Poverty – GboS, October 2017
[6] https://knoema.com/atlas/The Gambia/topics/Poverty/Income-Inequality/GINI-index

change and because they see a better life in Europe. And although, as mentioned it is mainly men migrating, the scale of migration is also having an impact of women – especially women farmers who constitute a growing proportion of the country's agricultural workforce. This means that The Gambia's agricultural policy must increasingly focus on benefitting women farmers. Women and families left behind by migrating husbands can be at greater risk of poverty, discrimination, gender-based violence and vulnerability from conflict and disasters.

The PUDC has an opportunity to build the rural economy such that the Gambian youth see a brighter future in staying behind in country. The provision of basic amenities including electricity and roads have tremendous potential to arrest the out-migration of youth from the rural communities.

7.2 General Economic Overview

The economy of The Gambia is relatively small and relies primarily on tourism, traditional agriculture and foreign remittances, and is vulnerable to external shocks. Over the last few years the Gambian economy has managed to continuously record growth. Real gross domestic product (GDP) growth rebounded from 1.6% in 2016 to 6% in 2019, despite unpredictable rainfall that caused a 10% decrease in agriculture production and the collapse of Thomas Cook UK that caused the Government to adjust the tourism sector in order to meet targets. Growth in 2019 was largely driven by a strong recovery in tourism as the number of tourists touched a record high. Expansion of the private sector credit by 35% as well as improvements in revenue mobilization and public financial management and increased electricity supply and lower interest rates also contributed to these achievements.

This assumes strong policy implementation and an effective fiscal reform in the form of strong revenue collection and expenditure control supporting debt sustainability. It also assumes a sustained increase in investment in basic infrastructure, reflecting a step-up in donor support and an acceleration in executing existing projects

Table 1: Key Economic Indicators

	2018	2019	P2020	P2021	P2022	P2023	P2024	P2025
Growth and Inflation								
Real GDP Growth	6.5	6.0	6.3	5.8	5.5	5.2	5.2	5.0
Headline inflation (average)	6.5	7.1	6.7	6.0	5.5	5.1	5.0	5.0
Fiscal Sector								
Total Revenue (incl grants)	15.4	22.2	22.9	22.5	22.0	21.6	21.3	21.3
Total expenditure	21.6	24.8	24.6	24.2	23.4	22.7	22.0	21.7
Overall fiscal balance	-6.3	-2.6	-1.7	-1.8	-1.4	-1.1	-0.7	-0.4
Primary balance	-3.0	0.6	1.0	0.8	0.8	1.1	1.3	1.5
Net domestic borrowing	3.3	1.2	0.5	0.0	0.0	0.0	0.0	0.0
External Sector								
Current account balance	-9.7	-5.3	-8.7	-9.9	-9.6	-9.0	-9.1	-8.8
Public debt	86.6	81.4	75.8	70.8	66.6	62.7	58.5	54.4
Gross official reserves (months of imports)	2.7	3.4	3.7	4.1	4.3	4.4	4.4	4.6

Source: The Gambian authorities; and IMF Staff estimates and projections. (Percent of GDP)

Sectors Contribution to GDP Growth

The GDP of The Gambia has been able to achieve an average growth rate of 5.8 percent over the past 3 years (2017-2019), fluctuating from a low growth rate of 1.6 percent 2016 to 6 percent in 2019.

The country's agriculture sector is largely dependent on rainfall, which is highly sensitive to weather patterns. Both 2016 and 2019 recorded unusually low amounts of rainfall causing agricultural production to fall. Meanwhile, spill over effects from the regional Ebola crisis damaged the tourism sector, which accounts for about one fifth of GDP (World Bank The Gambia 2017). Also in the same year (2016), there was a border impasse between Senegal and The Gambia for a period of 3 months, which compounded the economic hardship of The Gambia in terms of trade, movement of goods and people. An unclear political climate caused the tourism industry a reduction in the numbers. The figure below shows the contribution of agriculture, industry and services sector to the GDP.

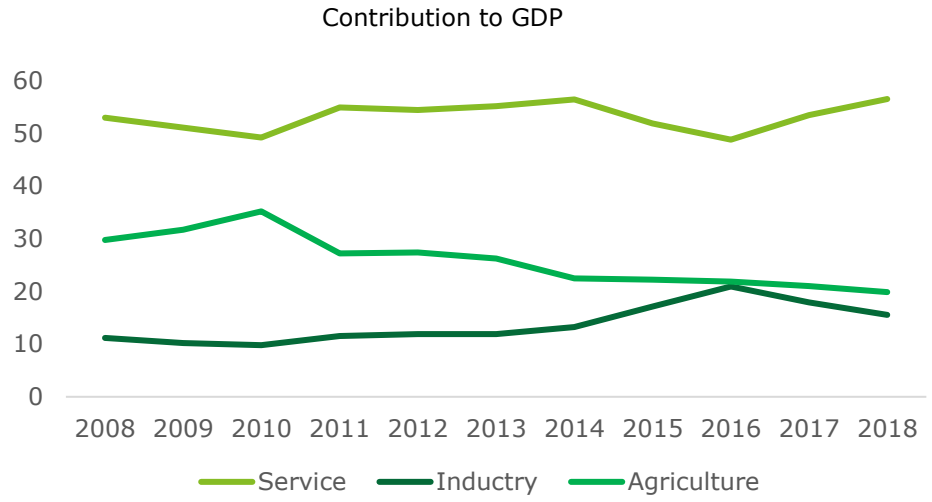


Figure 7: Contribution to GDP

Source: Statista, share of economic sectors in the GDP in The Gambia

Although The Gambian economy has been performing well over the years, a poor situation was inherited from the previous government. The reliance on domestic financing by the previous administration to cover unsustainable structural fiscal deficits, combined with unpredictable shifts in monetary and exchange rate policy, led to a sharp rise in the public debt stock and acute shortage of foreign currency.

To add to the worries of economic slow-down, the global upsurge of COVID-19 might have severe impact on the tourism sector of The Gambia. Most of the tourists in The Gambia are from Europe which has currently been the worst affected area. As a result, there might be negative impact on the overall GDP for the country during the year 2020. To deter this, the World Bank intends to increase their Covid-19 emergency grant response from US$ 5 million to US$10 million. Authorities are also working to re-focus projects in health, social protection, agriculture, tourism and private sector development that covid-19 can have an immediate impact on.

Inflation Rate

Current trends indicate that consumer price inflation (CPI) is relatively subdued. Despite average inflation increasing from 6.81 percent in 2015 to peak at 8.03 percent in 2017,from thereon, it has slowed down to 6.52 percent in 2018. In 2019, it rose slightly to 7.1 percent however this was mainly due to a one-off factor of an increase in food prices. [7] Per the projections of The Gambia Bureau of Statistics (GBoS) and Statista, the inflation rate will decline to 6.52 percent in 2020 and will continue slowing down to 4.98 percent in 2023 which is the reflection of the structural reforms the government is implementing.

[7] IMF, First Review of the Staff-Monitored Program and Request for a 39-Month Arrangement Under the Extended Credit Facility,2020

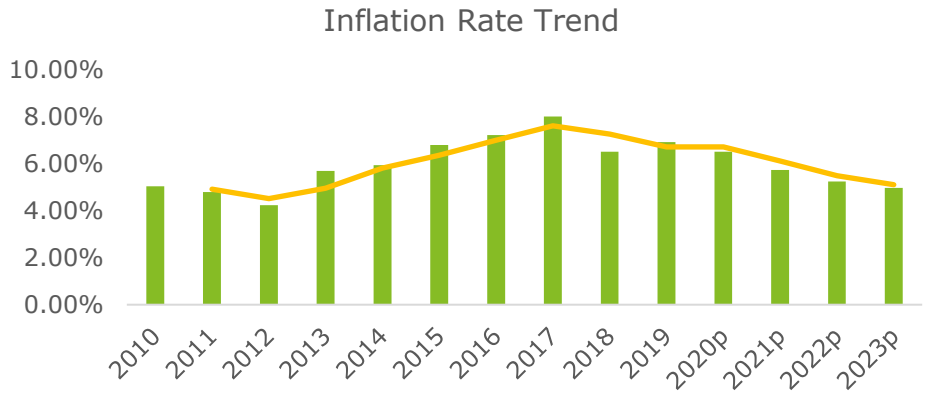


Figure 8: Inflation Rate Trend

Source: The Gambia Bureau of Statistics (GBoS), Statista.com.

Exchange Rate

The Gambian Dalasi (GMD) has remained relatively stable against the major currencies (Euro and USD) on account of tighter monetary policy and improved foreign exchange inflows. However, the foreign exchange market witnessed some seasonal volatility during the tourism peak season, as demand pressures mounted. The Gambian Dalasi recorded a depreciation of only 3.2 percent against the US dollar in 2019.

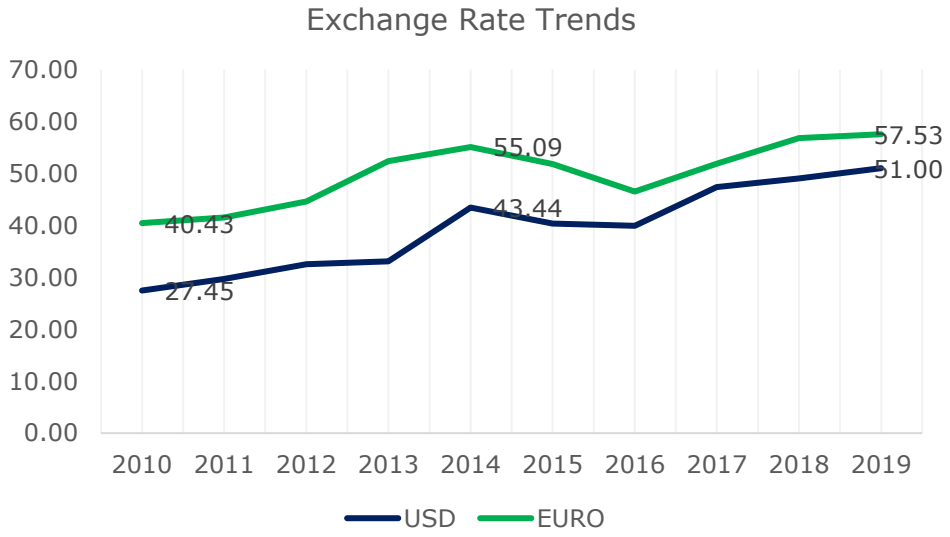


Figure 9: Exchange Rate Trend

Source: The Gambia Bureau of Statistics Service (GBoS); World Bank Country Data

Exchange rates appeared to have been largely stabilized between 2018 and 2019 for the US Dollar, largely due to inflows from the supports, grants, technical assistance received from development partners such as World Bank Group, IMF and Foreign Direct Investment and inflows of private capital and remittances. It is also important to state that the GMD is constantly struggling to close the widening gap against the Euro. This presents an opportunity for the sitting government to revamp trade and business relations with the EU members by providing initiatives and incentives that will attract both FDI and remittances. These favourable developments in the country's external position, along with the internal security for the tourists, are expected to help restrain exchange rate volatilities in future.

Fiscal Deficit and Public Debt

The Gambia is recovering from the large public debt burden inherited from the Government before and have only recently managed to gain public debt sustainability. Over the past three years in office, the government spending has amounted to 31.3 percent of the country's GDP leading to an averaged budget deficit of 7.3 percent of the GDP. At the end of 2018, The Gambia's public debt was $1,406m, an increase of $102m since 2017. This amount implies that the debt stock in 2018 reached 86.5% of The Gambia's

GDP; A 0.44 percentage point fall from 2017, when it was at 87.01% of GDP[89]. 2019 recorded a slight decline in debt stocks sitting at 81.8% of GDP as a result of strong economic growth, increased fiscal discipline and prudent borrowing. The public debt-to-GDP ratio has been projected to steadily fall over the next five years. With the IMF and other donor organisations involvement as well as the revision of various financial policies anchored in fiscal discipline, the public debt burden in the Gambia is being tacked and the country is on track to follow a more sustainable path. The government have an aim to bring public debt-GDP ratio below 60% by 2024.

7.3 Major Challenges

According to the Economic Freedom Index 2019, The Gambia's economy scored 52.4, making it the 146th freest globally and the 30th ranked among 47 countries in the Sub-Saharan Africa region[10]. The overall score was the result of the gains made in government integrity, judicial effectiveness, trade freedom, investment freedom and labour freedom exceeding losses on government spending.

The transition from dictatorship to democracy has paved the way for revival of the economy, which reflected in higher agricultural output, recovery in trade and tourism, strengthened investor interest, and a resumption of aid inflows. After several years of economic mismanagement, new policy initiatives such as regulatory reform, lower corporate taxes, and easing access to land are planned with the aim of rebuilding investor confidence. However, pervasive corruption has been a critical challenge, and weak protection of property rights has undermined the rule of law.

- **Government debt**: Over the past three years, government spending has amounted to 31.3 percent of the country's output (GDP) and burdens of heavy debt service payments has put the country at a high risk of debt distress.
- **Regulatory Inefficiency**: Despite improved monitoring of State Owned Enterprises (SOEs) there is still a lack of regulatory enforcement and this continues to hamper business opportunities and environments in The Gambia. The large financial deficits of state-owned companies such as NAWEC and other public enterprises are a particularly acute problem to the public sector. Growing debt leaves little room to stimulate economic growth.
- **Open Market**: According to the World Trade Organisation (WTO) on June 30, 2018, The Gambia had one non-tariff measure in force. Foreign and domestic investors are generally treated equally under the law. Credit to the private sector has increased, but the overall banking and financial system remains underdeveloped and there is no stock exchange.
- **Insecurity and political instability[11]**: Insecurity and political instability continue to pose high risks in 2019 with the withdrawal of the Economic Community of West African States mission and possible contention over the three-year presidential term limit. Other issues that are likely to affect the economic outlook include a resurgence of political instability, delays in implementing structural reforms, and adverse weather that could weaken rain-fed agriculture.

Other major challenges faced by the country in overall development are as below.

- High population growth
- An undiversified economy reliant on primary commodities and highly vulnerable to external shocks
- Unsustainable use of natural resources and the environment
- Relatively low literacy rates
- High unemployment especially among youth
- Inadequate health facilities

7.4 National Development Plan

The transition to a new government after the December 2016 national election gave the Gambians the opportunity to create a new National Development Plan (NDP) from 2018 to 2021. The four-year development plan discusses the position of the country with regard to its future, looking ahead and

[8] The Gambia National Debt 2018 – countryeconomy.com
[9] Economic Freedom Index 2019
[10] Ibid
[11] African Development Bank – Country Economic Outlook 2019.

confronting the numerous challenges faced in the past 22 years[12]. The new plan also identifies the government's priority areas and outlines an action plan to meet its election pledges and sector reforms. The document was released in late 2018.

The plan emphasizes the importance of an integrated and holistic approach to development, with a forward-looking agenda addressing economic, environmental, social, and governance issues, and a commitment to good governance and reduction of inequality. It also commits the government to environmental sustainability, recognizing the potential of renewable energy, and acknowledges the importance of developing the agriculture sector, infrastructure, and the tourism industry as a means to strengthening the economy[13]. Furthermore, the NDP strongly emphasizes gender mainstreaming and empowerment of women and youth, and commits the government to developing more inclusive policies, including in relation to persons with disabilities.

The plan, however, is broad in its ambition. The development priorities set by the government have attracted a significant amount of international support, and The Gambia has tried to remain on the international community's radar to secure its support in the long term.

The plan proposes measures to address the country's financial distress, which is characterised by an unsustainable public debt of 48 million dalasi ($1 million) or 25 percent of the GDP. It also targets to address the electricity issues that arise from the inability of the sector to meet domestic demand or for economic activities. Along the line, it will also address agriculture, tourism, trade, education, healthcare, women's empowerment and youth. Through the plan, it is expected that the Government will act decisively to address poverty, particularly rural poverty, and close the growing gap in access to basic services between the predominantly urban western part of the country, and the rural poor predominantly found in the east of the country.

As per the plan, the Government is committed to serious economic reforms following the historic transition to democracy, which opens up many possibilities that could spur growth and restore the country's economic stability.

The Government's vision for the "new Gambia" is "a country that upholds the highest standard of governance, accountability and transparency; where social cohesion and harmony prevails among communities; citizens enjoy a standard of living and access to basic services to enable them to lead descent and dignified lives; youth, women, children realize their full potential, and a nurturing and caring environment exists for the vulnerable; there is an enabling environment for our private sector to thrive; and our natural heritage is nurtured and preserved for future generations".

[12] Specific challenges can be found in the NDP, abbreviated here as: 1. Economic shocks, 2. Economic mismanagement by previous regime, 3. Large public debt, 4. Devaluation of currency
[13] The Vision of the New The Gambia – The Government of The Gambia, National Development Plan (Draft), 2017.

8. Current Rural Infrastructure in The Gambia

8.1 Rural Infrastructure Development Analysis

The investment requirements for infrastructure in Africa are large in scale and number. In The Gambia, it is not just a case of funding additional infrastructure projects, as funding is not the sole problem – the core issues are institutional in nature. Pouring additional funding into sectors characterized by high levels of inefficiency in unlikely to provide the most effective investment. The country needs to improve the capacity and efficiency of the institutions responsible for developing and managing infrastructure. The goal is not to reinvent existing institutions but to reform them and support their evolution.

Development in Africa for the past two decades has been highly concentrated in the urban areas. This is evident by the unprecedented migration of rural dwellers to the urban areas. Shifting the paradigm calls for a holistic understanding of the issues affecting rural residents. The African Development Bank (AfDB) has gathered, in its 'Infrastructure Diagnostic Study on Africa', the major cause of rural migration and consistent poverty as rural infrastructure deficit.

A detailed analysis of the infrastructure sectors or technical sectors that are necessary for economic growth has been highlighted below.

8.2 Energy / Electricity

Overview

The electricity generation in The Gambia is majorly dependent on fuel (HFO/LFO) imports which are costly and which expose the country to volatile fuel market prices, and negatively affect the cost of service and delivery. Electricity services are provided by the National Water and Electricity Company (NAWEC), which is a state-owned vertically integrated utility that handles generation, transmission, distribution, and retail of electricity.

NAWEC operates two main power plants in Kotu and Brikama serving the Greater Banjul Area (GBA). In the rural areas, NAWEC provides electricity through two independent grids, covering the north and south bank of the River Gambia. It plans to connect the different grids creating a national transmission backbone covering the whole country.

The Gambia remains largely limited to distributed and off-grid applications. In an effort to promote the development and use of renewable energy in The Gambia, the Renewable Energy Act was enacted in December 2013 to stimulate the deployment of both on and off-grid renewables in the country's electricity mix in order to achieve greater self-reliance in energy and reduced dependence on fuel imports for electricity generation. In the electricity roadmap, solar PV is recognized as a low-cost game-changer for The Gambia's electricity sector. A number of utility scale solar PV projects have been committed and are in the pipeline for implementation in The Gambia. This includes a 20 MW solar PV power plant financed by the World Bank and the European Union as part of The Gambia Electricity Restoration and Modernization Project (GERMP). Also, NAWEC has signed a power purchase agreement (PPA) with an IPP for a 10 MW solar PV project. These solar PV projects and upcoming projects will contribute significantly to increase the share of renewables in The Gambia's electricity and diversification of energy resources.

As of January 2019, the total installed capacity in the country was around 139 MW. Keeping with the targets in the electricity roadmap, The Gambia seeks to scale up its generation capacity to 300 MW by 2025[14].

As per the data available with NAWEC, almost 88% of rural villages in The Gambia are not electrified as of 2019. Region-specific electrification status is given below. Only 4% of villages in the Central River Region are electrified.

[14] West African Power Pool Report, September 2019

Table 2: The Gambia Electrification

Region	District	Total villages Electrified	Villages close to Network within 200m	Villages within than 5km of network	Villages away from 5km of network	%Electrified
Banjul City	Banjul	3				100%
Banjul City	Kanifing	19				100%
URR	Basse	35	43	3	288	9%
WCR	Brikama	99	5	29	220	28%
NBR	Kerewan	32	38	68	193	10%
CRR	Kuntaur	12	15	1	313	4%
CRR	Janjanbureh	11	14	8	288	3%
LRR	Mansakonko	17	4	1	130	11%
	Total	**228**	**119**	**110**	**1432**	12%

Opportunities in Energy Sector

The Gambia has identified short-term and medium-term solutions to restore the performance of the electricity sector.[15] The basic needs required to salvage the sector include the rehabilitation of the existing heavy fuel oil (HFO) plants, targeted investment in transmission and distribution to reduce losses, and the installation of pre-paid meters.

Grid Electricity

National Water and Electricity Company (NAWEC) signed a power purchase agreement with Société Nationale d'Électricité de Sénégal (SENELEC) of Senegal during 2018 which is aimed to ensure SENELEC supply between three megawatts to 10MW of electricity to the NAWEC, with expanding the supply as the capacity of the network grows. We understand that merely 70% of the supply remains untapped and thus providing quick-win under PUDC to be incorporated.

Solar

The government is currently conducting a feasibility study for the construction of a 150MW solar plant connected to the Soma substation. The Government of The Gambia has said it will award permits for a power purchase agreement with utility the National Water & Electricity Company Ltd and prepare transmission lines for connection to the substation. However this project is only forecasted to be completed in the mid-term. The solar project, which may be coupled with 20 MWh of storage capacity for grid stabilisation, is expected to be built in two phases, with the first, 80 MW unit scheduled for completion in 2022 and the second, 70 MW section planned to come online in 2026.

The Gambia has one of the most ambitious solar rollout plans across West Africa. It aims to electrify all of its public school and health centres with renewable energy. The European Investment Bank (EIB) and the World Bank are providing €106 million (£91m) and €35.7 million (£30.6m) of financial support for the West African nation's Renewable Energy Programme, which aims to install solar panels and battery technology for all its 1,100 rural schools and health centres. A €41 million (£35m) grant is also being provided from the EU budget for the project.

For rural areas however, due to the lack of an extensive grid network the construction of both solar-mini grids and also standalone solar systems are required.

In addition, Renewable Energy policy of The Gambia encourages PPP mode for energy generation thus giving a scope for harnessing the potential of private players in Energy segment especially solar.

Challenges in Rural Energy sector

The Gambia is facing a severe challenge for quality and access to electricity especially for its rural areas. Existing power infrastructure has undergone some modernization and system rehabilitation but a lot more action is required. In short, the energy system in The Gambia has largely become burden on its economy and hence other areas of development. As economic development is closely related to electricity, it is quite unavoidable to address this problem.

[15] The Energy Roadmap and Action Plan for The Gambia, policy document

In addition, the level of skills in The Gambia is not sufficient for the magnitude of the energy challenge in the country. The Government will need to revitalise its technical arm (Gambia Renewable Energy Centre) to provide scaled-up support in technology development, finance, regulation and management. Some of other issues electricity sector as per the NDP[16]

- **Low access to electricity**: electricity coverage in The Gambia is estimated at 35 percent of the urban population and 6 percent of the rural population.
- **Inadequate supply**: Out of the capacities installed, NAWEC has only 54 MW power available for consumption. During the peak demand of 70 MW, NAWEC is obliged to ration the available power leading to a total blackout in some parts of the country.
- **Inability to collect revenues**: NAWEC is unable to collect revenues accrued from the usage of the electricity by its customers which has plunged the company into serious financial constraints and has incapacitated the company to fund its operation costs and improve upon both the existing and the new services.
- **High transmission and distribution losses:** lack of investment is the major cause of transmission and distribution losses.

8.3 Roads & Transportation

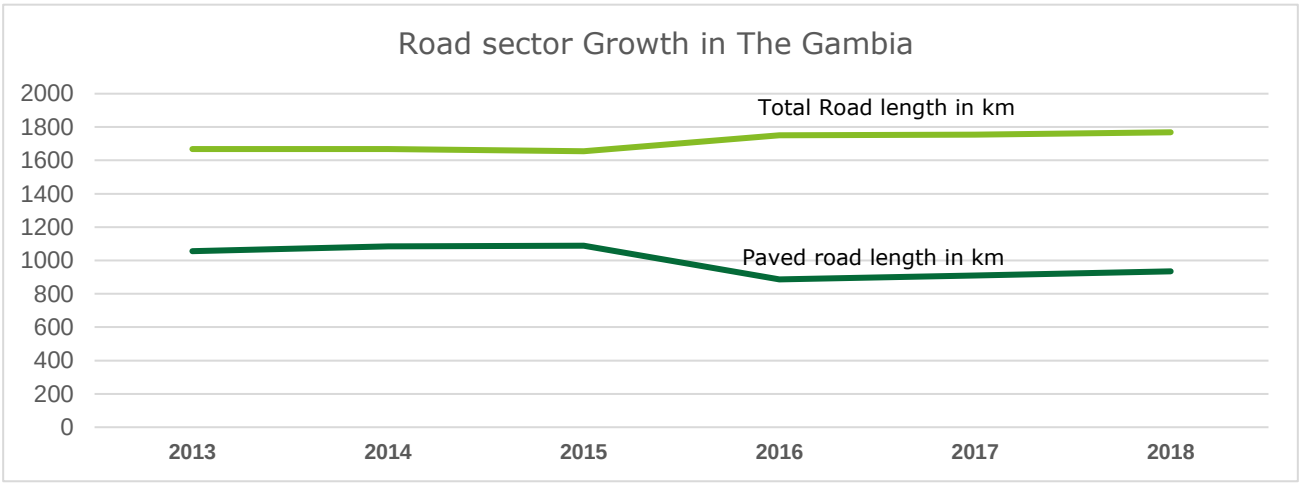
The Gambia has land area stretching 477km along the Gambia River, which divides the country into two distinct parts - the North and South Banks. Due to this physical separation of the country into two parts, there is a need for an efficient transport system to connect its two banks both for national integration, and to use its transport system for facilitating transit traffic from its south to the north of Senegal. The important role of the transport sector has been identified in the framework of successive national development plans.

As per the GBOS, Statistical data for 2019, the growth rate of roads (especially primary) seems to be flat over the last 5 years, whereas there has been significant progress in secondary and other ,mainly unpaved, roads.

Table 3: Road Quality in The Gambia

Road type	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**
Primary roads	Km	Km	Km	Km	Km	Km
Paved	649.00	649.00	649.20	648.47	668.47	688.47
Unpaved	169.00	169.33	169.33	169.33	149.33	129.33
Secondary roads						
Paved	396.90	405.00	416.00	214.29	214.29	214.29
Unpaved	143.90	135.80	124.80	415.00	415.00	415.00
Other roads						
Paved	2.10	29.50	23.20	23.70	26.70	31.70
Unpaved	306.19	278.70	272.40	279.70	279.69	289.70
Total length of roads	**1667.09**	**1667.33**	**1654.93**	**1750.48**	**1753.48**	**1768.48**
Of which: paved roads	1054.90	1083.50	1088.40	886.46	909.46	934.46
%Paved roads	**63.3%**	**65.0%**	**65.8%**	**50.6%**	**51.9%**	**52.8%**

[16] The Gambia National Development Plan (2018-2011)



Challenges

As per the National Transport Policy 2018, the following challenges were outlined.

- Connecting the isolated Regions within the country

Figure 10: Road Sector Growth

- Significant mobility needs of the population estimated at 1.713 million with increased rate of urbanization
- Lack of integration of various transport modes
- Inadequate transport policies and regulations to achieve operational efficiency
- Huge gap in Transport Infrastructure Financing
- Inefficient road traffic safety and non-compliance Axle-Load regulations/provisions
- Weak institutions and capacity
- Insufficient private sector involvement/Local Construction Industry

8.4 Water & Sanitation

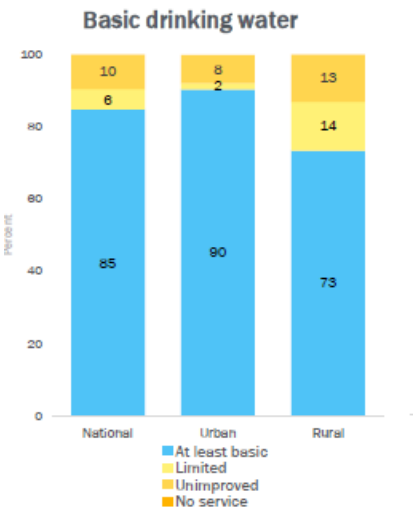
Overview

In The Gambia, the drinking water needs of rural communities are met primarily through ground water sources, which could be in the form of boreholes (motor driven or hand pumps), dug-wells etc. Based on the 2013-2014 statistics about the groundwater abstractions recorded, the table below provides an overview of the abstraction points and actual abstraction rates across the different administrative regions.

The majority of ground water extraction has taken place in the West Coast, which includes the Banjul region as well. As far as the projected water requirement based on estimated population of The Gambia in 2020, the requirement is set go up from the current 127,665 m^3 per day to 170,035 m^3 per day, a 33% increase.

Challenges:

- A majority of villages do not have potable drinking water and are dependent on ground water extracted through boreholes or dug-wells
- As per the MICS-2018 report,
  - 85% of households have access to basic drinking water services, however only 34% (one third) of households are using safely managed drinking water services.
  - Large disparity between the richest (91 percent) and poorest (15 percent) with regard to access to basic sanitation
  - About one third (34 percent) of households are using safely managed drinking water services
- On the other hand, as the country is over-dependent on ground water for all their water requirements (drinking, irrigation etc.), there is a possibility of over extraction of ground water beyond the prescribed limits.



Sanitation and Hygiene:

As per the MICS report, rural sanitation seems to be a matter of concern, as 64% of the rural population does not have basic sanitation facilities. It is even higher in villages of the CRR and URR regions as evidenced in the table below.

Figure 11: Basic drinking water

Although much progress has been made regarding open defecation and improved sanitation practices in The Gambia. The piloting of CLTS (Community Led Total Sanitation) in 2009 and the gradual expansion of the approach through targeting of communities in West Coast Regions, particularly along The Gambia – Casamance Border, Central River, Upper River, and Lower River Regions have further reduced the rate of open defecation. Data from the Multiple Index Cluster Survey (MICS) shows 36% decline of open defecation from 4.4% in 2005 (MICS III2) to 2.8% in 2010 (MICS IV). The proportion of caregivers practicing appropriate disposal of children faeces has risen from 81.2% in 2005 to 88.1% in 2011 (MICS III and IV).

LGA	Basic Drinking Water	Basic Sanitation	Basic Hygiene
National	85	47	31
Banjul	100	56	52
Kanifing	98	63	34
Brikama	86	53	31
Mansakonko	88	41	45
Kerewan	72	25	31
Kuntaur	66	13	29
Janjanbureh	69	26	18
Basse	84	50	24

Percent of population using basic drinking water, sanitation and hygiene services by LGA

Figure 12: WASH status in The Gambia as per MICS report 2018

Figure 13: Sanitation in The Gambia as per MICS report 2018

8.5 Agriculture

Overview

The agriculture sector is the backbone of The Gambia's economy and the principal source of livelihood for the rural population for the majority of households below the poverty line. Its performance and share in most key socio-economic indicators in the past decade have not been consistent, and in some years, performance in production stagnated or even declined. This has been attributed to a combination of factors including adverse climatic conditions, land degradation, salinization, coastal erosion, degradation of agricultural land, and youth migration, which are amongst others serious threats to national food security and stability in The Gambia.

The sector is characterised by: semi-commercial groundnut and horticultural production, small-scale subsistence rain-fed crop production mostly undertaken during a single rainy season of five (5) months (from June to October), traditional livestock rearing, a large artisanal fisheries sub-sector and small-scale cotton. Due to lack of investment in modern irrigation, the potential of the agriculture has been hindered, leading to inefficient production to meet the national food needs. The productivity is quite low for all major staples. Yield data indicates large yield gaps compared to Senegal despite similar agro-climatic environments, rainfall patterns and occurrence of weather events. As a result, the country is obliged to use scarce foreign exchange to import about 50% of its requirements.

Agriculture Growth and Performance[17]

The Agriculture sector is a major driver of growth in The Gambia. It accounts for approximately one quarter of GDP and provides employment to almost 70% of the labour force. Output in the agricultural sectors is

[17] GNAIP. 2015. Republic of the Gambia National Agricultural Investment Plan (GNAIP). Banjul, the Gambia

growing steadily, however, current output levels only meet 50 percent of the country's food needs. Crop yields are generally low, with an average of 1.5 tons/Ha compared to an estimated potential of 3-4 tons/Ha for cereals, excluding rice, for which yields of up to 6 tons/Ha have been obtained elsewhere. The main agricultural products grown locally are peanuts, rice, millet and sorghum. The main fruits produced include mangoes and cashews. These are also the major cash crops, while rice is the staple crop. Approximately only 38 percent of the total land area of the country or about 430,000 Ha is arable. Agriculture is listed as a strategic priority in the National Development Plan (2018 – 2021).

Fisheries

The fisheries sub-sector is both industrial and artisanal, with the latter accounting for about two thirds of the total catch. Marine fish resources are enhanced by the freshwater flows of the River Gambia. Studies by FAO suggest that there is high pressure on demersal fish stocks, and the Government is trying to reduce fishing of these species. But pelagic fish are believed to be under-exploited, as they are mainly caught by artisanal fishermen using gill nets and sold in urban markets.

Key constraints to the development of fisheries, especially artisanal fisheries, include post-harvest losses, weak extension & research systems, and poor marketing infrastructure. There are few projects / schemes implemented in the country focussing on the fishery sub-sector. For instance, the Special Programme for Food Security (SPFS) has provided a wealth of examples of community organisation and specific food security activities such as water harvesting, improved and diversified production including poultry, small ruminants, aquaculture, mushrooms, exotic fruits, cashew and rice to achieve local food security.

Forestry

There is currently a heightened awareness of the importance and value of the Forestry sub sector to the macro-economic development in The Gambia, particularly to food and nutrition security for poverty reduction, economic growth, climate change implications, and conservation of the country's biodiversity and its fragile ecology. Nonetheless, the constraints in the subsector are mainly structural, particularly weak institutional setting at the same time ensuring its sustainable management.

Food Security

Production of food commodities for local consumption heavily depends on the weather. The country produces about 50 percent of its domestic requirements. The country relies on rice imports from the international market to cover its consumption needs, and food prices are strongly affected by the exchange rate of the Dalasi. Soaring international food prices and low national production are leading to high inflationary pressure on the domestic food market, eroding the purchasing power of urban and rural consumers. Subsistence farming households do not produce enough in their monocrop system to achieve a marketable surplus. Income from agriculture and other sources is limited, often due to insufficient marketing opportunities. Poor rural households have to bridge a food deficit period between 4 to 6 months, generally in the rainy season.

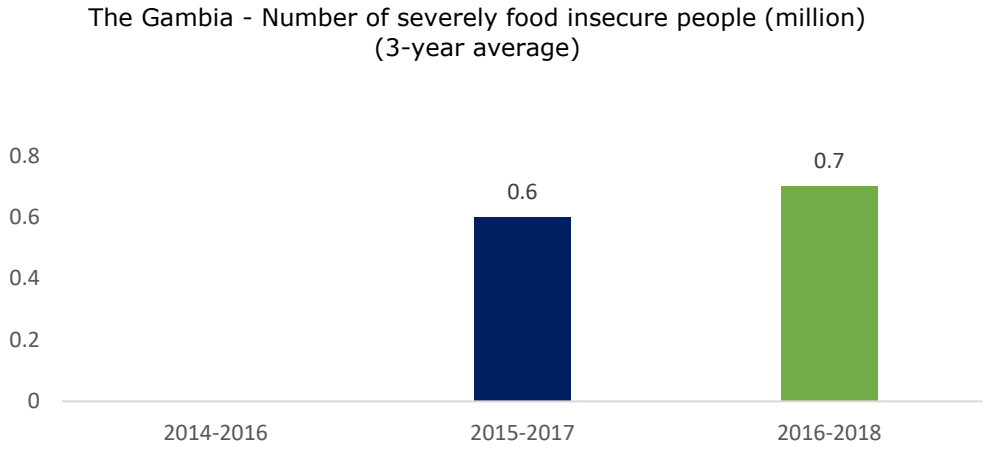


Figure 14: Food insecurity

Source: FAO database

Agriculture is the key sector for investment to achieve long-term food security. It's highlighted under Strategic Priority 3 in the National Development Plan: Modernizing our agriculture and fisheries for

sustained economic growth, food and nutritional security and poverty reduction. In order to achieve this, the agricultural sector needs to be transformed from subsistence farming to market-oriented commercial enterprises. Comparative advantages of agricultural and human resources need to be built, emphasising productivity increases and competitiveness.

Livestock

Livestock has been considered as the significant wealth within a rural household. Livestock owned by rural communities of The Gambia mainly constitute cattle based production systems, small ruminants (sheep and goats), poultry, draught animals (horse and donkeys). Largely, the livestock production systems in the Gambia is traditional, nomadic pastoralism for cattle and small ruminants (although small ruminants are on free range but tethered in the inner fields during the rainy season). Small ruminants are also being increasingly fattened for commercial purposes. Poultry production in the zone is traditionally widespread characterized by a free-range system where the birds scavenge for feed and water[18]. It was noted that from the field visits that cattle production systems are primarily managed by the women members of the community whereas the financials are bestowed with male counterparts. On the other-hand, small ruminants are fully managed by women members.

Opportunities in Agriculture & Livestock development

- Favourable policy environment – adoption of Agriculture and Natural Resources (ANR) policy 2017-2026 by the GoTG
- Emphasis from the Government on increasing land and labour productivities and intensity of land use as well as changes in land use pattern
- Increased focus on Modernization, structural reorganization and rationalization of ANR production systems with a view to increasing productivity and, expanding and diversifying the production processes which require substantial expansion of capital expenditure in horticulture (floriculture, pomology and floriculture), livestock rearing, forestry and wildlife, fisheries, ground water resource exploitation and the integrated development of related agro-based industries.
- Promotion of environment friendly investments in ANR and agro-based processing/downstream activities vis-à-vis redistributive trade in particular with a fiscal review
- Labour-saving agricultural machinery also provides opportunities for both exporters and domestic manufacturers. Tractors, power tillers, ploughs, sprayers and harvesters are being used in commercial farms. Multilateral development agencies such as the World Bank, African Development Bank, and specialized United Nations agencies (e.g. UNDP, IFAD, and FAO) frequently fund agricultural projects in the country. Some of these projects require the supply of machinery and other imported equipment.

Key Challenges and Threats of Agriculture Development

The Gambia is highly vulnerable to recurrent droughts, floods, and other climate change related risks, thus the agriculture sector, though had been contributing up to 30 per cent of GDP in the past, this has declined to 27 per cent in 2017 (GBoS 2017). Average agricultural production growth rate per annum was 2.5 per cent from 2007-2016 (below the population growth rate of 3.1 per cent), with relatively wide yield gap across major crops.

a. Irrigation infrastructure or investment is very limited, leaving the country's agriculture almost entirely dependent on rainfall, despite the availability of abundant inland water resources.
b. The government of The Gambia is unable to regulate and control wild forest fires. This is primarily a result of out-of-date policies that lack clear-cut measures and enforcement mechanisms. There is an urgent need for a new policy that recognise and adapts current thinking and practices related to early-dry-season controlled burning, which has proven successful in neighbouring countries.
c. Due to the high stocking density and the incidence of annual bush fires that consume most of the feed resources, there is consistent scarcity of livestock feed during the dry months of the year. The convergence of livestock in and around isolated pockets of remaining grazing areas leads to range degradation, loss of topsoil, and the proliferation of unpalatable species.
d. The Gambia is currently experiencing a rapid depletion and degradation of the natural resources by locals and foreigners. This is compounded by the population pressure, salinization, and deforestation, decreasing fertility of the arable land, erosion, recurrent droughts and persistent climate variability.
e. Lack of agriculture financing or investments for both the farmers and the sector. Lack of credit facilities compels farmers to borrow money at a high rate (commercial rate).

[18] Draft Gambia Agriculture Transformation project

f. In case of livestock, there seem to be considerable shortages for the feeding systems for cattle, small ruminants, pigs and poultry.
g. High morbidity and mortality in small ruminants due to preventable diseases like PPR, etc. coupled with inadequate veterinary care services in the rural areas.
h. Inadequate finance for the purchase of animals along with poor marketing facilities for the produce.

Thus highlighting the need for urgent interventions like PUDC in Agriculture to boost rural economy.

Case Study:

National Agricultural Land and Water Management Development Project (NEMA) 2012 - 2019

Project NEMA was a $65m project co-financed with IFAD, IsDB and some domestic funding. The project specifically worked to aid women and young adults in The Gambia and reduce poverty rates by implementing sustainable land and water management practices, productivity will increase among this group.

The main goals of NEMA include were to address the proper use of farmland and the development of domestic markets. The project enhanced the usage of watershed areas, which are key to many ecosystems and usable for crop production, and by making agriculture profit-oriented, which gives an income to these women and young adults.

Lessons learned from this project include:

- **Beneficiary ownership requires active participation of beneficiaries in the planning, implementation and monitoring of project-financed activities**. A key conclusion of the NEMA evaluation was that beneficiaries were not adequately consulted in project planning, implementation and monitoring. This resulted in a lack of buy-in and ownership and manifested itself in poor maintenance and sustainability of investments.
- **Targeting must be the result of in-depth analysis and offer specific services adapted to the needs of these beneficiaries.** Although most projects had a high number of women and youth as beneficiaries, this often occurred by default.
- **New technologies, modern farming systems, skills, knowledge and market opportunities are essential to attract youth in agriculture.** Misconceptions, image and perceptions about working in agriculture have constrained the number of young people opting for a career in the sector.
- **Choice of technologies must be appropriate for farming conditions and to the technical and financial capacities of beneficiaries.** Agricultural investments should target lower-cost, easier-to-maintain equipment, which is more adapted to the requirements and capacities of the target groups and greatly increases chances of sustainability.
- **The farmers' and producers' associations and cooperatives need capacity-building in managerial skills** to provide better services to their members and sustain their support without dependence on government support.

8.6 Financial Inclusion

Overview

The Gambia's financial sector is small, even relative to that of its population. It is dominated by the banking sector with is regulated by the GoTG through the Central Bank of The Gambia.

Licenses are issues by the CBG under the Central Bank Act (2018) and monitors, regulates, and supervises the banking system. Besides the banks (of which there are currently 12 active) the financial sector also consists of insurance companies, a number of foreign exchange bureaus and pensions, and provident and housing finance funds.

Whilst The Gambian banking sector as a whole is healthy, the bulk of commercial bank lending is concentrated in the distributive trade sector, due to the low risks and quick returns. Commercial banks are not allowed to offer deposits in foreign currencies and they do not provide long-term financing. Over the past 2-3 years interest rates for short term financing have been hovering around 27-28%. The CBG base rate (or monetary policy rate) is currently 12.5%[19]. This has come down significantly since 2016 where it was 23% and even further since 2004 where the rate was 34%.

For rural communities, providing access to credit has long been the mainstay of development strategies across Africa. Supply-led rural finance have been supported and sponsored by a number of donors and governments, The Gambia is no exception (see GAWFA). These interventions are often to attempt to mitigate the 'urban-bias' of macroeconomic policies. This is added to by the relative absent of commercial bank in rural financing. This is due to the perceived high risks and heavy transactions costs present in the rural areas.

Table 4: Distribution of Commercial Banks across the Country (Source: CBG)

Region/LGA	No. of Banks	No. of Branches
Banjul	12	13
KMC	12	41
WCR	8	21
NBR	4	5
LRR	1	1
URR	5	5
CRR	0	0
Total		**86**

Since ordinary The Gambians were not able to access traditional sources of finance, microfinance emerged in the late 2000s aiming to reduce poverty by providing financial services, thus expanding rural economic opportunities and reducing their vulnerabilities.

Microfinance institutions (MFI)[20]

Village Savings and Credit Associations (VISACAs)

These are community based MFIs that are owned and managed by its members. Different networks used to provide both financial and technical support for the VISACAs during their establishment to ensure sustainability. These networks were also called promoters including: MICROFIMS, AFET, FFHC and FORUT respectively.

Finance Companies (FCs)

These are institutions owned by individuals who have subscribed for shares to form the company. The basic regulatory requirements that guide the operations of these institutions include: a Minimum capital of D50, CAR of 20%, and Gearing Ratio of 10 times, Required Reserve of 8%, liquidity ratio of 30% and ROA of 1%.

[19] As at November 2019.
[20] Central Bank of Ghana

Challenges

Accessibility of credit and banking facilities

As mentioned above, often whilst made with the best intentions the policy of the CBG can be biased towards the urban areas which further isolates the rural communities. Whilst the current interest rates are high, and potentially prohibitively so for a small business, at least a potential/growing small business can access finance. In the rural areas this is often not even an option.

Cultural and religious dynamics

It is important to important to consider and factor in cultural and religious dynamics when attempting to make changes to the financial landscape through external interventions. For example, there is a clear need to apply Islamic financial principles and banking practices in a sensitive manner when undertaking interventions in a predominantly Muslim country such as The Gambia. There may be a need to educate and address cultural and religious practices with respect to issues of employment, loans, savings and bank interest. In ensuring sufficient consideration of religious and cultural norms there is a greater chance that the efficiency and effectiveness of project will be increased. These considerations are particularly important in financial spheres, due to the close relationship between finances and family dynamics (especially prevalent in more rural areas), which are further informed by culture and religion.

Skills and knowledge gaps

The provision of the opportunity to gain finance is not merely enough to increase financial inclusion. Institutions must be structured properly and individuals must be equipped with the right skills and knowledge in order to make the most efficient use of funding. Especially when considering micro-credit financing, without an improvement in the competencies of the beneficiaries, and effective accountability practices implemented by the providers of credit, little benefit would be experienced by the targeted communities.

Sector collaboration

There must be collaboration between NGOs, the private sector and the public sector in order for the development and growth of finance interventions, and especially with respect to micro-financing initiatives.

With reference to the skills and knowledge gaps highlighted above a large component of success of any interventions will the coordination between the base support and educational initiatives provided by NGOs and the public sector. High levels of coordination help to reduce the risk to the private sector when improving financial inclusion. This is not always the case, and within The Gambia policy ideas and workable recommendation need to be developed by a group of organisations including members of parliament, local and international NGOs as well as academics. In this way the private sector can have confidence that proposals were not developed in isolation but with high levels of coordination and cross sector cooperation.

Opportunities

Microfinance can be championed as an important development tool with innovative methods of combating poverty, smoothening consumption and providing vital financial services to the entrepreneurial poor by expanding their economic opportunities and reducing vulnerabilities (UNCDF 1999:13). The potential of microfinance is not limited to the provision of financial services but has demonstrated its ability in successfully addressing issues of gender equality, more equitable income distribution and promotion of participatory approaches.

As a development tool, microfinance focuses on bottom-up, women, the majority under-served, job creation and ultimately alleviate poverty. The importance of microfinance cannot be over-emphasised in closing an important gap so that micro and small enterprises, farmers and those having difficulties in accessing formal finance can access financial products and services (including not only credit but also most importantly savings, insurance and remittances) to improve their lives and other dynamic livelihood needs.

8.7 Education

Overview

The expanding population within The Gambia combined with extensive urbanization in some areas eases constraints in education provision, however in other it presents greater challenges. The unit cost of establishing school places is high in urban rather than rural areas (due to land scarcity and unit cost of construction). In some cases this has led to overcrowding of schools and classes which undermines the provision of quality education.

The school age population growth however has been slowing in The Gambia over the last 30 years (see Table 5), and is projected to continue to do so. Albeit, as mentioned above overall population growth being positive and set to continue this way the slower growth rate of the younger age group suggests the start of a demographic transition. In 2013, the basic school aged population (7-15 years) fell to 22 percent of the total population from 24 percent in 2003. Based on the projections from the Ministries of Basic and Secondary Education and Higher Education, Research Science and Technology this trend will continue in the short- to medium-term

Table 5: The evolution of school age population (1993 - 2030)

	1993 Census		2003 Census		2013 Census		2020 projection		2030 projection	
	Total	%	Total	%	Total	%	Total	%	Total	%
Total population	1,038,145	100	1,360,681	100	1,857,181	100	2,308,994	100	3,151,524	100
3-6 years	150,862	15	178,322	13	211,624	11	238,570	10	283,124	9
7-12 years	170,522	16	224,770	17	283,290	15	333,101	14	419,825	13
13 – 15 years	71,632	7	95,876	7	128,285	7	157,297	7	210,481	7
16 – 18 years	64,734	6	86,319	6	119,319	6	149,669	6	206,888	7
Subtotal	457,750	44	585,287	43	742,518	40	878,637	38	1,120,318	36

Source: MoHERST

If this trend remains, the demographic pressure on provision of basic education would become lighter with a smaller proportion of the population needing basic education.

Table 6: Gross Enrolment Rate by Level of Education, Sex and Local Government Area (Source: GBoS)

	Primary			Secondary			Tertiary		
	All	Male	Female	All	Male	Female	All	Male	Female
THE GAMBIA	**86.9**	**85.5**	**88.4**	**53.8**	**52.0**	**55.3**	**7.3**	**9.5**	**5.6**
Urban	***95.4***	***93.4***	***97.5***	***64.9***	***63.7***	***65.9***	***10.2***	***12.9***	***8.2***
Rural	***78.6***	***77.8***	***79.5***	***40.0***	***38.8***	***41.0***	***2.7***	***4.6***	***1.1***
Banjul	111.2	107.5	115.9	72.4	72.3	72.4	11.9	14.3	10.2
Kanifing	100.0	96.4	103.7	66.9	68.7	65.5	8.3	6.8	9.5
Brikama	95.0	93.9	96.2	65.9	63.9	67.6	11.7	16.3	7.7
Mansakonko	98.8	95.4	102.3	48.6	50.2	47.2	1.4	2.1	1.0
Kerewan	79.7	78.5	80.9	45.9	42.9	48.9	1.5	2.8	0.7
Kuntaur	43.0	39.6	46.1	20.3	17.9	22.7	0.9	1.5	0.5
Janjanbureh	61.4	61.4	61.3	35.0	30.3	38.7	1.2	1.7	0.7
Basse	80.5	79.5	81.6	23.7	24.3	23.1	1.0	1.8	0.5

Structure of the Sector

Prior to 2007, education was the responsibility of the Department of State for Education (DOSE).

In 2007, the DOSE was split into two separate entities:

1. Ministry of Basic and Secondary Education (MoBSE); and
Ministry of Higher Education, Research, Science and Technology (MoHERST).

MoBSE operations are managed centrally especially with regarding financial management, but partially decentralized to its six Regional Educational Directorates which facilitate regional level operations and management. MoHERST, on the other hand, is highly centralized at all levels of operation.

Challenges to the sector

There has been a noticeable improvement in developing the education sector over the last few decades but many challenges remain, especially for the rural populations, for example educational attainment has been rising but remains low, the quality of education has also risen but still remains low even by regional standards. Universal Primary Education (UPE) has been achieved, but enrolments at the post-primary levels have not been rising as fast.

There is also a large skills gap in the adult population, who were not beneficiaries of the relatively recent improvement in the primary and secondary sectors. Emphasis needs to be placed on tertiary education and equipping the workforce with the right skills to be better aligned to the needs of the modernizing economy.

However, many of these challenges could be attributable to under financing of the sector that is operating in a fiscally constrained environment. Unless The Gambia's economy grows at a much faster rate than in currently projected, the probability of substantially increasing the allocated domestic resources to the sector in the next 5 -10 years is minimal. It may therefore the case that the sector needs to try to do more, with the same – i.e. become more efficient.

Specific challenges are highlighted below:

Increasing Access to Education at all levels

The Gambia has made impressive strides since 2009 in extending access to basic education to as many of its children as possible, as discussed above. Moving forward the challenge is to target the most rural and hardest-to-reach to make sure that all children of the official primary age group are accessing schooling. This involves targeting both boys and girls from more rural areas, and the poorest of the urban and rural poor. More work is needed to develop target policies and strategies to address the barriers to participation for the most vulnerable – especially adolescent girls and children from poorer and rural backgrounds and at the secondary level. As the IHS 2015 household survey revealed that there are still significant disparities between children from urban and rural areas.

Improving Children's Readiness for School and Pre-Basic Education Provision

The provision of affordable Early Childhood Development programmes (ECD[21]) is a key building block for reducing the disparity in this area. With affordable and widespread ECD not currently available, this means that a large proportion of the young The Gambian population are excluded from any early learning and development opportunities, especially children living in rural areas and children from poorer backgrounds. There is currently large regional inequalities in the provision of ECD centres.

Improving the Quality of Education

An important challenge for the sector remains the need to address quality education throughout the system. The sector need to consolidate and advance the quality improvement measures that have been initiated over recent years, such as improvements in textbook provision, and continued supervision, monitoring and evaluation of policy implementation across the system. According to the IHS 2015 there are also significant gender, age and geographic disparities. Most notably, whilst 46 percent of workers in urban settings have no formal education this rises to 72 percent when looking at the rural population.

Vocational Education

Vocational Education has the potential to better prepare students for wage and self-employment as part of the socio- economic diversification process. Despite the potential benefits, vocational education continues to suffer from inadequate infrastructure and small number of students. This is also combined with a lack of funding scholarships for teachers, instructors and students. It also suffers from the perception that vocational education is somehow a suboptimal form of education and therefore the second option for most students.

Rural/Urban Disparity Summary

Children in the rural areas are disadvantaged with regard to access to education and completion of their education at all levels. According to The Gambia HIS, across all measures of educational enrolment and attainment scores are lower in rural areas compared to urban areas, however the exact reason for this is laced with multi-collinearity and hard to find, target and mitigate a single factor. In addition, educational attainment in rural areas is often low, which is commonly associated with a lack of education among parents. This reduces the chances of their children attending or staying in school. On the supply side, it is costlier to provide schools in rural areas because of higher unit costs emanating from the need for teacher incentives and higher teacher to pupil ratios.

[21] Early Childhood Development (ECD) is a three-year programme provided for children aged 3 to 6 years by the public and private sector, to help further stimulate development of their psycho-motor and mental faculties and to provide them with pre-literacy and pre-numeracy skills

Current projects[22]

Under the Education Sector Strategic Plan a number of plans have been put in place and are either underway of are in the planning stages. Only the high level detail has been displayed below for brevity:

Intervention 1: "Access and Equity programme area".
The interventions planned under the Access and Equity Programme are expected to deliver increased access to and improved equity within basic, secondary, technical and vocational education and training, tertiary and higher education. They include aspects such as scholarships and infrastructure improvements in Ndembam, Julangel etc… and also gender specific interventions. Total estimated spend from 2014 – 2022 is approximately 109 million USD.

Intervention 2: "Quality and Relevance Programme Area"
This aims to improve areas such as textbook provision, primary and secondary curriculum, recruit and train high quality teachers and improve the management of school –amongst other interventions. Total estimates spend of approximately 47 million USD (2014 – 2030)

Intervention 3: "Research and Development Programme Area"
The strategic interventions planned under the Research and Development Programme are expected to deliver: Research in the critical fields of development, mainly health, agriculture, basic sciences and human resource development and management promoted and strengthened. Approximate cost from 2014 – 2030 is 20 million USD.

Intervention 4: "Science, Technology, Engineering and Math Programme Area"
The STEM Programme Area is expected to deliver this output: STEM national processes as envisaged in The Gambia's development plan harmonised, coordinated and integrated. Approximate cost from 2014 – 2030 is 41 million USD.

Intervention 5: "Sector Management Programme Area"
Approximate cost from 2014 – 2030 is 8.3 million USD.

There is an opportunity, especially when considering the infrastructure projects under Intervention 1, for the PUDC to streamline and fast track the delivery of some of these projects.

8.8 Healthcare

Overview

The healthcare structure in The Gambia is characterized by three service level delivery, namely Primary, Secondary and Tertiary[23]. The primary healthcare level focuses more on villages with a population of over 400 people where a Health Worker and Traditional Midwife will be initially trained and assigned to deliver primary healthcare to their village of responsibility. The Village Health Workers (VHWs) are assigned the role of maintaining the supply of essential drugs, the provision of outpatient care, making home visits and carrying out health education programs. The traditional birth attendants conduct deliveries and identify and refer at-risk mothers.

At the secondary healthcare, medical care is provided by the large and small health centres which are around seven main government-run and private health centres. Each facility has its resident nurses, doctors and ancillary staff. Until recently, Minor Health centres had only had registered and enrolled nurses and other support staff. These facilities provide our-patient services and in-patient services at a small scale. Dispensaries, on the other hand, are staffed by enrolled and community health nurses.

However at the tertiary healthcare level, services are delivered by four main referral hospitals where are located in Banjul, Farafenni, Bwiam and Bansang. The Royal Victoria Teaching Hospital (RVTH), located in Banjul, is the main referral hospital offering specialist consultant services.

Table 7: Public Sector Service Delivery Structure in The Gambia

Facility Type	Public	Private

[22] Sourced from the Education Sector Strategic Plan 2016 – 2030 (MoHERST)
[23] Ministry of Health and The Gambia National Health Policy (2012-2020)

Primary Healthcare Level		
Primary healthcare village health posts	634	
Service Clinics	11	
Secondary Healthcare Level		
Major health centre	4	36
Minor health centre	49	
Community clinic	60	
Reproductive and child health centre	3	
Tertiary Healthcare Level		
Teaching and specialty hospitals	2	3
General hospital	5	
District hospitals	4	

Source: MOH - Service clinics include those associated with military, police, fire and prison bases and facilities

Health Financing in The Gambia

The Ministry of Health (MOH) is responsible for all health related activities in terms operations and funding in The Gambia due to the fact that the public health sector covers approximately 80% of the health facilities in the country. It is important to also indicate that private sector provides healthcare services in the Greater Banjul Area, whilst few NGO's cover healthcare services in the remote area. Thus in The Gambia, the provision of healthcare is dominated by the Government facilities under the basic care package at all the three levels of health service delivery.

In The Gambia, major financing for public healthcare relies on programme-based budget allocations to the MOH from the National Treasury's general tax revenue base. Additional resources are collected through revenue collection in terms fees paid by the patients and support from the international donor organisations.

Per the World Bank's World Development Indicators 2019 database, in 2017, the expenditure on health for The Gambia was US$49 million from US$21 million in 2003, representing an annual average growth rate of 7.30 percent.

The chart below illustrates the trend of the expenditure on health in The Gambia from 2003 to 2017.

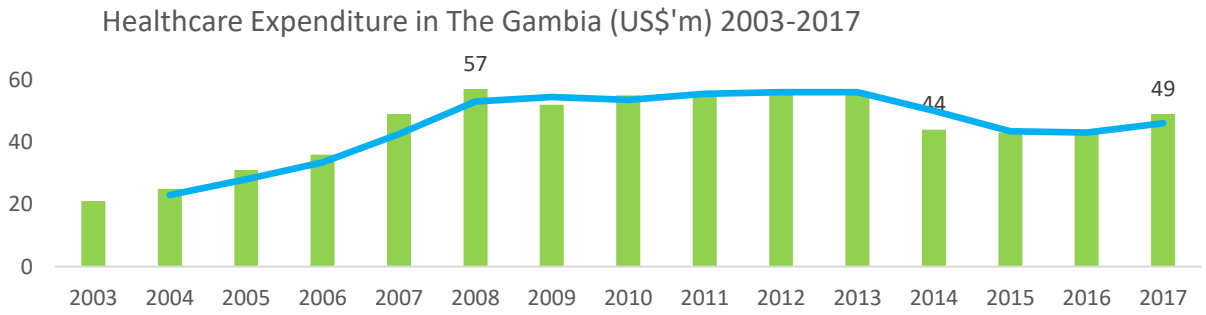


Figure 15: Healthcare Expenditure in The Gambia

Source: World Bank Database 2019 – Healthcare Expenditure in The Gambia

According to World Health Organisation (WHO), per capita spending on health in The Gambia is close to WHO US$112 estimate of the level of health needed in a low-income country to achieve the SDGs for health[24].The Gambia however falls well below the Africa regional average total health expenditures per capita. The government through health strategy plan has development objectives to improve on healthcare access by 2020[25].

[24] Financing transformative health systems towards achievements of the health Sustainable Development Goals 2017
[25] Acceleration of Quality Health Services and Universal Coverage 2012 - 2020

Basic health statistics[26]

Metric	2018 Measure	2010 Measure
Life expectancy	61.7	59.6
Infant mortality rate (per 1000 births)	41.4	47.2
Current health expenditure (% of GDP)	4.4	5.7
Hospital beds (per 1000)		1.1[27]

Challenges in the Health Sector in The Gambia

The Gambia's health sector has over the years been under great pressure due to a number of factors: the growing population rate, inadequate financial and logistic support, shortage of adequately and appropriately trained health staff, high attrition rate and lack of efficient and effective referral system. Poverty and ignorance have led to inappropriate health seeking behaviours and contributed to ill health[28].

Management of resources for healthcare, both human, financial and material, still remains centralised at the Ministry of Health and Social Welfare headquarters. Divisional health systems are weak with no clear operational linkages with the central level, the community and the other providers in the private and traditional healing systems. There is need for improving efficiency and effectiveness in the organisation and management of the health sector through:

- Management reform
- Creation of popular structures (i.e. Hospital board and local public health committees) for re-enforcing community participation in decision making
- Devolution of responsibilities, authority and resources to the Hospital and Divisional Health Management Teams and village development committee.

Linkages between and functions of all the management structures should be clearly defined to ensure harmony, promote self-management (autonomy) and re-enforce the decentralisation process[29].

Opportunities in the Health Sector in The Gambia

Investment opportunities in the healthcare in The Gambia are numerous and can target various complementary facets of the health ecosystem, including physical infrastructure, financial solutions, emergency response, and drug, vaccine and diagnostic development. Direct investments into individual companies allow for targeted opportunities; fund investments enable portfolio diversification to balance risk and return. A few examples can help illustrate the growing landscape:

- To expand and enhance the physical infrastructure of hospitals and clinics that serve lower-income patients. The objective of the health strategy plan is to provide an enabling environment and to build networks of health facilities in The Gambia.
- The health service providers can leverage on UNICEF's Bridge Fund which is an accelerator for the provision of healthcare commodities that offers investors a reliable fixed rate of return while deploying critical supplies for relief and development globally.
- Currently, the Global Health Investment Fund (GHIF) has a robust portfolio of companies focused on the development of pharmaceuticals, vaccines and diagnostics to address infectious diseases in Africa and other parts of the developing world. Local health practitioners can leverage on these opportunities and provide a scalable healthcare services and jobs.
- Investments in digital tools and diagnostics.

[26] Human Development Report (The Gambia – 2018)
[27] 2011 measure (last updated)
[28] https://www.who.int/workforcealliance/members_partners/member_list/dpehThe Gambia/en/
[29] http://www.accessThe Gambia.com/information/health-social-welfare.html

9. About PUDC in The Gambia

9.1 Why the PUDC Model?

The costs and benefits of the PUDC model are explored later on in the report, this section will address whether the conceptual model and design of the PUDC is a beneficial one for The Gambia.

The uniqueness of the PUDC is its integrated and systemic approach to combining economic development of infrastructure and equipment throughout The Gambia. Such an approach treats the causes of poverty and inequality in rural areas with a comprehensive and integrated response. This integrated approach has been to combine development interventions into a package and encourage sectoral and holistic response to a development problem.

Section 7 gives more detail on The Gambia as a country, however a summary is below as relating to the chosen interventions (Section 9.2):

- As per the rural poverty indices available, as many as 39 districts of the country have poverty rates over 50%, with 15 of them having over 75%.[30]
- Based on the details provided by the Government, as many as 88% of the villages are not electrified, with 12 districts lacking any network for electricity.
- The water supply in rural areas is not up to expectations. As per MICS2018 data, 85% of households have access to basic drinking water services, however only 34% (one third) of households are using safely managed drinking water services.
- As far as rural roads are concerned, the conditions seem to be precarious in The Gambia. With many of the villages yet to be connected with the highways (primary or secondary roads), transporting people in need of urgent medical care to the hospitals or surplus supply to the market remains an unaddressed concern.

The Government of The Gambia is keen to adopt the successful rural transformation project being implemented by Senegal, namely PUDC, and fast track rural infrastructure development in the country.

SDG Alignment

To enhance the speed in the execution of the programme, the PUDC has adopted the approach of conducting a simultaneous implementation of activities through a UNDP procurement vehicle. This methodological approach to PUDC management means that the programme can rapidly meeting the urgent needs of rural populations with socio-economic infrastructure and basic facilities.

The simultaneous approach integrates the concerns of different stakeholders, technical ministries of the program both in its formulation and execution and its management. UNDP, acting as technical implementing agency, will also need to involve its own institutional resources.

One of the axes of the PUDC structure is the speed at which interventions are implemented due to procurement being managed and conducted through UNDP rather than a government procurement process. A summary of the SDG performance can be found in the appendix and whilst in some areas The Gambia has made good progress there is a clear need for swift intervention in others (Section 9.2).

Below are some specific areas, but none the less the overall mapping of the Gambia SDGs to the PUDC areas of implementation shows direct links with 15 of the 17 SDGs. Only SDG 11 and 14, respectively, related to sustainable cities and the Management and Protection of Oceans and seas are not directly related to the PUDC.

The end goal of the PUDC is to significantly transform the lives of rural populations and reduce inequalities between rural and urban, which gives a direct link SDG1, SDG2 and SDG10.

As an example, under SDG 1, insignificant progress has been made for both the proportion of population living under national poverty and the population covered by social protection. The lack of progress over the last number of years on these measures mean that there is a need to act quickly, the PUDC model has the ability (as demonstrated in Senegal) to rapidly improve the poverty indicators for the areas benefiting from the implementations.

[30] As per GBoS IHS survey - 2015

If The Gambian Government is able to finance some, if not all of the initial phases with their own resources it will be aligning to SDG17 (Partnerships), and critically The Gambia will be strengthening domestic resource mobilization.

In addition to the speed, the PUDC is a programme focussed primarily on infrastructure. This is an area, again, where within the SDGs improvements are required. There is currently a serious industry and infrastructure gap in the country, Gambia only scores 18% for this measure. Therefore, when considering potential methods for providing benefit for ordinary Gambians, a programme that has a focus on infrastructure will likely reap more reward due to the current lower level of development.

The PUDC contributes to SDG3 by giving people the means to live a healthy lifestyle and promote the welfare of all for all ages, SDG6 by ensuring universal access to water supply and sanitation and sustainable water resource management and SDG7 - ensuring the access for all to reliable, sustainable and affordable modern sources of power.

Through all its components, the PUDC promotes the improvement of local income, improved agricultural productivity and the development of rural entrepreneurship and production transformation through the value chain. These objectives contribute to the achievement of SDG8 and SDG9.

All PUDC achievements contribute to stabilising populations in their land and reduce the phenomenon of rural exodus and illegal migration. The PUDC creates jobs and also fight against terrorism and cross-border traffic and addresses the vulnerability of populations affected by food and nutrition insecurity and finally contributes to SDG16.

Whilst the move to include women in all aspects of society is going in the right direction, Gambia's culture and institutional setup means that progress is slow. However through the PUDC the empowerment of women is a fundamental objective – whether that be in the creation of new roles for women directly or as a spill over from the electrification or creation of agricultural areas meaning that the 'traditional' role of women can be changed.

Assuming that all newly constructed infrastructure meets environmental standards, and the access to energy and clean water helps preserve the environment, this will contribute to the achievement of SDG 12, 13 and 15.

Realising NDP Objectives

The National Development Plan (briefly referenced in Section 7.4) highlights an integrated and holistic approach to development. Given the alignment to this key aspect, the PUDC is well placed to support the NDP.

It is the case that many previous projects and programmes have invested large sums into reducing poverty levels across The Gambia, yet not all of these have been successful as they ought. Whilst success of the PUDC cannot be guaranteed, if it aligns to the majority of SDGs and the NDP then the conditions for success will at least be set.

The NDP is upheld by eight strategic priorities which have been mapped to PUDC characteristics to show where the PUDC will have a direct, or indirect link to the priority.

NDP Strategic Priority	**PUDC Characteristic**
Restoring good governance, respect for human rights, the rule of law, and empowering citizens through decentralization and local governance	Emphasis and decision making power is delegated down the hierarchy to the community level
Stabilizing our economy, stimulating growth, and transforming the economy	One of the main multiplier effects behind all of the infrastructure projects is the subsequent multiplier effect for the economy. E.g. electrification improved the ability of the household to be economically active
Modernizing our agriculture and fisheries for sustained economic growth, food and nutritional security and poverty reduction	The creation of sustainable, community led agricultural areas is a key facet of the PUDC
Investing in our people through improved education and health services, and building a caring society	Whilst not suggested in Phase 1, further PUDC activity will focus on education and health services. However, by providing access to safe,

	clean drinking water the reliance on health services should decline
Building our infrastructure and restoring energy services to power our economy	The PUDC is focused on improving rural infrastructures on fast-track mode
Promoting an inclusive and culture-centred tourism for sustainable growth	The PUDC focuses least of all on the tourism aspect of the NDP as it focuses on the poorest and most rural communities
Reaping the demographic dividend through an empowered youth	Through the development of rural communities the PUDC seeks to retain the youth in their home regions by giving them increased opportunities
Making the private sector the engine of growth, transformation, and job creation	The PUDC is not solely financed through government funding, there is a large opportunity for public-private partnerships to occur. This is especially the case when ongoing returns are foreseen (water/electricity)

9.2 PUDC Intervention Sectors

In the case of rural infrastructure development, it is not the case that one can simply eliminate the areas that are not required because selected are the poorest and in need of infrastructure improvements in all sectors. The process is rather to work out which area will be the most beneficial and start there (cost/benefits discussed in Section 9 & 10). The selected areas for the initial implementation of the PUDC are feeder roads, electrification, agriculture and livestock and water.

These areas are already the priorities for the PUDC which has evolved from the Programme for Accelerated Community Development (PACD) (Section 9.5).

They have been suggested because they form the basis for any further socio-economic development in the community. Relatively good access via feeder roads, for example is essential for the subsequent construction (or use of) a community health centre – as is the electrification of the particular village. In addition, since these areas are the likely pre-requisites for further development they hold the greatest multiplier effect.

The examples of feeder roads, electrification and rural water are shown below:

Access to Energy

The PUDC wants to increase the rate of penetration electric proceeding by the extension of the existing network and the use of solar energy. Access to energy has the potential to impact 10 SDGs namely SDG1, 2, 3, 4, 5, 6, 7, 8, 11 and 15. To this end, access to energy is a powerful lever for reducing poverty and inequality.

Access to energy (SDG7) generates multiplier effects and improves the productivity of factors, in particular by promoting the food processing and conservation of products (milk, vegetables ...). It allows to boost the creation of national wealth (SDG8), especially at the rural level, and reduce poverty, inequality and food and nutrition insecurity (SDG1, 2 and 10). The energy through the construction of bio-digesters, reduces the labour of women in the search for firewood, which gives them more time available they devote to education (SDG4) and other productive activities. Thus women will see their incomes and improve their health (SDG3 and 5). Access to electricity improves education (SDG4) and health (SDG3) through respective domestic lighting and improving the functioning of health services. Improving the health, education and the preservation of the environment contributes to the fight against non-income poverty and inequality (SDG1, 2 and 10). This will increase the attendance and the quality of services. Finally, the availability of electric power will allow to operate waterworks and upwelling in the water towers to make available drinking water to the rural population (SDG 7).

Feeder roads

The PUDC through this component has the objective to open up the rural areas through the construction and rehabilitation of rural roads. Rural roads are linked to 7 SDGs, namely those relating to the fight against poverty, hunger and inequality as well as those related to education, health, growth and infrastructure.

The construction of rural roads has wide reaching but often hard to quantify multiplier effects. It helps strengthen national infrastructures (SDG9) but also

2. facilitate the transport of goods, improve access to markets for local production and facilitate the supply of local markets from other localities; market access of local products will increase production and rural income (SDG8) and thus reduce poverty (SDG1 and 2) and inequality (SDG10); the supply of local markets for goods and services reduces the purchase price and to increase consumption and thus reduce poverty and inequality (SDG1, 2 and 10); market access also led to the access to production inputs at the lowest cost thanks to lower transport costs, which will result in an increase in productivity and income (SDG8);
3. facilitate the transport of people and improve people's health through better access health centres (SDG3);
4. encourage the emergence of other economic activities around rural roads, improving incomes and thus reduce poverty and inequality (SDG1, 2, 8 and 10);
5. Increase the mobility of people and thus strengthen their freedom and expansion of their choice. improve incomes and thus reduce poverty and inequality (SDG1, 2, 8 and 10);
6. increase the mobility of people and thus strengthen their freedom and expansion of their choice. improve incomes and thus reduce poverty and inequality (SDG1, 2, 8 and 10);

Access to rural water

The objectives of PUDC through this component result in the construction of boreholes, water towers, water troughs for livestock and fountains. And commissioning of these works will allow the satisfaction of water needs. Increasing access to rural water supply affects a total of 9 SDG, namely SDG1, 2, 3, 4, 5, 6, 8, 10 and 16 with regard to the two simultaneous functions that access to water plays, namely, a consumer and a production factor.

The multiplier effects of the availability of rural water will lead to the following:

1. Improved agricultural production, livestock and aquaculture and thus improve food and nutrition security (SDG2), promotes creation of national wealth (SDG8), increasing rural incomes and reducing poverty (SDG1 and 2) and inequality (SDG10);
2. Reduced time spent by women in search of water, which improves their health (SDG4) and gives them more time available they devote to education (SDG4) and other productive activities will strengthen their autonomy (SDG5);
3. Improves access to drinking water of communities, and reduce water-related diseases (SDG3);
4. Improved environment through afforestation irrigated areas around hydraulic structures and choice of species of trees fertilizing soil; improving health, education, environment and food security and nutrition contribute to the fight against non-income poverty and inequality (SDG1, 2 and 10). The availability of water for farmers and ranchers can reduce water-related conflicts and enhance peace and security (SDG16).

Agriculture, Livestock and Labour Saving Devices

The majority of individuals employed at the village level agriculture or livestock area are women. It is essential for this programme to ensure that it designs interventions that uniquely target those who are often most disadvantaged and inhibited from progressing out of poverty.

Increasing the productivity, ownership and revenue from agriculture and livestock will have an impact on similar SDGs to that of water. Specifically 1,2,8 and 10.

The critical SDGs targeted by this set of interventions however is SDG5 – Strengthening Gender Equality.

Reducing time spent by women in production of food, and/or increase in production by women improving the skills and equipment of women will strengthen their autonomy. The community corporations proposed under Institutional Framework will also assist in meeting this SDG.

Summary

Rural infrastructure across the Gambia is needed across many sectors, however as has been alluded to above the priority sectors have been selected on the basis of first-hand information from field visits, expertise gained from stakeholder interaction and an understanding of the sequence of developing the rural areas. Insights and lessons learned were also gleaned from the Senegalese model and informed the sectoral analysis.

9.3 Community Corporations

The sustainability of the PUDC will be the factor on which success of the programme is judged. There is no shortage of successful short term development projects but a distinct lack of long term ones.

The PUDC is proposing an innovative method to organise communities to assist with the long term sustainability of interventions. These are called "community corporations". It will be a legally registered corporation governed by a Memorandum of Understanding (MoU). This MoU would be set by the community members and all assets established within the particular community would fall under the jurisdiction of the corporation. The profits from the operation of these assets (whether dairy cows or water infrastructure) could be reinvested on new business opportunities and/or disbursed as dividends to shareholders. Issues with the organisation and arbitration of cases could be dealt with using existing conflict resolution mechanisms, which if fail to produce a solution the ultimate decisions could be taken to the law courts.

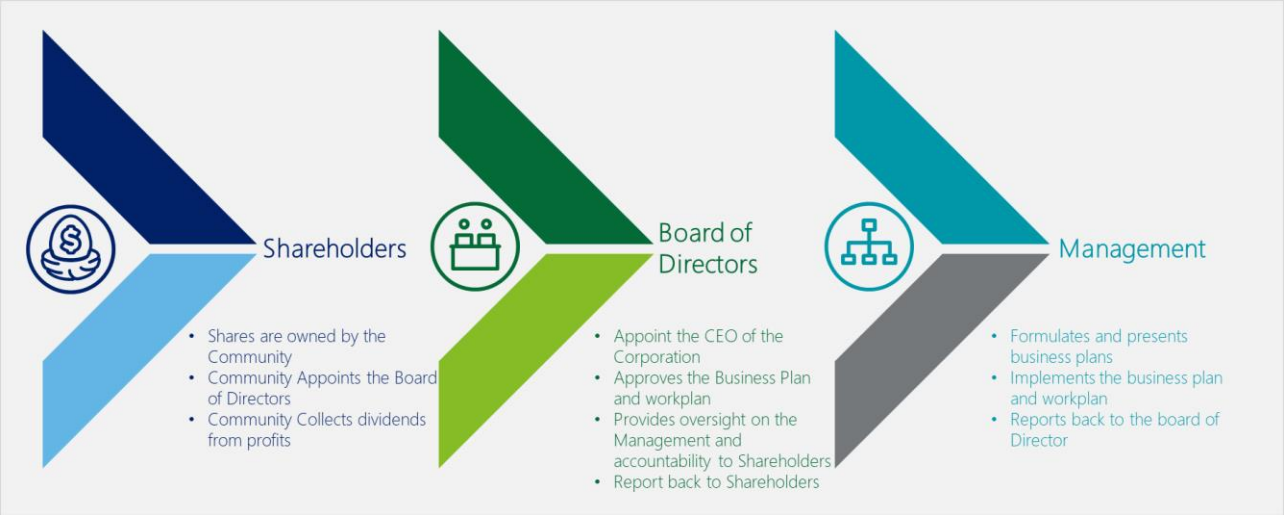


Figure 16: Community Corporations

These structures are supported and enacted by and through **capacity building of the community members**

It is a known fact that without Capacity building of the key stakeholders, it would be difficult for any community programme to succeed. It is suggested that all key community members must be oriented on the project benefits from the inception of the programme. There should be continuous / regular capacity building programmes throughout the project period. Community members must be encouraged with more knowledge and skills to cooperate so that they can deal with the project for sustainability purposes. In case of PUDC, once the village / community is finalised by the district administration or LGA, capacity building should begin from then onwards.

9.4 Government Buy-in

In the perspective of the SDG performance and the new NDP, combined with the evidence from the PUDC Study Tour to Senegal that the Government of The Gambia, with the technical support of UNDP, decided to initiate Programme for Accelerated Community Development (PACD) which aims to foster indigenous, integrated and sustained economic growth to reduce inequalities in access to basic social services between urban and rural areas. The concept has been agreed upon by the Honourable President of The Gambia and rolled out into an action plan.

The purpose of the program is to significantly improve the living conditions of the rural population and to encourage the active engagement of local actors in initiatives to accelerate the economic and social development of their localities. A Steering committee has been constituted with the Director General as the Chairperson to spearhead the PACD implementation and monitoring across the key departments.

9.5 About PACD

The PUDC in the context of The Gambia is unique. This is due to the currently ongoing Programme for Accelerated Community Development (PACD) that was initiated by the Government immediately after the delegation to Senegal.

The aim of the PACD program is to contribute to the significant improvement of the living conditions of people in the rural areas through improving sustainable access to basic socio-economic infrastructure and services, and the creation of a local economy for sustained and improved socio-economic development, social justice and equality.

At present the programme has **five components** as follows:

a. Improving access to portable water
b. Rural Electrification;
c. Rural roads Infrastructure;
d. Food Security (Post-harvest and processing equipment and exotic livestock breed for milk production)
e. Sustainability of services and assets

The project is limited to 1 year and its results and lessons learned will be used to develop a broader nationwide PACD – for which this feasibility study has been designed to inform. The initial results of this project will also showcase to donors, the government, and stakeholders the potential positive impact of a nationwide PACD on the population and the economy as a whole

The **Overall Objective** of the PACD is to contribute to the significant improvement of the living conditions of people in rural areas through improving sustainable access to basic socio-economic infrastructure and services, and the creation of a local economy for sustained and improved socio-economic development, social justice and equality.

The Government has been mobilizing support for this multi-donor project by earmarking USD 5 million for FY 2020. Authorities of decentralised structures at the level of Regions, Local Councils, Wards and communities were envisaged a leading role in the implementation and monitoring of project activities. UNDP will be responsible for the overall management of the project through its PACD Management Unit.

Various components are detailed as below:

Table 8: PADC Components

Component	Major activities	Outreach	Key department	Budget (USD)
Rural Roads	Laying of feeder roads to remote villages connecting them with primary / secondary road network	110km road network connecting 149 communities	National Road Authority	2.38m
Rural Electricity	Grid extension especially in North River Region Complementation with Solar off-grid systems	19 communities mainly from NBR region	Ministry of Energy and Petroleum, NAWEC	1.60 m
Access to potable drinking water	Installation of Solar based water boreholes Construction of reservoirs Laying of pipes Communitisation	35 boreholes benefitting 44 communities across five regions of the country	Department of water resources	0.63 m
Labour Saving Devices & Livestock	Supply of post-harvest processing devices to women groups Supply of improved breeds of cattle and goats	40 assorted post-harvest devices in 30 rural districts 100 cattle and 250 goats	Ministry of Agriculture	0.65 m
Direct Project Cost & GMS	End to end management	All project areas	UNDP	0.6 m
Total				**5.86 m**

10. Proposed geographies for PUDC

10.1 Regional poverty mapping

The Gambia had witnessed a rising rural poverty (from 64 percent in 2010 to 70 percent in 2015), and a growing gap between rural and urban areas with regards to access to markets. While the proportion of households living below the poverty line has decreased from 33.4 % in 2010 to 31.6 % in urban areas, the rural poverty has been increasing i.e., it was 60% during 2003 which increased to 64.1 % in 2010 and to 69 percent in 2016 (IHS report 2016). The rural areas accounts for about 60% of the country's poor but they have only 42% of total population.

Poverty status of Local Government Administrations (LGAs) and the districts was analysed as per the Integrated Household Survey (IHS) 2015 and it was the first time that this type of data was collected in the history of The Gambia. The aim was to arrive at the most deprived regions within the country. Both absolute and extreme poverty figures were considered for the analysis.

Table 9: The Gambia Poverty Mapping

Region		Total population as per 2013 census	Sex ratio	Mean household size	Absolute[31] poverty	Extreme poverty[32]
	THE GAMBIA	19,22,950	91	6.9	48.6%	20.8%
	Urban	*10,57,467*	*91*	*6*	31.6%	35.9%
	Rural	*8,65,483*	*91*	*8.4*	69.5%	8.4%
Banjul	Banjul	30,703	105	4.1	10.8%	1.7%
Kanifing	Kanifing	3,83,545	88	5.5	17.3%	1.1%
WCR	Brikama	7,30,895	94	7	51.2%	20.9%
LRR	Mansakonko	82,201	88	6.9	60.1%	28.0%
NBR	Kerewan	2,25,516	88	8.2	59.8%	25.3%
CRR	Kuntaur	98,966	87	9	72.4%	37.4%
CRR	Janjanbureh	1,27,333	88	9	71.4%	37.1%
URR	Basse	2,43,791	91	7	59.4%	32.1%

From the table above, it is clear that the Central River Region (including Kuntaur and Janjanbureh LGAs) has the highest incidence of poverty in the country in terms of both absolute and extreme poverty (71% of 2.2 million people are poor). Similarly, the regions of Lower River Region, North Bank Region and Upper River Region have also witnessed comparatively high poverty levels hovering around 60%. In view of this, we had further drilled down the poverty incidence at the district level and obtained below table on the basis of absolute poverty at a district level.

10.2 Current and proposed methodology for selection of communities

For the costing of the PUDC programme a number of districts were selected on the basis of the distribution of the villages where the absolute poverty levels are above 60%. This was undertaken in order to obtain a benchmark cost estimate for the programme. However, the actual communities that should be targeted for each sectoral intervention has not been defined, and no attempt has been made to do so. This is because the data at village level was not available to be analysed at such granularity, however selection criteria for each sector is provided Section 10.

[31] Refers to a condition where a person does not have the minimum amount of income needed to meet the minimum requirements for one or more basic living needs over an extended period

[32] The level of vulnerability faced by households wherein even if they allocate all their income on food, they still cannot meet basic minimum food needs

Nonetheless, it is understood that a new **community level** household poverty study has been initiated by the Government of The Gambia with support from The World Bank which is currently covering c.30 districts, this will provide a much more granular level of information than the IHS 2015.

Therefore, one of the steps being recommended within the implementation plan is the gathering and analysis of the new community level data that will be available. Where districts have been missed out, from the new survey, the Government should ensure that this information is collected and supplemented to the overall data set. For each sectoral intervention this study proposed a methodology for how to select the communities based on a number of factors, arrived at with consultation with Government, UNDP and other stakeholders. The macro-level criteria suggested currently is to target the villages that require intervention from all four of the sectors first, the ones that require three second and so on and so forth. With the communities requiring only one sector being the lowest priority.

For our report purposes Table 10 contains the breakdown by Region and LGA.

Table 10: Rural Districts with absolute Poverty Range

Region	LGA	Total districts	<50%	51%-60%	61%-75%	>75%	Number of districts used for cost estimation
	THE GAMBIA	44	11	7	11	15	25
	Urban	5	5	0	0	0	0
	Rural	39	6	7	11	15	25
Banjul	Banjul	4	4	0	0	0	0
Kanifing	Kanifing	1	1	0	0	0	0
WCR	Brikama	9	1	2	1	5	6
LRR	Mansakonko	6	1	2	2	1	3
NBR	Kerewan	7	1	2	3	1	4
CRR	Kuntaur	5	0	0	3	2	5
CRR	Janjanbureh	5	0	1	1	3	3
URR	Basse	7	3	0	1	3	4

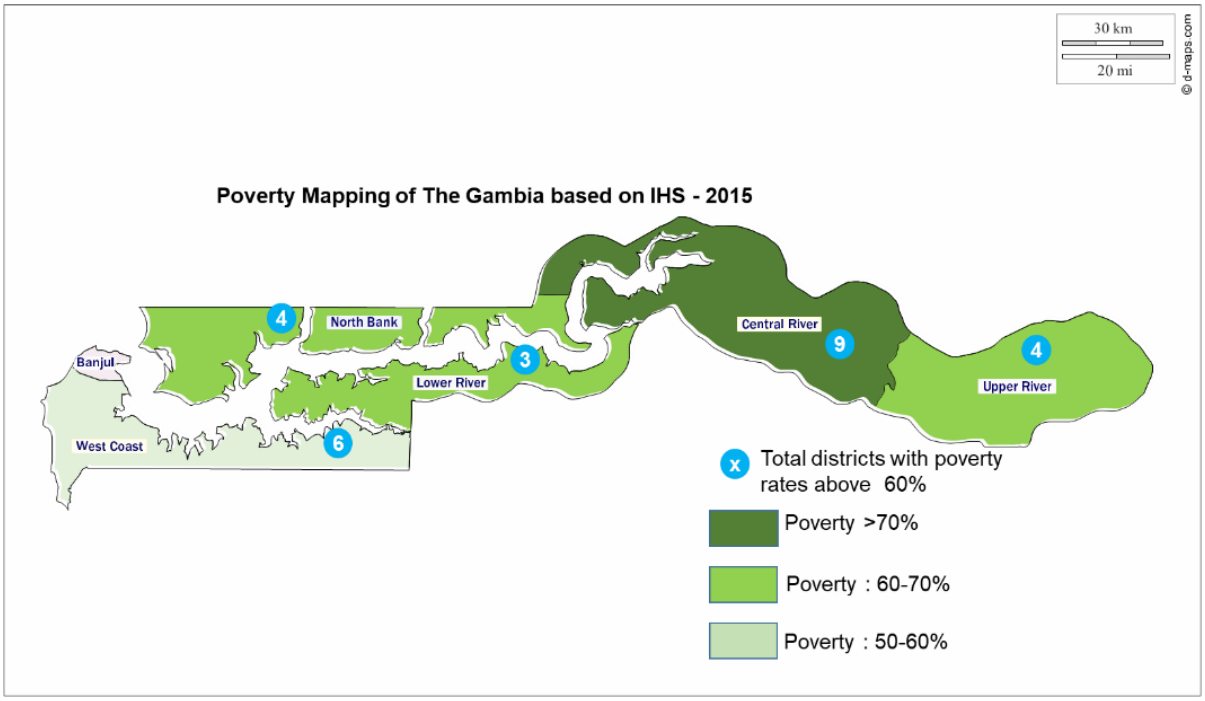


Figure 17: The Gambia Poverty Map

10.3 Sample villages for field visit

The villages for the field visit were chosen from those that shortlisted for the PACD implementation in phase 1. Also, the districts with more poverty and the villages with more population as per 2013 were chosen. Accordingly, the following 5 villages (1 from each division) were visited to understand the needs of the community and their priorities. A detailed questionnaire (refer annexure 0) was used as a reference for the interactions. We tried to understand the challenges in implementation from Village Heads as well.

Table 11: Field visit samples – village priorities

Region	District	Village	Population as per 2013 census	Whether selected for PACD phase 1		
				Water supply	Electricity	Roads
NBR	Upper Nuimi	Jurunku	350	✓	✓	✓
LRR	Kiang East	Kolior	450	✓	-	✓
WCR	Kombo Central	Marakissa	1617	✓	-	-
URR	Jimara	Sotuma Sireh	1518	✓	✓	-
CRR	Upper Saloum	Mamud Fana	1466	-	✓	-

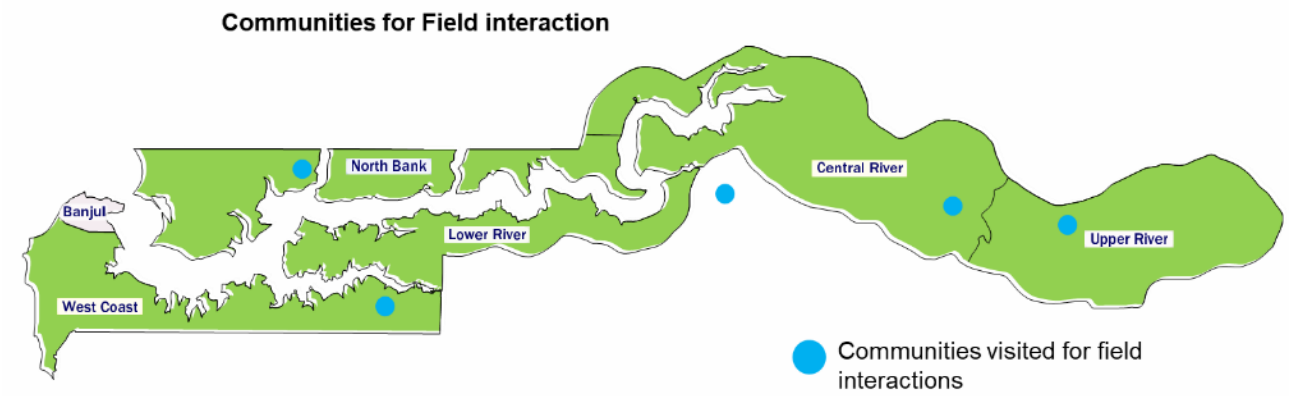


Figure 18: Field interaction map

Few insights obtained from the field interactions are listed below:

Jurunku (NBR)

The village Jurunku located in Upper Nuimi District of North Bank Region was visited mainly because it was selected for PACD implementation for 3 sectors namely Roads, Electricity and Water supply. It is about 35km from the ferry terminal at Barra with over 5 km stretch from the secondary to the village along sandy tracks between fields and through tiny villages. Jurunku is situated between two bolongs (creeks), leading down to the Gambia River. Major livelihoods are predominantly agricultural with chief crops being groundnuts (peanuts) and rice. Being isolated from the mainland with few links to the outside world and there are a few tradesmen selling their wares and one bush taxi a day to Barra. Some of the key observations are as below.

- Electricity remains the first priority for the community and has always been their request from the government. Whole of the village is yet to be electrified except a handful of solar panels (maximum 10) available with well to do families. The lack of electricity impacts negatively the living conditions of the community in terms health, education, and economic activities. As a result, it has become the major reason for migration of local youth to the cities and abroad in search of better opportunities. According to the community, electricity can solve many of their problems including jobs creation for the youth and improvement in the living conditions.
- Water is the second priority of the village. There is a manually operated borehole available at the centre of the village. However, potable water continues to be a challenge for some compounds within the community due to the distance it takes to draw water from the borehole. Due to lack of water, animals have perished during the dry-season and there has been low garden produces especially. In terms of

irrigation, the community is in need of 3 mechanised boreholes which will cost around D4,500,000 (US$100,000). This includes all infrastructure (pipelines, moto, solar equipment…)

- The feeder road of 17 km stretch connecting the village to the highway was in deplorable condition and needed further attention for bettering the same. There were many instances which made them difficult to access the health centres or market place due to the lack of proper road facilities.
- There was no health centre available for the village; however there was a nurse serving 2 to 3 villages including Jurunku. Despite asking their demands for health centre multiple times, they did not get it through from the government. Finally, the community initiated construction of a health centre through their own community contribution. The construction was mostly complete however, there would be a need for external assistance to make it operational.
- As far as agricultural practices are concerned, women do majority of labour with men involved during the ploughing and the harvesting times. However, the entire marketing activities were managed by male members of the community. The village got a community garden of 5 acres under NEMA project which was completely managed by women members. They were drawing water for irrigation from solar driven water pumps. Community felt satisfied with the implementation. In addition, there were other community gardens having manual operated boreholes which seem to be dangerous for children who might accidentally fall into them.
- Youth from the community felt the need for vocational training especially in the modern age skills so that they become either employable or self-employed.
- The village has fishing communities though small in number who mainly depend on inland fishing. There was a reasonable demand from them for electricity so to store their harvest safely.
- Villagers was unanimously ready to pay the bills for electricity and water based on the usage.

Marrakisa (WCR)

The village Marrakisa located in Kombo Central of West Coast Region was visited based on the selection for PACD for water supply. It is about 30 km from Banjul after crossing Brikama. Marrakisa is a large settlement of over 2000 population with many small hamlets in and around. The major livelihoods of the community was agriculture along with many households having members employed in regular jobs. Some of the key concerns highlighted during the discussions with the village council are as below.

- Water was the top priority for the community though there was one water supply system (solar driven borehole) installed 20 years ago with government funding through Gamsolar. However, the population has increased much since the installation and it is not adequate to feed not even quarter of the communities. They were demanding for augmenting the existing water borehole system with additional solar / grid connected power supply and borehole to draw more water. They had system of collecting a fixed amount per compound on a monthly basis. However, there is no penalty if any compound fails to pay. The village council has 1-2 members looking after water collection within the village.
- Next priority was electricity – most streets in the main village were electrified but there few hamlets left behind for electrification covering approximately 1/3rd of the households. They were told to contribute for the electric poles. Villagers were ready to pay their bills provided their houses are electrified.
- Another priority put forth by the community was the support for their agriculture marketing. They were given a vegetable garden under NEMA for 3.5 hectares supporting 300 women farmers. It had solar driven borehole for water supply system, overhead reservoir and water distribution systems and other required ingredients for vegetable gardens. Every farmer is given 5-10 strips of land in which they can cultivate the vegetable of their choice. Tomatoes, egg-plants, lettuce were predominant.

10.4 Rationale for PUDC Priorities:

Assessment of the priorities of the villages from the five communities visited gave mixed inputs on finalization of the components for PUDC. However, there is a clear alignment of their priorities with that of National Development Plan and also with PACD objectives. These basic amenities were even scarcer in the villages located in Upper river region and Central river region. Our key take-aways from the field visits on the basis of key areas of development are highlighted below.

a) Electricity

- Electricity remained the top priority for 3 out of 5 communities. They needed electricity not only for lighting their houses but also to increase their standards of living. And there was unanimous aspirations amongst the families that they can opt for additional livelihoods with the provision of electricity. Over and above, there would be substantial reduction in drudgery of women for managing household chores and children would be able to continue their education with improved lighting.

- Currently, they were dependent on traditional energy while a few had access to diesel or Solar based lightings.
- Provision of electricity to villages depend on the availability of Grid network. For example Marrakisa has grid lines passing through the main village and it would be quicker to get the left-out hamlets connected to the gird line. However, providing access to electricity to the remote villages in the CRR and URR would be challenge where there is no Grid supply established. In such cases, the only way out to be go for off-grid isolated power sources like Solar, Bio-mass etc.,
- Most of them were ready to pay for the usage as well. However, they were not clear about how much they can.
- Some of them especially women members opined that with the introduction of electricity, they can go for newer livelihoods like petty shops with storage of ice, tailoring etc.,
- It is imperative that PUDC should take up electricity as the priority component so that it can have multiplier effect in terms of education, health and livelihoods.

b) Water

- Currently, all villages visited has supply of water in one-way or other. However, there is an increased demand for water usage with growing population. In all the villages visited, majorly women and children were involved in carrying water to homes. Their unanimous demand was provision of water supply in their compounds so that their labour can be saved for other productive purposes and children can spend more time of education and recreation activities.
- Provision of potable drinking water to all is a must under SDG to avoid all water-borne diseases and hence extra burden on the rural families through health expenses.
- There was also a good demand for water for agriculture gardens.
- Also, there is an urgent need for assessing the existing water supply systems in terms of their adequacy and the functioning. Based on this assessment, the water supply systems can be taken up in PUDC. Also, they should be assessed for drinking purposes and agriculture needs either separately or together.
- Institutionalization of the water supply systems through community ownership would become mandatory as witnessed in the village Marrakisa. Otherwise it may not sustain in the long-run.
- The role of private players is also evident in addressing the water supply needs, for instance as seen from Gamsolar. Their potential can be tapped further through PUDC.

c) Roads

It was witnessed that feeder roads were in the priority list of all villages. However, the communities preferred that it should be implemented by the government. Also, they were of the view that with improved roads, their access to the schools (Middle / high), and hospitals will go up and hence a reduction in their expenses. Some of these feeder roads are to be newly laid while most of them require better grading or asphalt layering. We were also informed that the conditions of these feeder roads are worst in the North Bank Region especially in the interiors / remote villages.

Feeder roads play a vital role in transportation of the agriculture produce from the farm-lands to the nearby markets. Because of poor infrastructure, the farmers have been incurring losses in terms poor returns.

Due to the poor quality roads, the operations of local public transport is also minimal which added the worries of the villages for basic commutation to the market and other areas of interest.

We also noted that UNOPS has taken up laying of 10 feeder roads in rural Gambia with the funding from European Union.

Considering all these reasons, it is justified that PUDC for The Gambia should have feeder roads as one of its core components to provide the better and quick returns to the rural economy.

c) Agriculture / Allied activities

From the interaction with communities of all five regions, it was clearly evident that the agriculture plays vital role in their livelihoods. Most of them were dependent on farm based activities for earning their incomes. While the cropping pattern varied between the regions, the nature of farming practices remain more or less similar. Most of them especially women were working on rain-fed agriculture adopting traditional techniques and hence resulted in less productivity. Surprisingly, there was increasing trend of

vegetable garden cultivation almost in all villages visited. These gardens were promoted by several government programmes and proving alternate source of income generation other than regular crops.

In addition to farming, we noted that the women were also involved in the management of dairy and small ruminants. Though they were doing complete management of these animals, their marketing or incomes lie in the hands of their male counterparts.

Considering the direct impact that agriculture interventions have on the rural economy especially on women members, it is suggested to include them under the PUDC. These interventions can be in terms of community led vegetable gardens and group livestock management.

d) Health and Sanitation

Health facilities were not witnessed much in the villages visited and most of them had difficulties in accessing the health care centres for their ailments. The major reasons quoted by the families for lack of health facilities were linked to electricity, water and accessible roads. Probably, they would be able to manage the nearest health centres with these basic amenities.

In case of sanitation, open defecation was prevalent in all of the communities visited. Almost 80-90% of the villages did not have toilets and more surprisingly there was no demand from the communities for the same. The awareness levels among them on sanitation aspects on open defecation were low.

e) Education and vocation/skilling

Interestingly, in all the villages visited the primary education seem to be good with many of the young boys and girls were enrolled in the local schools. However, there were problems noted in the girl's drop-out of middle schools mainly due to the inaccessible roads. Also, there were complaints about the lighting which again related to electricity.

In few villages visited, the youth were very keen on vocational / skilling so that they could be quickly employed or they could start their own enterprise. This indicated a need for connecting them with few of the ongoing schemes or programmes like Youth Empowerment Project (YEP) to reap them better benefits.

f) Financial inclusion

It was noticed in the villages visit that the credit needs were primarily met from the informal sources rather than institutions like Banks or other MFIs. Hence, the need for enhancing the institutional credit was felt amongst the communities. However, we should also be mindful of the fact that there were VISACAs and other credit cooperative agencies, which are operational for meeting the purpose of financing rural credit needs.

Table 12: Community priorities from field visits

		Priority for the communities*				
Region	**Village**	**1**	**2**	**3**	**4**	**Other Priorities**
NBR	Jurunku	Electricity	Water	Road	Agriculture	Health centre, Skill Development
LRR	Kolior	Electricity	Road	Water	Agriculture	
WCR	Marakissa	Water	Electricity	Agriculture	Roads	
URR	Sotuma Sireh	Agriculture	Water	Road	Electricity	Education
CRR	Mamud Fana	Electricity	Agriculture	Road	Water	Health

*These priorities were only based on the interactions with the communities and may not represent the region as a whole.

11. Costing and selection methodology

11.1 Costing Methodology / Assumptions

Four primary areas have been selected for initial consideration under the PUDC model, the benefit of which are discussed and presented under Section 4.

The combination of improving access via feeder roads, installing solar mini-grids (or connection to main grid), improving access to safe clean drinking water and setting up local agricultural areas with arable and livestock means that the spill over benefits from each intervention will be maximised.

Costing information for various priority sectors chosen for PUDC has been difficult to obtain for some of the areas so reasonable assumptions have been made. Where so these have been documented and can be adjusted if more refined information comes available.

Where required, the overarching economic assumptions of the costing for the feasibility study assumed an inflation rate of 6%[33]

11.2 Feeder Roads

The individual selection of roads has not been attempted and would have required a much lengthier (both in detail and in duration) study. It is recognised that the cost of constructing roads is predicated on many factors, especially in a region such as The Gambia where the many river, gulleys and streams mean that costly bridges or culverts are needed in unknown quantities.

The unit cost build-up for a kilometre (km) road is used to develop the funding required to construct roads in the selected villages or districts. Whilst arriving at an average cost for the construction/resurfacing of 1km of road is difficult similar projects in other countries have been leveraged and industry players have been engaged to estimate the unit cost.

In addition, the length of new roads to be constructed has been difficult to obtain. Whilst the total length of road in The Gambia that requires attention is 1,571.5km[34] this is too great a distance to complete in the first year of the PUDC project and attention needs to be paid to the routes that will serve the greatest benefit (e.g. number of people and severity of poverty). This being the case, the assumption has been made that approximately 35% of the requirement will be rehabilitated under PUDC (786km).

It is also the case that type of reconstruction will vary from region to region and road to road. It is appreciated that not all roads will be Type 1 (described below), therefore it is assumed that 75% of the requirement will be bitumen (with a new Otta seal technology) roads and 25% gravel. Expert advice on the construction of roads in The Gambia has advised that the majority of roads should be constructed with a tar seal rather than the less hard wearing gravel technology. These assumptions have been made on the basis of available evidence and can be revised where appropriate.

Cost scenario for the rehabilitation of 1 km road:

	TYPE OF ROAD	AVERAGE 1KM COST (US$)	PERCENTAGE
1	The rehabilitation and surfacing of a feeder road with Otta seal technology (O-S)	295,000	75%
2	The rehabilitation of a gravel feeder road (G-S)	100,000	25%

Source: National Consultant Team and Case Study from Dept. Feeder Roads in Sierra Leone

Annual maintenance cost: When considering the rehabilitation of roads, it is imperative that the ongoing maintenance of the road is taken into account. It is estimated that the yearly maintenance cost will be 3% of the total cost of 1 km road. Contingency cost is provisioned for uncertainty that may occur in the future and is estimated at 2% of the total cost of 1km on yearly basis.

Rehabilitation of the PUDC roads is expected to take 5 years, with c. 150km of road being constructed each year. A summary table is shown below:

[33] Trading Economic Prediction
[34] There are some data points in the data received where the requirement was 0Km. For the purpose of this analysis this is taken at face value however it is highly unlikely, given the socio-economic status of these villages that this is correct. The 1571.5km figure was obtained from the national consulting team.

Table 13: Road Cost Summary Table

Number of km for PUDC	Otta seal (O-S) km	Gravel Seal (G-S) km	5 year total cost
550.0	412.5	137.5	$159.52m

At a region and time base level, the costs breakdown as follows (includes inflation assumption as stated above):

Table 14: Region wide Road-Cost Summary

Region	Length (km)	Type		Year 1	Year 2	Year 3	Year 4	Year 5
WCR	58.1	O-S		$2.61m	$2.77m	$2.93m	$3.11m	$3.3m
	19.4	G-S		$1.33m	$1.41m	$1.49m	$1.58m	$1.68m
NBR	15.9	O-S		$0.71m	$0.76m	$0.8m	$0.85m	$0.90m
	5.3	G-S		$0.36m	$0.38m	$0.41m	$0.43m	$0.46m
LRR	10.4	O-S		$0.47m	$0.50m	$0.53m	$0.56m	$0.59m
	3.5	G-S		$0.24m	$0.25m	$0.27m	$0.28m	$0.3m
CRR	196.6	O-S		$8.84m	$9.37m	$9.93m	$10.52m	$11.16m
	65.5	G-S		$4.49m	$4.76m	$5.05m	$5.35m	$5.67m
URR	131.6	O-S		$5.92m	$6.27m	$6.65m	$7.04m	$7.47m
	43.9	G-S		$3.01m	$3.19m	$3.38m	$3.58m	$3.80m
Subtotal	786			$27.97m	$29.65m	$31.43m	$33.31m	$35.31m
Maintenance			3%	-	$0.89m	$0.94m	$1.00m	$1.06m
Contingency			2%	$0.56m	$0.59m	$0.63m	$0.67m	$0.71m
	Grand Total			**$27.63m**	**$30.15m**	**$31.96m**	**$33.88m**	**$35.91m**
	5 Year Total							**$159.52m**
	Total km constructed							**550 km**

Since accurate road level detail was not available, assumptions have had to been made on the length of road in each region that will need constructing. This means that in some regions there might be a greater requirement than what is shown above, and in some there might be less of a requirement.

In addition to the costs above, there are potentially additional costs for the installation of new bridges and box culverts as part of the maintenance schedule. However they have not been included in the tables above, this is due to the difficulty in estimating the number needed per km. Nonetheless, using assumptions obtained from Sierra Leone which estimates two bridges and seven box culverts per 4km. This would increase the cost per 4km by c.$83,500. Applying this across the 550km proposed under the PUDC increases the total cost by c. $11,500,000. This reason this is not explicitly included is due to the lack of assumptions received from The Gambia.

Selection Criteria

It is intended to cover the feeder roads connecting the remote or left-over villages of the selected PUDC districts to primary or secondary roads. NRA, Gamworks and UNOPS with EU grants are the agencies which are laying rural roads in the country. UNOPS has taken up 10 feeder roads covering a length of c.104 km mainly in URR (5), NBR (4) and CRR (1).

A total of 786 km feeder roads have been planned under PUDC over a period of five years. Some of the key aspects to be considered for effective implementation of these feeder roads are stated as below.

- Selection of feeder roads
  - The population of the village (s) connected should be no less than 1000 persons so as to ensure the multiplier effect is effective
  - More number of expected beneficiaries per km
  - Expected improvement of access to social services like Schools, Health centres, market yards should be highest along the selected roads
  - Community should come forward to take-up ownership and enrol themselves for the works / maintenance through labour-intensive methods for sustainability

- Economic Internal Rate of Return[35] for the roads over the period of 20 years using the software namely Highway Development and Management Tool (HDM-4) should be at least more than 10%
- Once the selected feeder roads are constructed by the Implementation contractor and also signed off by the supervision contractor, then it must be agreed by the community before transferring the feeder roads to NRA.
- It will be responsibility of NRA for maintenance of these roads after it takes them over.

11.3 Solar Powered Drinking Water Systems

In most cases connecting rural villages to the water network is not either feasible or cost effective. The construction of boreholes is necessary for the provision of water to these villages. Whilst The Gambia has c.900 villages the number of boreholes requiring excavation is much less as it would be bad practice to construct that number across the country. The current assumptions are that in Year 1 the priority villages (those in PACD) have boreholes constructed and then in the subsequent years c.60 are implemented per year. We have considered the scenario where solar panels are required as the source of power for the water system.

The average cost for providing a Solar Powered Drinking Water System (SPDWS) to a single village within a PUDC district is c.$80,000[36], this is based on the average number of households of villages in the PUDC districts (700). It includes the borehole, associated tanks and pipework. It is recognised that this is an average and some will be more, and some less, however without conducting detailed surveys of each village and developing a selection criteria an average has to be used. It is assumed that under the PUDC 60 SPDWS a year can be constructed. It is worth noting that the figure used is the estimate for street taps, if household connections were preferred by the village or programme there would be an associated cost increase. For a village of c.700 the estimate total capital cost for a complete drinking water system with household connections is around $100,000. It is suggested that if a household wanted to have a connection there should be a function for a level of household contribution in order to facilitate such a connection.

It is understood that the placement of boreholes across the country requires a much more detailed and scientific study. This was not the purpose of this work, provided below is a high level estimate of the order of magnitude of funding that would be required for a The Gambia-wide water investment programme.

Table 15: Water Unit Cost Assumptions (Source: National Consultants)

Item Description	Amount US$
Solar powered drinking water system (SPDWS) , includes:	80,000[37]
- Solar Panel System	
- Water tank	
- Reticulation	
- Water pump	

As mentioned above, for year one of the PUDC project, those villages that have been selected under PACD were chosen and costed (shown in Table 16). For the ongoing PUDC programme the total number of villages per region for the PUDC districts is shown in Table 16. The number of SPDWS for PUDC (i.e. years 2 – 5) per region was apportioned based on the proportion of the number of villages per each region.

Table 16: PACD and PUDC Village Numbers

Region	Total # of villages	Already selected PACD villages (Year 1)	Remaining Number of systems per year (PUDC)	Total across 5 years	Total households impacted
URR	194	8	10	48	3360
WCR	208	6	11	50	3500
CRR	454	12	24	107	7490
NBR	181	12	9	48	3360
LRR	76	4	4	20	1400

[35] Generally accepted quantitative measure of the economic attractiveness of a project is the Economic Internal Rate of Return (EIRR), which is the discount rate at which the discounted economic benefits of the project are equal to the costs. If the EIRR of a project is equal to, or greater than the opportunity cost of capital in the country, the project is considered acceptable

[36] This estimate was obtained from LGA Strategic plans and validated with National Consultants.

[37] Estimate based on the average village size of 700 households

When the average cost of setting up the water supply to the village is multiplied by the number of SPDWS the result is shown in Table 17.

Table 17: Cost of establishing water supply by Region

Region	Year 1 (PACD)	Year 2	Year 3	Year 4	Year 5
URR	$0.64m	$0.85m	$0.90m	$0.96m	$1.01m
WCR	$0.48m	$0.92m	$0.98m	$1.04m	$1.10m
CRR	$0.96m	$2.02m	$2.14m	$2.27m	$2.41m
NBR	$0.96m	$0.77m	$0.82m	$0.87m	$0.92m
LRR	$0.32m	$0.33m	$0.35m	$0.37m	$0.39m
Maintenance		$0.17m	$0.41m	$0.67m	$0.95m
Contingency	$0.34m	$0.49m	$0.52m	$0.55m	$0.58m
Total	$3.70m	$5.55m	$6.12m	$6.72m	$7.36m
				Grand Total[38]	**$29.46m**

The contingency cost is 10% of the capital cost to account for future uncertainty and maintenance at 5%.

Selection criteria

There are both Government and Private players active in this field of solar powered water supply systems. Department of Water Resources and Gamworks – the para-statal are the key implementation agencies from the government side while Gamsolar, Swegam are prominent among private sector.

A total of 273 SPDWS are planned under PUDC over a period of five years. Some of the key aspects to be considered for effective implementation of these water supply systems under PUDC are stated as below.

- Factors to be considered while designing the SPDWS[39]
  - Water consumption per capita per day
  - Total population and projected population growth over the next 15 years
  - Maximum yield of water source (m3/day)
  - Expected drawdown
  - Distance from source to solar panels
  - Distance from source to water tank
  - Elevation from source to tank
  - Static and dynamic water table
  - Inside borehole casing diameter
  - Selection of street taps or taps inside the compounds
  - Seasonality of water demand (increases and decreases during the wet and dry seasons)
  - Actual solar energy available (insolation averages), shading and variation over the year (sunny, cloudy, rainy seasons)

Automated systems are better than manually operated SPDWS as latter were found to malfunction more regularly than those with automatic controls. Manually operated systems might lead to additional running costs as a pump operator was required to oversee the day-to-day running of the system, leaving space for human error.

It is suggested that contractors to be procured for SPWDS are preferably local so that they understand the ground realities better. Also, they shall provide a warranty period covering at least 5 years after installation of the SPWDS.

The amount collected from the families towards maintenance by the Water Management Committee can be accumulated over these five years and later they can be utilised in case of replacement / augmentation required for the SPDWS.

We understand from the interactions that communities prefer water taps inside their compounds instead of street taps. Thought it can avoid unaccounted water usage, it can end up incurring additional costs for setting up distribution outlets to every household.

- Collection of user charges

[38] Excludes PACD
[39] UNICEF Evaluation Solar Powered Water Systems (2016)

- Community shall collect the payment from every household based on utilisation per person per month. It can be as low as 5 GMD to 10GMD depending on the paying capacities of the communities or 60 GMD annually.
- It can also be fixed per household per month., 50-100 GMD per household depending on the size
- There can be metered connections which pay as you go for user fee collection
- There can be collection based on the per unit of water – say buckets / can being used by the families
- There can be annual collection based on the agriculture outcomes
- User fees per person would be better than fees fixed per household

- We were informed that water would be charged for maintenance at the 2.2GMD per cu.m at the outlet of the water tank in general. Out of which,
  - 60% goes to the service provider for the maintenance of the system after the warranty period
  - 20% goes to community maintenance fund
  - 20% to the central revenue fund which can be used for those villages which are running short of funds and then it can be collected back. This amount can be pooled into reserve fund for the village.

- Selection of villages for SPWDS – Major criteria to be followed while selecting the villages for installation of solar powered water distribution systems are as below.
  - Village should be having a minimum population of at least 500 persons
  - Village should have proper siting for drawing underground water
  - Village should have sufficient space for installation of solar panels preferably near identified siting for water supply
  - Community should be ready to pay for the usage of water at whatever decided by the villages

11.4 Rural Energy (Grid & Off-Grid)

The community areas selected for PUDC intervention in the energy sector are described in Table 18. However, due to the large number and the rural nature of a number of these villages it is assumed that not all of them will be able to be electrified across a 5 year project.

Table 18: PUDC Electrification

Region	LGA	Districts	Non-electrified villages
URR	Basse	4	181
WCR	Brikama	6	169
CRR	Janjanbureh	3	111
CRR	Kuntaur	5	329
NBR	Kerewan	4	171
LRR	Mansakonko	3	76
	Total	**25**	**1037**

To calculate the approximate cost of electrification, four scenarios were modelled under this section with one off-grid solution.

Table 19: Electrification Outcomes

Scenario	Description	Outcome
1	Where a village is fewer than 200m from the national grid	Connect village to national grid
2	Where a village is fewer than 5km from the national grid	Assume average distance for all villages is 3km and connect the village to the national grid
3	Where a village is further than 5km away from the national grid and there is a grid connection in the district	Assume average distance for all villages is 10km and connect the village to the national grid
4	Where a village is further than 5km away from the national grid and there is no grid connection in the district	Install solar infrastructure

Under cases 1, 2 and 3 the following consistent assumptions have been made

- Average village population of 700

- 1 x 250 KVA Low Voltage Distribution Sub-station is required
- 4km 400V Low Voltage Network is required

The cost for each of the three grid connected scenarios is show in Table 20.

Table 20: Grid Electrification Scenarios

Scenario	Assumptions	Cost per village
1	0.3 km of Medium Voltage network	$101,910
2	3 km of Medium Voltage network	$155,304
3	10 km of Medium Voltage network	$288,789

However since the cost of the solar system varies considerably between the villages, and all of the villages in this category are suggested for electrification a slightly different methodology was used. Data at village level was obtained and for each the costs of installing the solar systems was calculated. The cost of the system is dependent on the number of households and the associated infrastructure in the village that may also require electrification. Three categories with respect to infrastructure were created (see Table 21). This was following the methodology that Economic Consulting Associates and 3E have followed for selecting 10 sites for mini-grid installation in URR and CRR.

Table 21: Standalone infrastructure

			Power requirement (watts)	
Category	# of households	Cost of solar system	Per household	Other[40]
A (Solar mini grids)	Greater than 70	$3,900 per KW_{firm}[41]	250	2,000
B (Solar mini-grids)	Fewer than 70, greater than 20	$3,900 per KW_{firm}	250	1,000
C (Standalone)	Fewer than 20	$1,000[42]	100	0

Whilst it is accepted that standalone solar infrastructure is usually implemented by the private sector and the PUDC does need to be careful not to distort already effective market mechanisms. However, the involvement of the private sector is not guaranteed, especially for the smaller villages that is why standalone solar is being recommended. For these areas it is suggested that if there is no willingness from private institutions the PUDC should consider funding these systems to ensure that these villages are not left behind merely due to their size.

For the villages that require solar systems (Category A,B,C) the total cost was obtained by multiplying the number of households by the system cost. For each category the total cost was then divided by the duration of the programme and inflation taken into account.

In all of these cases the purpose of the PUDC is to bring the access to electricity to the community. The community must still be willing and have the ability to pay for the delivery of the services (this is equally true for water). In the situations where access is provided but the ability to pay is lacking the PUDC could signal to other donors to provide grants in order to subsidise the cost of electricity making the services more accessible to the poorer communities. These subsidies are not currently in scope of the PUDC.

The annual maintenance costs (AMC) for solar assets are 5% and 1% for national grid.

Shown in Table 23 is the five year schedule of costs for rural electrification. It assumes that all the short distance grid connectivity can be complete within year one (i.e. distance to the national grid is fewer than 5km). For the villages selected for grid connectivity that will be electrified an estimate of c.50 villages for the year 2 – 5 was established. Therefore giving the assumption that c.200 villages in this category can be connected to the national grid. All the villages requiring solar panels would, under the current assumptions, be completed within the 5 year horizon. Costing was completed at a village level - since village level population data was provided. This five year total was aggregated over the period and subsequently distributed across each of the five years accounting for inflation.

[40] To account for schools, community health centres and mosques
[41] Mini grids for half a billion people. Market Outlook and Handbook for Decision Makers, ESMAP World Bank Group
[42] IRENA (2016), Solar PV in Africa: Costs and Markets

Table 22: Breakdown of PUDC Villages for electrification

Scenario	Type	# of Households	Total Villages	Total Villages for PUDC	Schedule
1	Grid	-	60	60	Year 1
2	Grid	-	63	63	Year 1 & 2
3	Grid	-	664	200[43]	Year 2 -5
4A	Solar	more than 70	47	220	Across 5 years
4B	Solar	less than 70	109	24	Across 5 years
4C	Solar	less than 20	94	6	Across 5 years

Table 23: 5 Year PUDC Electrification Costs

Scenario	Type	Households	Total Spend	Year 1	Year 2	Year 3	Year 4	Year 5
1	Grid	-	$6.30m	$3.06m	$3.24m	$0.00m	$0.00m	$0.00m
2	Grid	-	$10.08m	$4.89m	$5.19m	$0.00m	$0.00m	$0.00m
3	Grid	-	$66.96m	$0.00m	$15.31m	$16.22m	$17.20m	$18.23m
4A	Solar	more than 70	$7.45m	$1.32m	$1.40m	$1.48m	$1.57m	$1.67m
4B	Solar	less than 70	$5.25m	$0.93m	$0.99m	$1.05m	$1.11m	$1.17m
4C	Solar	less than 20	$1.09m	$0.19m	$0.20m	$0.22m	$0.23m	$0.24m
Sub total			***$97.11m***	***$10.39m***	***$26.32m***	***$18.97m***	***$20.11m***	***$21.32m***
			AMC Solar	$0.12m	$0.13m	$0.14m	$0.15m	$0.15m
			AMC Grid	$0.08m	$0.24m	$0.16m	$0.17m	$0.18m
			Grand Total	**$10.6m**	**$26.69m**	**$19.27m**	**$20.43m**	**$21.65m**
						Total Electrification Cost		**$98.64m**

Selection criteria

NAWEC is the authorized agency to do generation, transmission and distribution of electricity within The Gambia mainly Grid connected.

As far as PUDC is concerned, a total of 573 villages are proposed to be electrified under PUDC either through Grid connection or through solar powered. This includes 323 villages under grid network and 250 villages under solar power over the period of next five years. Some of the key aspects to be considered for effective implementation of these feeder roads are stated as below.

- The project should embark on massive sensitisation of beneficiary communities regarding the payment of user charges.
- Villages should be clustered so that the benefits of mini-grids can be maximised.
- Communities should be willing to contribute to the project through the provision of land and labour
- Where standalone infrastructure is being proposed (smaller villages) a willingness and ability to pay study should be undertaken and if the result indicate that they are willing and able a private provider should be involved rather than the PUDC.
- Government should encourage private sector participation by:
  - Instituting user fees and for the private sector to manage the systems
  - Facilitate investments in the infrastructure from the private sector by subsidising the service costs
  - Allow entities other than NAWEC to be involved in the distribution and sale of electricity

11.5 Agriculture

Building on what was observed during the field visit to the Senegalese PUDC implementation sites, the construction of agricultural areas, along with the provision of targeted capacity building to assist with the management and maintenance of the specific areas is suggested and an area of focus for at least Phase 1 of the PUDC.

[43] 50 villages across 4 years, 664 was unrealistic for a 4 year programme

Two separate areas are costed, the provision of vegetable garden and the provision of livestock in the form of a hybrid dairy cow.

Community Managed Vegetable Gardens (CMVG)

Two sizes of community managed village gardens are proposed in order not to limit by community size. This has been adjusted based on feedback from numerous stakeholders that in order to not leave anyone behind the interventions need to be designed in such a way. Therefore there are to sizes of CMVG suggested (5HA and 3HA).

The main cost lines for setting up of community managed vegetable garden is shown in Table 24.

Table 24: Agricultural area cost lines

Line item	Cost for 5 hectares	Cost for 3 hectares	Description
Land development cost	$3,000	$1,800	Developing the land from current state to that which is tillable (inc. a level invested by the community)
Institutional support and capacity building	$5,000	$5,000	Employing agricultural experts to upskill local participants, both at the inception and ongoing (esp. in marketing)
Water Systems	$160,000	$90,000	All in cost for borehole, water pump, solar system, reticulation and drip irrigation system.
Input materials (Seeds etc.)	$488	$325	This costing is based on maize, which is one of the more expensive seeds
Water storage trough	$5,000	$5,000	Open troughs from which farmers can gather water
Fencing cost	$7,290	$4,860	Chicken wire or equivalent (Assumed to need a fence 3M high). Base cost of 2.7USD per square meter
Fencing pillars	$4,500	$3,000	2 needed per perimeter meter
Agricultural Tools	$300	$200	Assumption on that hand tools will be required for the area
Storage Area	$1,500	$1,000	Single storage area for tools and other equipment

For the vegetable gardens, it is suggested that the community in which the area is being proposed selects and develops the land with support from the PUDC with regards to technical expertise. Depending on the size of the area the land can then be divided into up to 200 – 400 different plots for individuals families to work upon. It is suggested that rather than employing a small number of full time workers to cultivate the land (as in the Senegalese example) the areas are handed over to the households where the women (if the man was otherwise economically active) would be able to produce crops on their allocated section. This is suggested in order to make best use of the land, as in Senegal there were large parts of the agricultural areas that were unused.

Whilst many of the agricultural costs will be once off, an enduring level of capacity building along with some other maintenance lines have been calculated. For an area constructed in year one Table 25 shows the detailed costs.

Table 25: Line item cost for Agricultural Area (5HA)

Line item	Year 1	Year 2	Year 3	Year 4	Year 5
Land development cost	$3,000				
Institutional support and capacity building	$5,000	$5,300	$5,618	$5,955	$6,312
Water Systems[44]	$160,000	$8,480[45]	$8,989	$9,528	$10,100
Input materials (Seeds etc.)	$488	$517	$548	$581	$615
Water storage trough	$5,000				
Fencing cost	$7,290				
Fencing pillars	$4,500				

[44] Includes borehole and irrigation system (drip) for 5HA at $80,000
[45] Annual maintenance cost at 5% of capital cost (adjusted for inflation)

Agricultural Tools	$300				
Storage Area	$1,500				
Contingency (10%)	*$18,707*				
Total	**$205,785**	**$15,726**	**$16,670**	**$17,670**	**$18,730**
Total per system					**$274,582**
Total cost per region (15 large CMVGs)					**$4.01m**

For each of the five regions for PUDC, if two smaller gardens are constructed and three larger each year, this give a total five year programme cost for CMVG across all region of **$28.22m**[46] (15 five HA and 10 three HA gardens per region). However, it could be suggested that some of the land development cost should be borne by the community to enhance the level of buy-in from the community. This may subsequently reduce the level of investment required.

Selection Criteria

Community Managed Vegetable Gardens (CMVG)

There have been multiple agencies, which have executed the Vegetable Gardens in the country including Ministry of Agriculture, FAO, World Bank, etc. in the recent past, There are 454 functional community vegetable gardens[47] in the county, (approximately 1,362 ha of land area) benefiting 136,200 female farmers. Interventions in vegetable production includes mainly land development (fencing, watering facilities), input materials for these gardens meant for women and youth farmers. The community gardens are generally well fenced, equipped with concrete-lined wells of different depths, and/or boreholes fitted with reticulations that allow year-round supply of water for irrigation. Solar powered boreholes would be provided for supplying water to these vegetable gardens and further irrigating the beds, they use rope and bucket for drawing water from troughs.

A total of 125 CMVGs are planned under PUDC over a period of five years. Some of the key aspects to be taken into account for effective implementation of these Gardens under PUDC are stated as below.

- Selection of villages
  - Community especially women members shall be keen to take-up vegetable gardens
  - Village should be having a minimum population of at least 1500 persons or 300 households
  - Village should have proper siting for drawing underground water
  - Village should have sufficient space for installation of solar panels preferably near identified siting for water supply
  - Community should be ready to provide suitable land of minimum 5 hectares for cultivation of vegetables
  - Community should be ready to pay the commission / fees whatever decided by the villages
  - Community should be ready to develop their lands allotted for vegetable gardens
  - Community should be ready for collective management of the vegetable gardens
  - If the village is already having solar power water supply systems, then it might be possible to draw water from that system with a different outlet without disturbing the drinking water supply

There is a huge potential for the private sector especially traders / supermarkets / big restaurants to play in these vegetable gardens. They can actively support them by purchasing the produce or supplying the necessary raw materials. It is also suggested that innovative institutions like Farmer Producer companies can be built around these CMVGs.

Labour Saving Devices

During consultation with stakeholders, the requirement for labour saving devices was highlighted specifically in reference to the impact that these devices can have on the quality of life and economic empowerment of women. This type of intervention was also selected under the PUDC in Senegal.

A package of 2 pieces of equipment has been created for the benchmark funding requirement for the PUDC.

Table 26: Labour Saving Devices

Equipment	***Initial cost ($ USD)***
Power Tiller	5,500
Rice Mill (mini plant 5mt/day)	11,000

[46] Total cost per region for small CMVGs is $1.63M over five years (10 three HA gardens)
[47] Ministry of Agriculture, Central Projects Coordination Unit

Initially it is suggested that in each region 15 of these packages would be deployed per year, meaning 375 impacted villages in total. The cost for a five year programme for a single region is shown below:

Table 27: Regional equipment cost

Equipment	Year 1	Year 2	Year 3	Year 4	Year 5
Power Tiller	$82,500	$87,450	$92,697	$98,259	$104,154
Rice Mill	$165,000	$174,900	$185,394	$196,518	$208,309
Total Capital	$247,500	$262,350	$278,091	$294,776	$312,463
Contingency and Maintenance		$74,250	$152,955	$236,382	$324,815
Grand Total	**$247,500**	**$336,600**	**$431,046**	**$531,159**	**$637,278**

Selection Criteria

- Community, especially women members, should be keen to take-up vegetable gardens
- Villages should have a minimum population of at least 1500 persons or 300 households
- Villages should have proper siting for drawing underground water
- Village should have sufficient space for installation of solar panels preferably near identified siting for water supply
- Community should be ready to provide suitable land of minimum 5 hectares for cultivation of vegetables
- Community should be ready to pay the commission / fees whatever decided by the villages
- Community should be ready to develop their lands allotted for vegetable gardens
- Community should be ready for Village Garden committee to manage the entire marketing of vegetables
- Community should identify and select the members for the Garden

11.6 Livestock

Community Managed Dairy Production (CMDP)

Observed in the field visit was the presence of cattle all across the regions. The local animal whilst often very cost efficient to maintain does not produce a level of milk that affords the owner to operate it on a commercial scale. A study in The Gambia found that hybrids can produce up to five times the amount of milk as a local breed.[48] The introduction of hybrids to local, rural communities is likely to enable either the operation of the animal at an enterprise level or it may produce benefits by reduces the work pressure of individual members of households and creates free time for to enable them to earn additional income by taking up other income generating activities. More detailed work would need to be conducted, especially with regards to the granular cost lines but an estimate is presented for consideration. Current estimates for one package (ten animals) are presented in Table 28.

[48] Lactation performance on-station of F1 crossbred cattle in The Gambia, A Diack, F B Sanyang and S Münstermann (2005)

Table 28: Livestock line item costs

Line Item	Unit	Cost per unit (USD)	Village Share	Units for 1 package	Year 1 Cost
Chaff cutter	Per unit	500	0%	5	2,500
Milking Machine	Per Unit	300	0%	5	1,500
Milking cans, Chain etc…	Group	150	0%	5	750
Feed	per kg	5	0%	50	250
Water trough	Per trough	75	0%	5	375
Fodder plot (Perennial)	Per Ac	500	0%	1	500
Animal Cost	Per animal	3000	10%	10	27,000
Initial veterinary Care	Per animal	500	0%	10	5,000
Ongoing annual veterinary care	Per animal	100	50%	10	500
Roaming herd manager	N/A	10000	50%	0.5	2,500
				Contingency (10%)	$4,088
				Year 1 total	**$44,963**

It is suggested that the community bears some of the cost for the animal and the ongoing veterinary care (10% and 50% respectively). This helps to increase the buy in from the communities but also starts to increase the financial inclusion of the individuals involved (likely to be women). It is not that an upfront sum will be required from the beneficiaries but a monthly or annual repayment for the use of the animal and the ongoing services.

Table 29: Livestock annual ongoing costs

Line Item	Year 2	Year 3	Year 4	Year 5
Fodder plot (Perennial)	$530	$562	$596	$631
Ongoing annual veterinary care	$530	$561	$595	$631
Roaming herd manager	$2,650	$2,809	$2,977	$3,156
Other general maintenance[49]	$3,962	$3,962	$3,962	$3,962
Total recurring costs per year	**$7,672**	**$7,894**	**$8,130**	**$8,380**

Total 5 year cost for 1 package (assuming implemented in year 1) - **$77,039**

If this scheme is implemented in 125 (1250 households) villages (10 per region per year), the approximate 5 Year total cost will be approximately **$16.74m.**

In addition to the Year 1 and annual costs, the establishment of a proper breeding programme would need to be calculated and factored in. At present no accurate data has been sourced that can accurate estimate the cost of such a programme but the establishment of International Trypanotolerance Centre in Banjul may reduce the cost compared to neighbouring nations however it is likely to still be significant.

Selection Criteria

As discussed earlier, the livestock production systems have been managed mostly by the women members across all regions. However, they face challenges in getting the best returns for their efforts. In addition to there are other difficulties in managing these production systems. Under this intervention of PUDC, it is suggested to provide support to women members for milk value chain equipped with better backward and forward linkages.

[49] 10% of initial capital cost

A total of 125 CMDPs are planned under PUDC in The Gambia over a period of five years. Some of the key aspects to be taken into account for effective implementation of these Dairy Production Systems under PUDC are stated as below.

- Selection of villages
  - Community should be selected from low challenging Tsetse fly infested areas
  - Community members, especially women, should be keen to take-up cattle production system collectively
  - Community should have prior experience in handling milk-value chain
  - Community should be ready to provide land for fodder cultivation
  - Community should have potable water for animals
  - Community should provide free land for fodder cultivation
  - There should be market for supply of milk in the vicinity of the selected village / WFP has programme to schools

11.7 Capacity Building

A core part of the PUDC is the upskilling and training of individuals within communities. Building the capacity within community sets the conditions for success with regards to the ongoing sustainability of the assets constructed by the programme.

Building on the lessons learned from other developing countries, innovative "community corporations" are suggested as the primary mechanism through which the management of infrastructure and other assets can occur. However the creation of these institutions, and enabling them for success comes at a cost for the programme. Since this is a primary part of the way in which the PUDC will operate it has been costed separately to the sectors.

The cost is based on the number of communities in which the corporations will be established. However, it is not easy to estimate the number of mutually exclusive communities that will receive interventions in water, agriculture/livestock and electricity. The total number of interventions planned under this study is c.1,000. Assuming a relatively high rate of crossover at 50% the estimated number of unique communities in which the PUDC will operated is c.500. Assuming then that not all of the communities are targeted for this specific mechanism and that only 70% the number is further reduced to 350, or 70 a year. Initial costs would range in the region of $20,000 with an ongoing annual cost to support the corporations of $7,500

The cost of establishing the corporation is estimate below:

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Number implemented	70	70	70	70	70	350
Initial Cost	$2.45m	$2.60m	$2.75m	$2.92m	$3.09m	$13.81m
Ongoing cost		$0.56m	$1.18m	$1.88m	$2.65m	$6.26m
					Total cost over 5 years	**$20.07m**

This cost would include assistance in aspects such as;

- Training on the functions and operations of a company (e.g. role of the board, shareholders etc…)
- Sensitization for the wider community
- Assistance and training with the formation of business plans and work plans
- Drafting of the Memorandum of Understanding

11.8 Cost Summary Tables

Sector Total & PUDC Total Cost

Table 30: Sector Total & PUDC Total Cost

Sector totals	Amount
Electricity	$98.64m
Agriculture & Livestock	$44.96m
Equipment	$10.92m
Roads	$159.52m
Water	$29.46m
Sub total	**$343.49m**
Corporation Capacity Building	$20.07m
Further Capacity Building (2%)[50]	$6.87m
M&E (3%)	$10.30m
Proj. Mgmt (10%)	$34.35m
Total 5 year PUDC Cost	**$415.09m**

Regional Summary

Table 31: Region Total (Sectors only)

Region Total (Sectors only)	
WCR	$56.65m
NBR	$43.22m
LRR	$23.77m
CRR	$134.07m
URR	$85.77m
Total	**$343.49m**

[50] Total 7% across both Capacity Building elements

11.9 Regional wide costing

Central River Region

Region	CRR						
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	OS	$11.60m	$12.29m	$13.03m	$13.81m	$14.64m	**$65.38m**
	GS	$1.31m	$1.39m	$1.47m	$1.56m	$1.65m	**$7.39m**
	C&M	$0.26m	$0.68m	$0.73m	$0.77m	$0.81m	**$3.25m**
	Sub-Total	**$13.17m**	**$14.37m**	**$15.23m**	**$16.14m**	**$17.11m**	**$76.01m**
Agriculture	Agricultural Gardens	$0.78m	$0.83m	$0.88m	$0.93m	$0.99m	**$4.42m**
	Livestock	$0.41m	$0.43m	$0.46m	$0.49m	$0.52m	**$2.30m**
	C&M	$0.119m	$0.273m	$0.440m	$0.621m	$0.817m	**$2.27m**
	Sub-Total	**$1.31m**	**$1.54m**	**$1.78m**	**$2.04m**	**$2.32m**	**$8.99m**
Equipment	Equipment	$0.25m	$0.26m	$0.28m	$0.29m	$0.31m	**$1.40m**
	C&M	$0.00m	$0.07m	$0.15m	$0.24m	$0.32m	**$0.79m**
	Sub-Total	**$0.25m**	**$0.34m**	**$0.43m**	**$0.53m**	**$0.64m**	**$2.18m**
Water	SPDWS	$0.96m	$2.02m	$2.14m	$2.27m	$2.41m	**$9.80m**
	C&M	$0.10m	$0.25m	$0.36m	$0.48m	$0.61m	**$1.80m**
	Sub-Total	**$1.06m**	**$2.27m**	**$2.51m**	**$2.75m**	**$3.02m**	**$11.60m**
Electrification	Electrification	$2.42m	$8.24m	$7.53m	$7.98m	$8.46m	**$34.63m**
	C&M	$0.08m	$0.14m	$0.14m	$0.14m	$0.15m	**$0.65m**
	Sub-Total	**$2.50m**	**$8.38m**	**$7.66m**	**$8.12m**	**$8.61m**	**$35.28m**
	Grand Total	**$18.05m**	**$26.57m**	**$27.20m**	**$29.09m**	**$31.10m**	**$132.02m**
Other Costs	Capacity Building	$0.36m	$0.53m	$0.54m	$0.58m	$0.62m	**$2.64m**
	M&E	$0.54m	$0.80m	$0.82m	$0.87m	$0.93m	**$3.96m**
	Proj. Mgmt.	$1.80m	$2.66m	$2.72m	$2.91m	$3.11m	**$13.20m**

Lower River Region

Region	LRR						
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	OS	$0.61m	$0.65m	$0.69m	$0.73m	$0.77m	**$3.46m**
	GS	$0.07m	$0.07m	$0.08m	$0.08m	$0.09m	**$0.39m**
	C&M	$0.01m	$0.04m	$0.04m	$0.04m	$0.04m	**$0.17m**
	Sub-Total	**$0.70m**	**$0.76m**	**$0.81m**	**$0.85m**	**$0.90m**	**$4.02m**
Agriculture	Agricultural Gardens	$0.78m	$0.83m	$0.88m	$0.93m	$0.99m	**$4.42m**
	Livestock	$0.41m	$0.43m	$0.46m	$0.49m	$0.52m	**$2.30m**
	C&M	$0.119m	$0.273m	$0.440m	$0.621m	$0.817m	**$2.27m**
	Sub-Total	**$1.31m**	**$1.54m**	**$1.78m**	**$2.04m**	**$2.32m**	**$8.99m**
Equipment	Equipment	$0.25m	$0.26m	$0.28m	$0.29m	$0.31m	**$1.40m**
	C&M	$0.00m	$0.07m	$0.15m	$0.24m	$0.32m	**$0.79m**
	Sub-Total	**$0.25m**	**$0.34m**	**$0.43m**	**$0.53m**	**$0.64m**	**$2.18m**
Water	SPDWS	$0.32m	$0.33m	$0.35m	$0.37m	$0.39m	**$1.76m**
	C&M	$0.03m	$0.05m	$0.07m	$0.09m	$0.11m	**$0.34m**
	Sub-Total	**$0.35m**	**$0.38m**	**$0.42m**	**$0.46m**	**$0.50m**	**$2.10m**
Electrification	Electrification	$1.09m	$1.16m	$1.23m	$1.30m	$1.38m	**$6.16m**
	C&M	$0.05m	$0.06m	$0.06m	$0.07m	$0.07m	**$0.31m**
	Sub-Total	**$1.15m**	**$1.22m**	**$1.29m**	**$1.37m**	**$1.45m**	**$6.47m**
	Grand Total	**$3.52m**	**$3.91m**	**$4.32m**	**$4.75m**	**$5.21m**	**$21.71m**
Other Costs	Capacity Building	$0.07m	$0.08m	$0.09m	$0.09m	$0.10m	**$0.43m**
	M&E	$0.11m	$0.12m	$0.13m	$0.14m	$0.16m	**$0.65m**
	Proj. Mgmt.	$0.35m	$0.39m	$0.43m	$0.47m	$0.52m	**$2.17m**

North Bank Region

Region	NBR						
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	OS	$0.94m	$0.99m	$1.05m	$1.11m	$1.18m	**$5.27m**
	GS	$0.11m	$0.11m	$0.12m	$0.13m	$0.13m	**$0.60m**
	C&M	$0.02m	$0.06m	$0.06m	$0.06m	$0.07m	**$0.26m**
	Sub-Total	**$1.06m**	**$1.16m**	**$1.23m**	**$1.30m**	**$1.38m**	**$6.13m**
Agriculture	Agricultural Gardens	$0.78m	$0.83m	$0.88m	$0.93m	$0.99m	**$4.42m**
	Livestock	$0.41m	$0.43m	$0.46m	$0.49m	$0.52m	**$2.30m**
	C&M	$0.119m	$0.273m	$0.440m	$0.621m	$0.817m	**$2.27m**
	Sub-Total	**$1.31m**	**$1.54m**	**$1.78m**	**$2.04m**	**$2.32m**	**$8.99m**
Equipment	Equipment	$0.25m	$0.26m	$0.28m	$0.29m	$0.31m	**$1.40m**
	C&M	$0.00m	$0.07m	$0.15m	$0.24m	$0.32m	**$0.79m**
	Sub-Total	**$0.25m**	**$0.34m**	**$0.43m**	**$0.53m**	**$0.64m**	**$2.18m**
Water	SPDWS	$0.96m	$0.77m	$0.82m	$0.87m	$0.92m	**$4.34m**
	C&M	$0.10m	$0.13m	$0.17m	$0.21m	$0.26m	**$0.87m**
	Sub-Total	**$1.06m**	**$0.90m**	**$0.99m**	**$1.08m**	**$1.18m**	**$5.21m**
Electrification	Electrification	$5.01m	$7.64m	$2.47m	$2.62m	$2.77m	**$20.50m**
	C&M	$0.05m	$0.08m	$0.02m	$0.03m	$0.03m	**$0.21m**
	Sub-Total	**$5.06m**	**$7.71m**	**$2.49m**	**$2.64m**	**$2.80m**	**$20.71m**
	Grand Total	**$8.50m**	**$11.33m**	**$6.51m**	**$7.10m**	**$7.72m**	**$41.16m**
Other Costs	Capacity Building	$0.17m	$0.23m	$0.13m	$0.14m	$0.15m	**$0.82m**
	M&E	$0.26m	$0.34m	$0.20m	$0.21m	$0.23m	**$1.23m**
	Proj. Mgmt.	$0.85m	$1.13m	$0.65m	$0.71m	$0.77m	**$4.12m**

Upper River Region

Region	URR						
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	OS	$7.76m	$8.23m	$8.72m	$9.25m	$9.80m	**$43.76m**
	GS	$0.88m	$0.93m	$0.99m	$1.04m	$1.11m	**$4.95m**
	C&M	$0.17m	$0.46m	$0.49m	$0.51m	$0.55m	**$2.18m**
	Sub-Total	**$8.81m**	**$9.62m**	**$10.19m**	**$10.81m**	**$11.45m**	**$50.89m**
Agriculture	Agricultural Gardens	$0.78m	$0.83m	$0.88m	$0.93m	$0.99m	**$4.42m**
	Livestock	$0.41m	$0.43m	$0.46m	$0.49m	$0.52m	**$2.30m**
	C&M	$0.119m	$0.273m	$0.440m	$0.621m	$0.817m	**$2.27m**
	Sub-Total	**$1.31m**	**$1.54m**	**$1.78m**	**$2.04m**	**$2.32m**	**$8.99m**
Equipment	Equipment	$0.25m	$0.26m	$0.28m	$0.29m	$0.31m	**$1.40m**
	C&M	$0.00m	$0.07m	$0.15m	$0.24m	$0.32m	**$0.79m**
	Sub-Total	**$0.25m**	**$0.34m**	**$0.43m**	**$0.53m**	**$0.64m**	**$2.18m**
Water	SPDWS	$0.64m	$0.85m	$0.90m	$0.96m	$1.01m	**$4.36m**
	C&M	$0.06m	$0.12m	$0.16m	$0.22m	$0.27m	**$0.83m**
	Sub-Total	**$0.70m**	**$0.97m**	**$1.07m**	**$1.17m**	**$1.28m**	**$5.19m**
Electrification	Electrification	$1.07m	$4.82m	$3.91m	$4.14m	$4.39m	**$18.34m**
	C&M	$0.01m	$0.05m	$0.04m	$0.04m	$0.04m	**$0.18m**
	Sub-Total	**$1.08m**	**$4.87m**	**$3.95m**	**$4.19m**	**$4.44m**	**$18.52m**
	Grand Total	**$11.92m**	**$17.01m**	**$17.01m**	**$18.23m**	**$19.53m**	**$83.72m**
Other Costs	Capacity Building	$0.24m	$0.34m	$0.34m	$0.36m	$0.39m	**$1.67m**
	M&E	$0.36m	$0.51m	$0.51m	$0.55m	$0.59m	**$2.51m**
	Proj. Mgmt.	$1.19m	$1.70m	$1.70m	$1.82m	$1.95m	**$8.37m**

West Coast Region

Region	WCR						
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	OS	$3.43m	$3.63m	$3.85m	$4.08m	$4.33m	**$19.32m**
	GS	$0.39m	$0.41m	$0.44m	$0.46m	$0.49m	**$2.18m**
	C&M	$0.08m	$0.20m	$0.21m	$0.23m	$0.24m	**$0.96m**
	Sub-Total	**$3.89m**	**$4.25m**	**$4.50m**	**$4.77m**	**$5.06m**	**$22.47m**
Agriculture & Livestock	Agricultural Gardens	$0.78m	$0.83m	$0.88m	$0.93m	$0.99m	**$4.42m**
	Livestock	$0.41m	$0.43m	$0.46m	$0.49m	$0.52m	**$2.30m**
	C&M	$0.119m	$0.273m	$0.440m	$0.621m	$0.817m	**$2.27m**
	Sub-Total	**$1.31m**	**$1.54m**	**$1.78m**	**$2.04m**	**$2.32m**	**$8.99m**
Equipment	Equipment	$0.25m	$0.26m	$0.28m	$0.29m	$0.31m	**$1.40m**
	C&M	$0.00m	$0.07m	$0.15m	$0.24m	$0.32m	**$0.79m**
	Sub-Total	**$0.25m**	**$0.34m**	**$0.43m**	**$0.53m**	**$0.64m**	**$2.18m**
Water	SPDWS	$0.48m	$0.92m	$0.98m	$1.04m	$1.10m	**$4.52m**
	C&M	$0.05m	$0.12m	$0.17m	$0.22m	$0.28m	**$0.84m**
	Sub-Total	**$0.53m**	**$1.04m**	**$1.15m**	**$1.26m**	**$1.38m**	**$5.36m**
Electrification	Electrification	$0.80m	$4.47m	$3.84m	$4.07m	$4.31m	**$17.48m**
	C&M	$0.01m	$0.04m	$0.04m	$0.04m	$0.04m	**$0.17m**
	Sub-Total	**$0.81m**	**$4.51m**	**$3.87m**	**$4.11m**	**$4.35m**	**$17.65m**
	Grand Total	**$6.55m**	**$11.35m**	**$11.33m**	**$12.21m**	**$13.15m**	**$54.60m**
Other Costs	Capacity Building	$0.13m	$0.23m	$0.23m	$0.24m	$0.26m	**$1.09m**
	M&E	$0.20m	$0.34m	$0.34m	$0.37m	$0.39m	**$1.64m**
	Proj. Mgmt.	$0.66m	$1.14m	$1.13m	$1.22m	$1.32m	**$5.46m**

12. Benefits of PUDC

12.1 Direct socio-economic outcomes

The impact on living standards, income and GDP growth is explored in subsequent sections however it is possible to calculate the estimated number of villages and households to be impacted for all sectors apart from roads (as the data has not presently been made available). Table 32 contains the detail.

At a minimum, assuming all selected communities are not mutually exclusive, that is, all villages who receive electrification also receive boreholes and agricultural investment etc... Then the estimated number of households impacted across 5 years of the PUDC programme will be **40,110** equating to **c.280,000 individuals**. At the higher end, assuming complete mutual exclusivity (still excluding roads) the estimated number of households to be affected will be **98,040** equating to **c.686,280 individuals**.

Table 32: PUDC Direct Benefits

Sector	Metric	*PUDC Duration*					
		Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Total**
Roads	Feeder Road Kms	157	157	157	157	157	786
Electricity	Villages Electrified	118	138	106	106	106	573
	Households impacted	8,225	9,625	7,420	7,420	7,420	40,110
Water	Villages connected to water supply	42	58	58	58	57	274
	Households impacted	2,940	4,060	4,060	4,060	4,060	19,110
Agriculture & Livestock	Villages with Gardens	25	25	25	25	25	125
	Households impacted	7,500	7,500	7,500	7,500	7,500	37,500
	Villages with livestock	25	25	25	25	25	125
	Households impacted	250	250	250	250	250	1,250
Equipment	Villages with equipment	75	75	75	75	75	375
	Households impacted	5,250	5,250	5,250	5,250	5,250	26,250

12.2 Economic Benefit from the PUDC programme

The PUDC aims to contribute to the significant improvement of people's living conditions through a more sustained fight against social inequalities, through sustainable access to basic socio-economic infrastructure and services, and the creation of a local economy.

The extent to which the creation of a local economy and sustainable access to basic socio-economic infrastructure will lead to a greater economic benefit for the country is hard to empirically quantify. There is a wide literature base regarding the potential qualitative benefits which will be touched on briefly in the proceeding sections. Notwithstanding this, one of the core empirical challenges is to distinguish between the respective purposes of different types of aid.

The PUDC covers assistance that is termed as "early impact"[51] aid that supports sectors like roads, energy, agriculture, and industry, any of which might be expected to boost growth in the short to medium term. This can be distinguished from other social sector activities like education, health, water, and humanitarian assistance, "whose growth effect might arrive far in the future or not at all".

Indeed the wider economic benefits, even in larger more developed economies of good public health or access to basic health facilities and education are very difficult to accurately quantify, and hence no attempt is made to do so for these sectors here. What can be accepted is that the overall social impact of investing in these sectors is large and the evidence base well established.

[51] Clemens, M. A., S. Radelet, R. R. Bhavnani, and S. Bazzi. 2012. "Counting Chickens When They Hatch: Timing and the Effects of Aid on Growth." Economic Journal 122 (June): 590–617.

12.3 Sectoral intervention benefits:

Roads

Rural road development (or more widely – rural transport) is an important stepping stone to economic growth and poverty reduction. Without effective transport rural communities are isolated from markets, health care and education. Studies in Uganda, Tanzania and India[52] found that investment in rural roads gave the highest, or second highest returns, and lifted more people out of poverty, per dollar spent, compared with any other form of public expenditure.

More recently the study by Hine *et al.* demonstrated positive impacts associated with increased income, poverty reduction, employment, agricultural output and sales, education, health, traffic volumes, transport services, transport costs and general economic indicators.

In addition the study found that the highest impacts, were observed for countries with lowest road densities. Wondemu study in 2010 found that between 1989 and 1994, households with access to all weather roads generated 90% greater income than those who did not. There does appear to be diminishing marginal returns between the investments in rural transport infrastructure and the positive impacts. For example in India, where road density is around 16 km per 100km^2 the benefits have been observed to be a lot lower than those of other countries (e.g. Ethiopia) with a lower road density.

Based on the data available the road density in The Gambia is approximately **33.1** km per 100 square km[53]. Given the road density in The Gambia is relatively low (although higher than that of Sierra Leone and Liberia) it is more likely that the multiplier impact from that of road construction is at the higher end of the scale.

It would not be complete without mentioning that there are some negative impacts associated with improved rural transport infrastructure[54]. For example in some cases better access has led to the spread of communicable diseases. Notwithstanding this however, on balance health impacts of road investment were positive.

As is noted in this study, improving socio-economic development through improved large scale rural access is costly both in terms of construction and maintenance costs. There is a question with regards to affordability with regards to what level of rural access is financially acceptable to a country. For example, the maintenance of a rural road network that provides access to 70% of the rural population in Sierra Leone is estimated to cost about 2.5% annually of the current GDP of the countries (Rozenberg and Fay, 2019).

It was clearly not feasible in the timeframe allocated to perform a detailed study into the economic returns for road building, nonetheless it is commonplace in these situation to leverage similar studies conducted in not dissimilar environments. Using Ethiopia as an example[55] , the internal rate of return for hypothetical gravel roads were in the range of 12 – 35%. The study also found that there was an associated increase in consumption in the remote communities by 27.9%. A major study[56], covering 16 countries in North Africa and 24 countries in SSA, found that infrastructure (transport and other infrastructure) accounts for more than half of Africa's recent economic growth and has the potential to contribute even more in the future.

Year of Study	Author	Impact	Countries
2009	Shalini, Boopen & Rojid	• Enhanced market accessibility for the poor • Job creation during road construction	Benin, Burundi, Cameroon, The Gambia, Ghana, Kenya, Mauritius, Niger, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia and Zimbabwe.
2012	Seetanah	• Increase in economic growth • Improved living conditions • Enhanced accessibility to employment opportunities • Enhanced accessibility to health services	Benin, Burkina Faso, Burundi, Cameroon, Egypt, Ethiopia, The Gambia, Ghana, Kenya, Madagascar, Malawi, Mauritius, Niger, Nigeria, Rwanda, Senegal,

[52] The International Food Policy Research Institute (1999, 2004, 2005)
[53] Last available data set from 2004
[54] Hine *et al*. (2016)
[55] Nakamura *et al.* (2019)
[56] Foster, V.; Briceño-Garmendia, C.M. Africa's Infrastructure: A Time for Transformation; The World Bank: Washington, DC, USA, 2009;

		• Enhanced accessibility to education	South Africa, Tanzania, Uganda, Zambia, Zimbabwe.

In addition to the country level macroeconomic benefits, road construction creates local employment especially if labour based methods rather than equipment based methods are used. This employment will improve the income and livelihood of locals. In addition locals who are employed will earn skills that can be transferred to other types of project and the skills can also be employed during maintenance.

Whilst there is a range of economic analysis on this topic[57], finding a definitive multiplier has been difficult. However the UK Government uses an economic multiplier of £1 spent on road construction returns £4 back in wider economic benefit. Given that the marginal return on urban roads (and in a developed economy such as the UK) will be lower than that of rural roads in a developing country a conservative estimate on the wider economic benefit of 1:6 ($1 spent:$6 back)

Electricity/Power

Access to stable electricity improves the gross income and welfare of households overall, however it does not always improve employment income in rural areas because it depends heavily on the extent to which electricity affects agricultural productivity. Where agriculture is manual and not supported by electrified infrastructure (e.g. water pumps) it follows that greater access to electricity does not improve employment income.

Countries must also be aware that often high-income households benefit relatively more from electricity access compared to poorer households. This implies that access to electricity has the potential to widen the income gap among rural populations.[58] Nonetheless, as with rural transport infrastructure the weight of evidence leads to the conclusion that the positive links between rural electrification and welfare justify investment in extending electrification to rural areas. This may be in the form of Solar Mini-Grids or in connecting villages to the main electricity grid. The IGC recently performed a study within Ghana and the results show that real gross income is about 64% higher for the households with access to electricity compared to households without access.

The same study found that both the probability of a rural household in a community with electricity owning a non-agricultural enterprise and the income from non- agricultural enterprises to be higher, 4.7% and 52.4% higher respectively, in comparison with a similar household in a community without electricity access. This suggests that establishment and operation of non-agricultural enterprises constitute an important channel through which rural electrification affect the economic outcomes (income and welfare) of rural households.

Improving access to electricity has additional benefit when combined with improvement in the water provision in the rural areas. Where not feasible to connect villages to the water network, pumps are required to extract ground water from boreholes. Combining the power and water interventions produce mutually beneficial outcomes.

Unlike improving the road networks (which are close to being public goods, up to the extent that they are non-rival) electricity is an excludable good and will be one that the Government or implementing partner can issue a tariff for. Indeed, even without wide electrification many rural villages will be using 'charging shops' and being made to pay for the electricity consumed (often at a very high rate compared to the prevailing tariff).

Electricity is a focus area for public-private partnerships as they can produce real benefit due to the investment in the long term producing greater sustainability. Detailed project analysis needs to be completed and suggested parameters are a period of 30 years, comprising 4 years of project implementation and 26 years of operation of project structures.

[57] Transport Corridors for Wider Socio–Economic Development, A S M Abdul Quium, UNESC 2019
[58] IGC 2018

Similar to roads, a robust figure for the wider economic benefit is difficult to capture, however study in Taiwan exhibited causality between a 1% increase in electricity consumption and a 1.72% increase in economic growth[59]. Using this data we can estimate an approximate stimulus to The Gambian economy.

Taking the most recent electrification rate of 56.2%[60] and multiplying by the population, gives approximately 1.3M people with electricity access. The PUDC is currently projected to give access to electricity to a further c.280,000 over 5 years. However, since these are rural areas the consumption of electricity is estimated to be a fifth of those in urban areas, meaning that the effect on economic growth as per our benchmark is smaller. Therefore after 5 years it is estimated that electricity consumption in The Gambia would increase by c.3-4% and have an associated impact on economic growth of 4-6%.

Water and Sanitation

As paid reference to above, calculating the economic return to investors/government from socio-economic reforms, especially that in the WASH area is very difficult to accurately predict. This is highlighted in that the time lag for benefits to arise is often long and the growth effect hard to attribute to a particular sectoral intervention.

However there is widely recognized economic case for investing in WASH, for example:

- The World Health Organization (WHO) estimates that for every US$1 invested in water and sanitation, there is an economic return of US$4 by keeping people healthy and productive[61]

Indeed the UN's Human development report states that the lack of safe water, sanitation and hygiene causes Sub-Saharan African countries annual losses equivalent to 5% of GDP. Indeed WASH is often billed as 'good for business' for the specific countries. Improved water resource management, water supply and sanitation contribute significantly to increased economic productivity. The biggest potential gains are in time-saving – amounting to over 70% of the economic benefits from universal water and sanitation access. Additional positive impacts include increased property values, tourism and business opportunities.[62]

Benefits from water source improvement by borehole drilling or rehabilitation have been analysed[63] and the economic case result was that there was the return on a US$ 1 investment was US$ 9.4 for borehole drilling and US$ 14.1 for borehole rehabilitation. The main contributors to this benefit are time savings and the economic benefits of averted child deaths.

There are also private benefits to improved sanitation in general that cannot be overlooked and are very large[64]. These benefits are often roughly structured around three areas: health benefits, financial returns and other lifestyle improvements. Severe or acute illnesses related to poor sanitation and water related hygiene often lead to malnourishment. This has been shown to have longer-term consequences on the accumulation of human capital and productivity (Victoria et al. 2008), which might be avoided through improved sanitation.

The assumption can be made that looking after sick children and seeking their treatment affects the labour market participation of adults, and hence household income. Financial returns from improved sanitation (other than lost working days) are associated with increases in the dwelling value (if owned by the household) and, in places, with higher status in the village. Finally, other lifestyle improvements include more convenience, less exposure to uncomfortable environments and safety.

It remains to be commented that any water supply system based on ground water extraction needs to look into the issues of ground water regeneration/raising the water table.

[59] Electricity Consumption and Economic Growth: Evidence from 17 Taiwan Industries, Wen-Cheng Lu, 2016
[60] World Bank 2017
[61] Hutton G (2012) Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage, p4. WHO, Geneva, Switzerland
[62] Hutton G (2012) Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage, p25. WHO, Geneva, Switzerland.
[63] Seungman Cha, Yinseo Cho, Sharon Jiae Kim, YongJoo Lee, Soonyoung Choi, Patrick Asuming, Yongwhan Kim & Yan Jin (2018) Cost-benefit analysis of water source improvements through borehole drilling or rehabilitation (2018)
[64] L. A. Andres, B. Briceño, C. Chase and J. A. Echenique, 'Sanitation and externalities: evidence from early childhood health in rural India', Policy Research Working Paper 6737, The World Bank South Asia Region Sustainable Development Unit and Sustainable Development Network Water and Sanitation Program, 2014

Agriculture, Livestock and Equipment

In providing assistance to the agricultural sector, Governments and IDOs must be cognizant of the Dutch Disease Hypothesis[65]. This is when aid is spent (or interventions made), even partially, on nontraded goods (local agricultural products), and the currency of the aid-recipient country appreciates in real terms. This then makes its exports less competitive on world markets. As a result, exports fall and imports increase, thus worsening the trade balance. The result is a fall in aggregate demand and, consequently, equilibrium income.

Looking once again for a theoretical basis on which the PUDC may be based, for agriculture alone we look to work complete by McArthur and Sachs.[66] They show that under a scenario of official development assistance, a group of target measures in agriculture leads to a multitude of benefits for the country.

It is demonstrated that under reasonable parameters a temporary boost in targeted assistance for agriculture, leads to a permanent boost in agricultural productivity. This agricultural productivity has a knock on effect, boosting savings from the increase in disposable income. They also found that as agricultural productivity grows this leads to a major expansion of the cash crop sector which drives a considerable share of overall agricultural growth. Given the right taxation conditions, the Government may also experience a major boost to tax revenues leading to rapid progress on the government balances. There is currently no available metric for calculating the quantifiable impact.

However, this being the case it is not uncommon for assistance for agricultural interventions from IDOs to be low (mirrored as well by small flows of FDI into the sector). This mainly reflects the low return on capital and investment in the sector.

Summary

Sector	***Investment***	***Return***
Roads	$159.52m	$957.12m
Water	$29.46m	$117.83m
Electricity	$98.64m	*+4-6% economic growth over 5 years*

[65] Van Wijnbergen, 1984, 1985
[66] Agriculture, Aid, and Economic Growth in Africa (John W. McArthur and Jeffrey D. Sachs)

13. Private Partnerships

It is clear that although concessions have worked in a few places (across Africa), contractual arrangements that combine private operation with public financing of investment appear to be the most sustainable option in many countries. In The Gambia, PPP (Public Private Partnerships) are currently orchestrated from within the Ministry of Finance and Economic Affairs (MOFEA). There are currently 10 PPP arrangements either planned or in existence.

Typically under a PPP arrangement the community or state partner plays one role while the private sector partner plays another. The public partner has title/ownership of the assets (the generation and distribution system); while the private party operates, maintains and manages the services.

13.1 Electricity

The existence of an already planned PPP agreement for the construction of a new generation facility for 30 – 35 MW indicates that the Government of Gambia is cognizant of the benefits of a PPP in the power sector. This demonstrates that the benefit case for PPP within the power sector is positive. For the PUDC there is an obvious opportunity where either standalone systems or solar mini-grids are constructed in local communities.

Solar mini-grids can be financed on a Build – Operate – Transfer (BOT) basis which secures the operation and maintenance of the facilities for the duration of the contract, assuming the tariffs are paid.

The total 5 year cost for the PUDC electricity programme is estimated to be c.$95m. If the Government of The Gambia were able to secure a PPP arrangement for 20% of the villages this would require c.$20m private investment. This is of course predicated on the assumption that the private provider over the length of the agreement (usually c.20 years) would operate the infrastructure, provide maintenance and collect the tariffs from communities.

It is worth paying reference to a current private power provider (GAM-Solar) that is currently implementing infrastructure similar to that being recommended in this feasibility study. As at January 2020 they have installed approximately 350 village solar pumping which is estimated to provide clean potable water to more than 400,000 rural villagers.

They have also implemented some 40 agricultural solar irrigation projects for development banks and foreign donor organizations. Back in 2013 a contract with the Ministry of Agriculture was implemented to provide 20 horticultural gardens with boreholes, fencing, reservoirs, piping, tanks and solar pumping systems.

They have worked with the following funding partners:

EDF (EU)	Netherlands Embassy, Dakar	Action Aid, UK	DingDing Bantaba / Child Fund, USA
JICA and Japan Techno Consultants (Japanese Government)	Engineers Without Borders, USA	Future in our Hands, Sweden	MRC Holland Foundation, Netherlands
Canada Fund (Canadian Government)	UNICEF	Sen De Gel, Turkey	SOS Children Village, The Gambia

13.2 Water

The lack of a comprehensive water network means that the drinking water needs of rural communities are met through ground water sources. This means that the construction of boreholes and standpipes are required.

There are currently no existing agreements within The Gambia and most in place in the region are short term and for management or operation and maintenance of existing systems that have traditionally involved minimal investment from the private sector.

One issue that The Gambia will need to address in a water PPP will be how to regulate and monitor performance under these contracts. The local government may find themselves in a dispute between residents and the operator and the operator may not trust local government to be objective. Likewise the

residents may not trust the operator to set the tariff at an appropriate level and continue to maintain the system. The PUDC model will assist with this by engaging at the community level, educating the communities as to how the infrastructure will be operated and also having the right governance structures in place to manage and monitor the private company.

Although The Gambia is the smallest mainland African country it may want to cluster the water schemes (boreholes etc…) in order to create a viable revenue base that will cover operating costs and leases. A cluster of comprising of approximately 100 to 150 boreholes would be adequate to engage a class of higher quality local private operators. Although rural water supply is not as great a commercial opportunity as is the case in the urban water sector where PPPs were first introduced across the region,

A market sounding process will reveal if there are capable local and regional private sector actors who are interested, and providing that the customer base could be scaled up enough to guarantee a return on investment. The PPP must also be structured in such a way that there is balance between the risks to the public and private sector alike, there is benefit from the economies of scale in clustering and that the performance requirements could be met by capable local private companies.

13.3 Agriculture

The Gambia's economy is reliant on agriculture (18% of GDP[67], see Section 6) which has key implications for poverty reduction and food security, yet small farmers in The Gambia face a number of constraints that limit their productivity. PPPs in agriculture have the potential to help modernize the agriculture sector and deliver multiple benefits that can contribute towards the pursuit of sustainable agricultural development that is inclusive of smallholder farmers.

PPPs within the Agricultural sector as part of the PUDC is attractive for three main reasons:

Potential to leverage financing: High levels of investment are required to unleash the potential of agriculture for sustainable development and poverty reduction in The Gambia. However, the 2020 budget allocation 6.9% government spending to Agriculture[68], down from 9.5%[69] below that of the 10% target. Gambia's high national debt levels (although reducing) also make it necessary to seek alternative funding options that do not lead to an increase in public debt. The mobilization of additional resources from the private sector is therefore considered necessary to supplement both public financing and official development assistance (ODA).

Risk sharing: The high (actual and perceived) risks of doing business in the agriculture sector often deters the private sector from investing alone. These risks include low returns on investment; limited access to productive inputs including land; high transaction costs and production risk associated with dealing with numerous small-scale producers; and political risk associated with government interference in agricultural markets. On this basis, PPPs are promoted as a useful mechanism for risk sharing through which the barriers to entry for the private sector can be lowered. A combination of market incentives and institutional mechanisms can be incorporated into PPP projects to provide greater certainty for investors and to help overcome the lack of an enabling regulatory environment. Under the PUDC the identification and selection of areas for private sector involvement can be coordinated and targeted at a local, decentralized level. The umbrella of the PUDC can then be used to solicit investment in a structured and regulated manner, with the appropriate checks and balances. At every stage, as is inbuilt into the PUDC model, the community must be consulted and village/district management structures must agree.

Innovation and market access: For public partners, the added value of agricultural PPP projects results from tapping into the powerful innovation and efficiency of the private sector while promoting the pursuit of sustainable agricultural policy objectives. This added value includes access to innovative technologies and superior management and marketing skills to achieve greater efficiency in the production and delivery of agrifood products and services.

[67] 2020 Budget, Government of The Gambia
[68] Ministry of Finance and Economic Affairs Expenditure Report Jan – Dec 2019
[69] It is recognised that the industry sector, in terms of contribution to GDP has now overtaken agriculture which may account for this reduction

Within the agricultural interventions in this study, one area where a PPP could be implemented is in the loan and subsequent repayment of the investment in livestock. Suggested in Section 11, the village would contribute to 75% of the livestock cost whilst the remainder is provided through a grant from the PUDC programme. The 75% of the cost would not be required from the community as an upfront payment but paid back on a monthly basis (say for example $4USD per month). This would effectively be a loan/credit facility from a private partner. Not only does this have the impact of increasing the chance that the intervention will be sustainable (communities have a level of buy in) but they are exposed to the functions of lending, borrowing and repayment. The financial inclusion of the rural areas in The Gambia is very poor and this arrangement has proved to be very successful in India where training and capacity building have accompanied the loans.

14. Investment requirements for PUDC

14.1 Current donor projects operational in The Gambia

Historically The Gambia has been the recipient of funds from multiple donors over the years. Based on the data received from the Ministry of Finance, GoTG, one half of the investments are given as *grants* to the government while remaining were pledged as loans. There are over 60+ ongoing projects with total commitments amounting to USD 844 million from 16 donor agencies. The major areas of the funding and some of the key donors for The Gambia are given below.

1. Delegation to European Union
2. World Bank / IDA
3. African Development Bank
4. Islamic Development Bank
5. IFAD
6. GEF
7. BADEA
8. EXIM Bank
9. OFID
10. SAUDI Fund

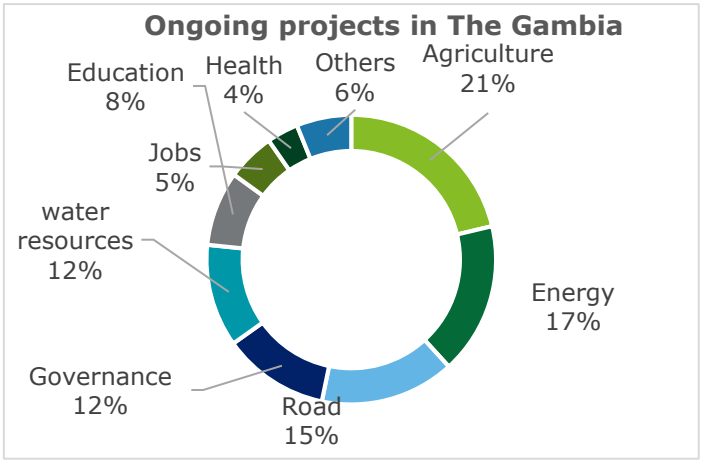


Figure 19: Ongoing investment projects in The Gambia

Delegation to European Union

It is noted that the EU is the biggest development cooperation partner in The Gambia after transition happened in 2016. The majority of EU funds are streamlined through the European Development Fund (EDF) with the current programme cycle running from 2016-2020. The key sectors under the National Indicative Programme (NIP) are:

- Agriculture for Economic Growth and Food Security/Nutrition
- Exit Strategy to the Transport Sector and Feeder Roads
- Governance/Rule of law/Security
- Inclusive Sustainable Growth and Job Creation
- Renewable Energy, Climate Change and Infrastructure
- Technical cooperation

As per the 11th EDF framework, an amount of Euro 291.5 million has been earmarked by the Delegation for the overall development of The Gambia. Sector break-up of the funds earmarked are as below.

Name of Project	sector	Amount in Million Euros
Focal Sector 1. Agriculture for Economic growth with FAO	Agriculture	20.5
Focal sector 2. Feeder Roads Rehabilitation with UNOPS	Road	10.5
Sector 1. Governance/Rule of law/security	Governance	135
Sector 2. Inclusive Growth/Jobs through PAGODA agreement already signed with UNCDF	Jobs	23
Sector 2. Inclusive Growth/Jobs through WACOMP to be signed	Jobs	5
Sector 3. Renewable Energy/infrastructure/ climate change with AfDB, GCCA, EIB etc.	Energy	62.5
EUTF for migration	Jobs	33
Other measures	finance	2

The World Bank

The investments from the World Bank have been on the rise in The Gambia since 2014 except the year 2016 due to the political transition happened during that year. This does not include the investments from the World Bank as part of Western Africa projects.

Table 33: World Bank funded projects in The Gambia

	Active projects		Closed projects		Total projects	
Year	**#Projects**	**Amount in USD million**	**#Projects**	**Amount in USD million**	**#Projects**	**Amount in USD million**
2010	1	5.25	6	21.87	7	27.12
2012			2	8.85	2	8.85
2013	1	5.00			1	5.00
2014	1	3.68	2	27.82	3	31.50
2015	1	5.00			1	5.00
2016	3	31.00			3	31.00
2017	1	7.50	1	56.00	2	63.50
2018	2	71.00			2	71.00
2019	1	30.00			1	30.00
Grand Total	**11**	**158.43**	**11**	**114.54**	**22**	**272.97**

Source: World Bank portal

The active projects funded by World Bank exclusively for The Gambia are as below.

Table 34: World Bank funded projects in The Gambia

Year	Sector	Project Name	Commitment Amount US$	Status
2019	Social Development	The Gambia Social Safety Net Project	30	Active
2018	Electricity	The Gambia Electricity Restoration and Modernization Project	41	Active
2018	Education	The Gambia - Education Sector Support Program	30	Active
2017	Health	AF Maternal and Child Nutrition and Health Results Project	7.5	Active
2016	PFMS	Integrated Financial Management Information System Project AF2	5	Active
2016	Education	Results for Education Achievement and Development Project (READ)	7.5	Active
2016	Electricity	The Gambia Electricity Support Project	18.5	Active
2015	Health	GM Maternal and Child Nutrition and Health Results Project	5	Active
2014	Health	Maternal and Child Nutrition and Health Results Project	3.68	Active

Source: World Bank portal

The major funds have been invested in Electricity and Education sectors which 50% of the total investment followed by Education (21%), Social Development (13%), Agriculture (7%) and Health (7%).

African Development Bank

The second major investment in The Gambia after World Bank was done African Development Bank over the last few years. A total amount of around USD 135 million have been committed by AFDB mainly for Agriculture and Trans-Gambian Highway with almost equally shared. Major projects under AfDB are as below.

Table 35: AfDB Projects in The Gambia

Name of Project	Period	Sector	Project Cost (USD million)
Food and Agriculture Sector Development Project	2013 – 2019	Agriculture	26.60
Agriculture Value Chain Development Project	2016- 2020	Agriculture	8.50
Building Resilience to Recurring Food Insecurity Project in The Sahel The Gambia. (P2RS)	2015 - 2019	Agriculture	17.71
Inclusive Growth Institutional Support Project (IGISP)	2017-2019	finance	3.21
Inclusive Growth Institutional Support Project (IGISP)	2017-2019	finance	2.43
Institutional Support for Economic & Financial Governance (ISEFG II)	2016-2019	finance	3.07
Trans-The Gambia Corridor Bridge Project	2012-2019	Infrastructure	66.30
Trans-The Gambia Corridor Bridge Project Phase II	2017-2019	Infrastructure	1.42
Agriculture Rice Value Chain	2020-2024	Agriculture	5.92

IDB

Islamic Development Bank has made an investment of USD 108.56 million mainly in the Agriculture with one project each in Energy and Education sectors

Table 36: IDB Projects in The Gambia

Name of Project	Start date	Donor	Sector	Project Cost (USD million)
Enhancing Value Addition in the Groundnut Sector Project	2013-2016	IDB	Agriculture	28.00
Building Resilience to Recurring Food Insecurity Project in The Gambia	2015-2019	IDB	Agriculture	15.00
Development of The University of The Gambia	2010-2020	IDB	Education	15.67
20 MW Brikama Power Generation Expansion Project	2013-2019	IDB	Energy	25.22
The Construction of Sukuta to Jambangelly Road Project	2013-2018	IDB	Roads	20.00
Agriculture Rice Value Chain	2010-2014	IDB	Agriculture	2.00
Small Ruminant Project	2019 - 2022	IDB	Agriculture	2.46

14.2 Mapping of PUDC interventions with existing IDOs

As part of the study we had interacted with multiple stakeholders including Government ministries / line departments, Multilateral and Bi-lateral donor agencies, UN organisations and international NGOs. When we analyse the priority sectors chosen for PUDC on the basis of the ongoing projects, the following donor projects could be leveraged upon.

Agriculture

Table 37: Agriculture projects in The Gambia

Name of the ongoing project	Donor
Food and Agriculture Sector Development Project	ADB
Agriculture Value Chain Development Project	ADB
Building Resilience to Recurring Food Insecurity Project in The Sahel The Gambia. (P2RS)	ADB + IDB
Agriculture Rice Value Chain	ADB + IDB + BADEA
Commercial Agriculture and Value Chain Management Project	WB
Enhancing Value Addition in the Groundnut Sector Project	IDB
Small Ruminant Project	IDB
National Agricultural Land Development Management Project	IFAD
NEMA CHOSSO	IFAD
Post Crisis Response to Food and Nutrition Insecurity in The Gambia	EU
Agriculture Economic Growth, Food Security/Nutrition to Mitigate Migration Flows	EU
Improving Food Security and Nutrition in The Gambia through Food Fortification	EU
Adapting Agriculture to Climate Change in The Gambia (FSP)	GEF

Roads

Table 38: Ongoing road projects in The Gambia

Name of the ongoing project in Road sector	Donor
Trans-The Gambia Corridor Bridge Project (Phase I & II)	ADB
The Construction of Sukuta to Jambangelly Road Project	IDB
Construction of Lamin Koto Passimuss Road Project	SAUDI FUND + OFID+KFAED + BADEA + Abu Dhabi
Rural Infrastructure Development Project	OFID
UNOPS - Feeder Road Development Project	EU-UNOPS

Electricity

Table 39: Ongoing electricity projects in The Gambia

Name of the ongoing project in Electricity	Donor
The Gambia Electricity Support Project	WB
20 MW Brikama Power Generation Expansion Project	IDB
22.5M Electricity Expansion Project	EXIM Bank
22.5M Water Expansion Project	EXIM Bank

UNIDO/GEF 5 Renewable Energy	GEF
Kotu Power Generation Expansion Project	OFID + BADEA
Rural Electrification Expansion Project Phase II	EBID

Water supply

Table 40: Ongoing water projects in The Gambia

Name of the ongoing project in Electricity	Donor
OMVG Interconnection	IDA/WB
Strengthening Climate Services and Early Warning Systems in The Gambia to Climate Resilient Development and Adaptation to Climate Change Phase II	UNEP

14.3 Potential Donors for identified sectors in PUDC

Based on our understanding of the donor investments in the country and globally and also on the interactions we had with the Donor organisations, the following donor organisations could be leveraged for the potential partnerships for PUDC implementation.

a. Delegation of EU (Some of projects are implemented through other UN organisations)
b. World Bank / IDA
c. AfDB
d. IDB
e. JICA
f. USAID

14.4 Government Investment

The 2020 budget sector allocation is shown below in Table 41. Whilst investment in infrastructure is clearly a priority for this administration the existence of a comparatively large new budget line to service the national debt means that in both real and percentage terms (of GDP) spending on Infrastructure and Agriculture has decreased. Whereas this is a positive step and will be a strong signal to international investors that The Gambia is taking the economic management of the nation seriously it does mean there are short/medium term implications on investment.

Notwithstanding the challenges that Departments and sectoral teams will face, it will be important for the Government to commit financially to the project. The PADC Year 1 has received $5m from the Government but longer term spending will demonstrate buy in from the Government and act as a strong signal to international investors or private partners. Going forward the Government has also committed to spending 5% of its national budget on development (c.$35m), allocating a proportion of this to PUDC will send the signals investors require.

As commented in Section 13, PPPs are an important tool in facilitating development, however they are by definition a partnership and the Government will need to take on some of the risk (financial and operational).

Table 41: Sector Allocation for 2020 Budget (Source: Budget Statements)

Department	D' Millions	2020 % of Total	Δ from 2019	2019 (% of Total)	2018 (% of Total)
National Debt Service	9,431.40	26.81		-	-
Ministry of Works, Construction & Infrastructure	4,134.15	11.75	-11.67	23.42	26.6
Ministry of Basic & Secondary Education	3,602.14	10.24	-1.21	11.45	11.13
Ministry of Agriculture	2,431.55	6.91	-7.83	14.74	9.51

Ministry of Health & Social Welfare	2,095.44	5.96	-2.05	8.01	7.94
Ministry of Finance & Economic Affairs	1,380.65	3.92	-3.63	7.55	6.45
Ministry of Interior	1,084.98	3.08	-0.65	3.73	3.68
Office of the President	1,124.37	3.20	0.58	2.62	2.72
Ministry of Higher Education	1,097.76	3.12	-2.01	5.13	4.65
Ministry of Trade, Regional Integration & Employment	842.17	2.39	1.87	0.52	0.7
Ministry of Foreign Affairs	1,015.63	2.89	-1.55	4.44	4.63
Ministry of Defence	773.6	2.20	-0.52	2.72	2.94
Other departments	*6,167.94*	*17.53*	*1.85*	*15.68*	*19.04*
Total	**35,181.78**	**100**	**-**	**100**	**100**
	35,181.78			**26,761.99**	**18,769.27**

15. Implementation mechanism for PUDC

15.1 PUDC Structure

Many of the organisations above will be informal participants to any PUDC implementation, in so far as they will be required to support projects but will not be formally commissioned as paid partners. However, using the blueprint from Senegal, there is a model which requires a level of staffing from across the stakeholder landscape (from NGOs to community organizations). A diagrammatic representation is shown in Figure 20.Drafting representatives from these entities would make them stakeholders and ensure buy-in.

For implementation, UNDP should consider creating an appropriate number of regional hubs (five in Senegal) to manage the interventions. Since these hubs oversee a number of sites, communities and individual projects, it is suggested that they are made up of International UN Volunteers and UN hired Technical Experts. The Regional Governance Team (would generally be made up of locally engaged staff with community/regional leaders setting direction. These teams are supervised by a UNDP team within the country's head office.

First, a steering committee should be created and co-chaired by Office of the President and UNDP. The committee will be responsible for strategic orientation of the programme. A proposed stakeholder list is below:

Table 42: PUDC Steering committee

Role	***Stakeholder***
Co-Chair	Secretary General & Head of Civil Service
Co-Chair	UNDP Resident Representative
Members	PS[70] Ministry of Finance and Economic Affairs
	PS Ministry of Transport, Works and Infrastructure
	PS Ministry of Lands and Regional Governments
	PS Ministry of Agriculture and Natural Resources
	PS Ministry of Energy and Petroleum
	PS Ministry of Women and Children's Affairs
	PS Ministry of Fisheries and Water Resources
Secretary	Director General of Department of Strategy, Policy and Delivery

The list above is not an exhaustive list of all stakeholders that may attend at any time, it is assumed that on an ad-hoc basis additional members are brought in on a requirement basis.

Second, to assist the Steering Committee the PUDC should establish a Technical Committee under the chairmanship of the Director of Delivery Unit.

[70] Permanent Secretary

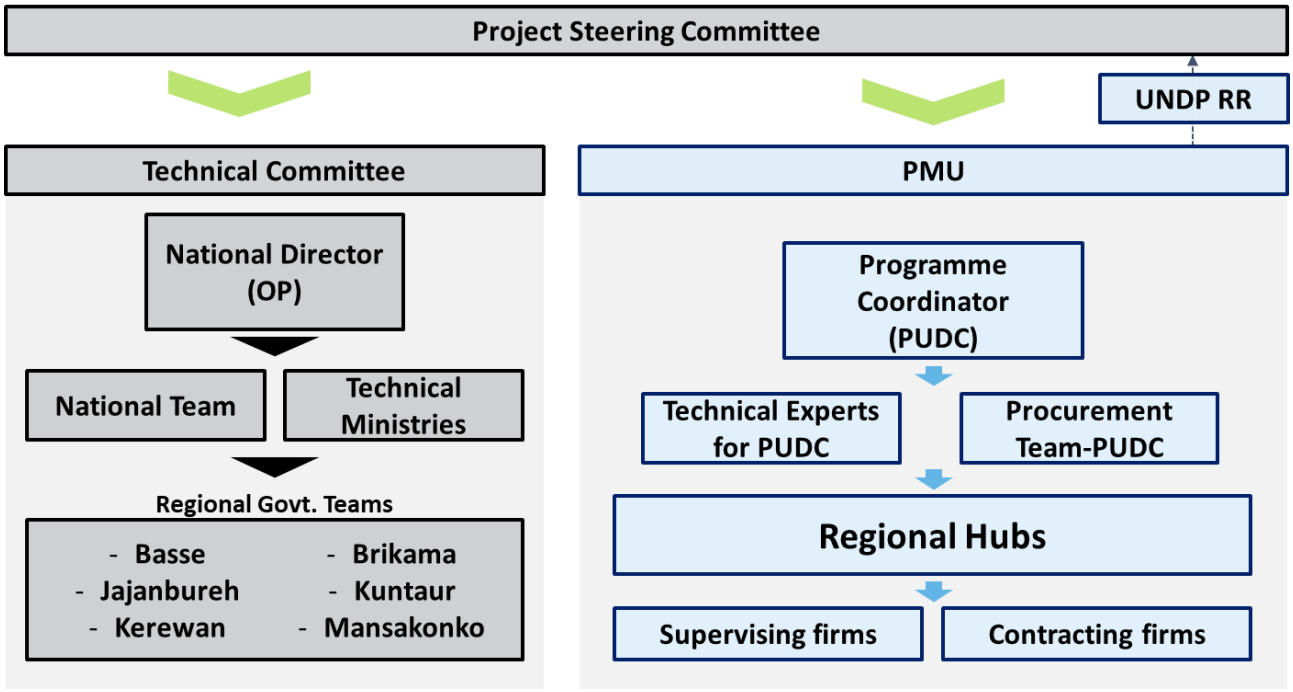


Figure 20: PUDC Governance

In addition to the contracted firms for delivering the projects, UNDP should also engage various technical supervising agencies to monitor implementation and provide monthly reports on the progress of the respective contracts. The Government of The Gambia needs to also be involved in the running of the PUDC programme. Whilst the programme might be managed by the UNDP, the Government needs to be actively involved in order for a programme of such scale to succeed, Therefore the Government of The Gambia should deploy a National Director (or similar) to do overall monitoring of the PUDC implementation. However, it must not be overlooked that the implementation of the projects will occur out of the Regional Hubs which are suggested to operate out of the Office of the CEO within the Area Council.

The National Director would be a civil servant, employed by the Government of The Gambia. However, as usually suggested for projects of such scale and importance, the monitoring and evaluation of the programme should be conducted by an independent organization.

15.2 Institutional Framework

Any development policy requires coordination among the various stakeholders within the implementation landscape. The challenge is to first identify the different actors and their area of intervention, with the aim to rationalize resources and optimize the actions of people.

The government or the public sector at various levels from national to local, private-sector agencies, technical/research institutions, NGOs and community-based organisations and the end-users at the community and household level need to play their roles in carrying out the activities and programmes related to skills and capacity development for rural change and development.

The Government (or Public Sector – including LGAs)

The Public Sector needs to drive a decentralized "demand-driven" strategy for PUDC activities which can be responsive to the specific demands (see Needs Mapping, under Implementation Plan) and potential of each community/cluster. The local government institutions (Area councils) and local community organisations (forming the Regional Governance Team) should establish a collaborative partnership in undertaking the responsibility for developing a local "vision" and strategy; designing/planning, allocating resources, and implementing and monitoring of development activities that would better cater to the local needs. The local steering committee consisting of the VDC and other Apex bodies and organization such as women, youth and farmer-based organization will take the lead in implementation of the PUDC programs. The designated Ministry and the LGAs, MDFT members from government and non-governmental staff from different sectors, will have input on the implementation using the decentralised approach. This will ensure decision-making on implementation of local development activities is devolved to the ordinary people at the grassroots level.

Effective utilisation of social capital can be singled out as the key role of local communities in respect of transformative change in rural areas. As a prerequisite for accumulation and the effective mobilisation of social capital, improving and upgrading the human capital is crucial. Developing skills of the individuals in a community enhances the quality and quantity of the output of social capital through collective action of the community.

The role of the Government of The Gambia within the PUDC is described more in Section 7.3.

Within Gambia, the status of decentralisation needs to be considered with each Area Council having their own strategic plan. The importance of each Local Government Area (LGA) in the scheme of the NDP is central (and therefore central to the PUDC) given that as part of the first priority of restoring good governance through decentralisation more power is likely to flow to the LGAs. This being the case it will be important not to set up a structure with initially to heavy an involvement from Central Government only for this to be rowed back in the years to come. The project will make use of the decentralized structures. This ensures participation of all stakeholders, from ministerial/departmental levels to village levels. The decentralization law and the 1999 governance policy make sure that all players in the field of development are factored in the decentralized structures. Of these, the MDFTs have immense technical expertise and knowledge of communities. It is however suggested that Wards be the entry-level, it is not feasible or effective for central government to plan community led interventions. Local Councils must embrace the new responsibilities that come with decentralisation as part of the NDP and focal point for PUDC activity in the region.

Community Corporations

Within each community the Community Corporation will be the principle agent for the PUDC. Within each sector the following committees are advocated. In the case where more than one intervention takes place in a selected community the Corporation may wish to have individual committees or have a single committee which oversees all of the assets.

Water Management Committees

- Water Management committees
  - WMCs can have minimum of 5 members and shall cover representatives from every hamlet of the village and also it should have majority women members (not less than 50%).
  - Each WMC will have a Chairperson and report to the community corporation management
  - These WMCs will be trained on utilising and maintenance of SPDWS from the day one.

- Major responsibilities of WMC
  - Monthly calculation and collection of user fees from every household based on the number of persons or usage per the meter
  - Levying of penalties in case of delayed payments
  - Employment and monitoring of staff for operations / maintenance of solar power systems, garden etc.,
  - Regular maintenance of the SPDWS – cleaning of tanks, solar panels, etc.,
  - Regular upkeep of accounts / records for funds meant for water collection and utilisation
  - Installation of newer connections / repairs if any
  - Convening monthly meetings

Community Managed Vegetable Gardens

- Selection of members
  - Each member should be ready to work on the gardens on the beds of 5m x 1m.
  - They should be ready to pay part of their sales as commission to the Vegetable Garden Committee
  - Regular maintenance of the allotted vegetable beds and ensuring that they receive yields

- Vegetable Garden Committee
  - Every community where vegetable gardens are installed shall have Vegetable Garden Committee with at least 5-10 members.
  - Each WMC will have a Chairperson and report to the community corporation management
  - These VGCs will be trained exclusively on vegetable cultivation practices, management of accounts and systems, collection of fees / commission etc.,

- Responsibilities of VGC
  - Monthly calculation and collection of commission from every member based on the sales
  - Levying of penalties in case of delayed payments
  - Arrangement of community lands, its development and distribution of beds to members

- Employment and monitoring of staff for operations / maintenance of solar power systems, garden etc.,
- Regular maintenance of gardens, cleaning of tanks, solar panels, etc.,
- Regular upkeep of accounts / records for funds meant for commission collection etc.
- Adding new members or managing exiting members
- Arranging of trainings or demonstrations to the farmer members
- Supporting in selling of vegetables to market / other places
- Procurement of seeds and other input materials including fertilizers, insecticides etc.,
- Attending monthly meetings

Dairy Management Committee

- Selection of members for CMDP
  - Each member should be ready to work on the dairy production system.
  - They should be ready pay part of their sales as commission to the Dairy Management Committee
  - Regular maintenance of the allotted animals and ensuring that they receive good yields

- Dairy Management Committee
  - Every community where CMDP is set-up shall have Dairy Management Committee with at least 10 members.
  - Each WMC will have a Chairperson and report to the community corporation management
  - These DMCs will be trained exclusively on Dairy Management practices, Milk value chain, management of accounts and systems, collection of fees / commission etc.,

- Responsibilities of DMC
  - Monthly calculation and collection of commission from every member based on the sales
  - Levying of penalties in case of delayed payments
  - Arrangement of community lands for fodder, its development and procurement and distribution of animals to members
  - Employment and monitoring of staff for operations / maintenance of sheds and animal if required
  - Regular maintenance of sheds, animals, fodder requirement etc.,
  - Regular upkeep of accounts / records for funds meant for commission collection etc.
  - Adding new members or managing exiting members
  - Arranging of trainings or demonstrations to the all its members
  - Supporting in selling of Milk to market / other places
  - Procurement of seeds and other input materials including fertilizers, insecticides etc.,
  - Attending monthly meetings

There is a huge potential for the private sector especially traders / supermarkets / big restaurants to buy milk from these farmers. They can actively support them by purchasing the milk or supplying the necessary raw materials.

Agricultural Equipment Management Committee (AEMC)

- Selection of members for AEMC
  - Each member should be ready to be trained in how to manage the assets
  - They should be ready pay part of their sales as commission to the Equipment Committee
  - Ready to support regular maintenance of the assets and ensuring that they are utilised

- Dairy Management Committee
  - Every community where equipment is provided shall have Equipment Management Committee with at least 10 members.
  - Each AEMC will have a Chairperson and report to the community corporation management
  - These AEMCs will be trained exclusively on Asset Management practices, management of accounts and systems, collection of fees / commission etc.,

- Responsibilities of DMC
  - Monthly calculation and collection of commission from every member based on the usage of the equipment
  - Levying of penalties in case of delayed payments
  - Employment and monitoring of staff for operations / maintenance of equipment
  - Regular upkeep of accounts / records for funds meant for commission collection etc.
  - Adding new members or managing exiting members
  - Arranging of trainings or demonstrations to the all its members
  - Attending monthly meetings
  - Organising and communicating to Regional Government the requirement for additional training.

Rural private sector

The rural private sector includes a continuum of economic agents, ranging from subsistence or smallholder farmers, rural wage-earners, livestock herders, small-scale traders and micro-entrepreneurs; to medium-sized, local, private operators such as input suppliers, and microfinance providers. Associations of farmers, herders, water users or traders also form an important part of the private sector. The rural private sector is an important facet of the local economy, and its varied agents and actors offers a special opportunity to establish and deepen the interventions of PUDC. Additionally, previous interventions by different projects have helped create viable private sector initiatives up to the village levels.

There were projects such as WID that help raised awareness on women issues and WAD brought their economic needs to the forefront through small scale enterprises to improve women's economic empowerment. However, the success of these programs was limited. Gender mainstreaming and gender responsive budgeting could target women headed household for adequate resource allocation for gender equality and equity. The traditional "Osusu", and other formal micro finance outlet could be utilized as part of social protection programs in remote and underserved communities in the Gambia.

Within the implementation architecture the rural private sector actors should consider the following responsibilities as part of their primary mandate when involved in the PUDC:

- Supporting the establishment of viable backward and forward linkages between rural producers and surrounding private markets, and facilitating smooth interface between them
- capacity building of small producers.
- creating systems and processes for supply chain and market linkages.
- Supporting private-sector entities (e.g. input suppliers or agro-processors) that can provide commercially viable services and markets for the rural poor.
- Assisting the establishment of an enabling policy and institutional framework for rural private-sector development.

Technical/Research Institutions

The technical and research institutions can provide technological platforms to design interventions with large scale impact. Research agencies can be involved in providing research, extension and training support in promoting newer seed varieties, cropping patterns, resource conservation technologies, etc. Technical Institutions/Universities can demonstrate low-cost technologies in rural areas for crop preservation, community water purification solutions, alternative energy sources, etc. Technical agencies can be involved in content development and training in community-based water resource planning and management.

International Non-governmental organisations (NGOs)

Whilst UNDP would be the key implementing organisation for the PUDC, multiple NGOs would be involved throughout the programme. It must be recognised that within the development sector and especially in the rural development space, programmes will often compete for similar outcomes and results and so coordination across NGOs will be a key success factor for the establishment of the PUDC as a driving force for change.

Partner NGOs and International Development Organisations should consider the following responsibilities (all assumed to come under the PUDC context):

- Providing funds for non-formal education, and capacity building of rural disadvantaged groups.
- Supporting capacity building of local community organisations and civil society bodies, local elected officials and the private sector.
- Bringing a perspective of international and comparative experiences and lessons and work in partnership with indigenous organisations and institutions to adapt and apply the lessons.
- Developing and publishing learning materials.
- Awareness building among the communities.
- Monitoring grassroots organisations and service organisations.
- Undertaking research and evaluation of the PUDC programme (not led by UNDP or the Government).

Rural trade unions and cooperatives

The Gambia doesn't have organized rural trade unions as the trade union activities are centred in the Urban Gambia but not very proactive as in other countries. However, farmer and consumer cooperatives do exist sometimes but often with very weak capacities. In some cases there are village associations set up to promote and spearhead village development, often with support from natives currently in the diaspora. These groups also seek to protect village interests. Where appropriate, PUDC can engage such associations in the absence of trade unions and artisanal groups.

Media

Often a forgotten and undervalued partner in the delivery chain for social and economic reform, the Media has a large part to play in the perception of communities (rural and urban) of projects. In Senegal, initially the media was critical of the decision to invest the Phase 1 amount ($200m) which is accredited with making implementation more challenging than it needed to be. Public perception (often controlled by the media) is critical to the success of the PUDC. The PUDC teams in Senegal and Togo have both realised this, and by way of example they both run and operate Twitter accounts.

In The Gambia, many regions have established community radios and they are great resources for community specific conversations. Create awareness on Inter-Ministerial Steering Committee, Multi-Stakeholder Coordinating Committee, and could also serve as a platform for Municipalities or Partners forum on development issues. In addition to community radios, traditional communicators, and "kanyalen kaffoos" provide huge potential for outreach, dissemination and sensitization. These are already part of village and community communication infrastructure and eases entry for development initiatives. They can be further capitalized for technical communication, and or have them work with the formal media in a complementary relationship.

15.3 Innovations in community institutions

Two cases – one implemented within The Gambia and other one from India is presented below which can be referred to for building or strengthening the community institutions under PUDC.

LADEP

The Gambia's Lowland Agricultural Development Project (LADEP) was a joint initiative of The Government of The Gambia, African Development Fund (ADF) and the International Fund for Agricultural Development (IFAD). The project was approved in 1996, and implementation was completed in 2004. According to the final evaluation report, the total financial cost of the project was a little over $8.05 million, with The Gambia Government as the borrower and ADF and IFAD as co-financiers. The loan was to be paid over 40 years.

LADEP was conceived on the premise that The Gambia has huge potential to become a competitive producer of rice, but had always been constrained by ecological, technological and other factors. Rice which is the staple food for overwhelming populations of Gambians accounts for a large chunk of imports to The Gambia. The project had five components:

- Soil and Water Management Schemes
- Tidal Swamp Access Schemes
- Support Services
- Lowland Development Master Plan
- Project Management

Project Goals and Objectives

LADEP was put together on the context that it will be the first phase of a long term 20-year programme. The principal objective of LADEP was to create nation-wide sustainable rice development schemes. The goal was to have at least 20,000 rice farmers gain access to plots of land in LADEP developed areas for rice production.

Implementation and Approach

From the outset, LADEP was conceived not to repeat the mistakes and shortfalls of the "enclave project approach," which essentially means inserting projects in communities that have little or nothing to do with community demands and are managed and or controlled by external agents. LADEP noted that several past projects fell into this trap and it therefore opted for "a programme-type approach with sustainability plans and an enhanced supportive national policy environment. So, philosophically, this project sought to be

different from the outset. LADEP's approaches were participatory and holistic. Communities were involved in project and site identifications.

The project also forged partnerships with the large pool of NGOs already present in the area. It allowed NGOs to focus on capacity building efforts ("software"), while LADEP provides much needed local infrastructure ("hardware") such as bridges.

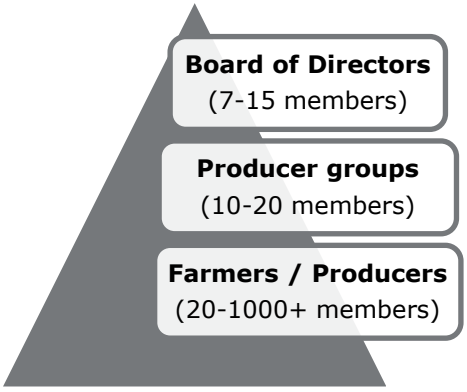
Project Impact and Outcomes

According to the Project Completion Report, LADEP was successful from the perspectives of both the beneficiary (The Gambia Government) and the co-financiers (ADF and IFAD). For example, production per hectare of land increased from 1,500kg/ha to 2,200k/ha, whereas production in fact doubled in some areas. Since local Gambian rice is considered premium compared to imported rice, the price increased despite the increase in production and this provided extra incomes for households. The project targeted poor households to help increase production for such households to have rice sufficient for themselves, but in many cases this was exceeded and surplus rice was sold at local markets for much needed cash. The social impact of the project was great because instead of just 21,000 households, the project reached 34,000 households. This increased the number of people directly or indirectly impacted from 73,000 persons from 21,000 households to 274,000 from 34,000 households. The project increased access to land and 70% of all beneficiaries were women. Improved infrastructure such as roads and bridges mean reduced physical labour and travel time for women farmers. Women control of lowland agricultural lands improved and women representation on Village Farmer Associations improved by 50%.

Case Study - Farmer Producer Companies

Farmers Producers Companies (FPCs) are the new-age institutions given fillip by the governments in South Asia, by blending oneness of Co-operatives and the efficiencies of private companies. FPO in general is formed by primary producers, like farmers, milk producers, fishermen, weavers, rural artisans, craftsmen, etc., and established in the form of Producer Company for sharing of profits/benefits among the members. These FPCs were evolved as new generation producer-led organizations to reap benefits of aggregation and economies of scale.

Government of India ideated these institutions in 2003 and allowed them to be registered under company's act. They are generally



governed by their own bye-laws or Memorandum of Associations. FPCs are generally two-tiered with lower tier begins with mobilizing farmers into groups of between 15-20 members at the village level (called Producer Groups or PGs) and federated into their associations as Farmer Producer Companies (FPCs) whose membership can go beyond 1,000 as well.

Agriculture value chain has different enabling and supporting environment with intermediaries acting as inseparable part of value chain. These intermediaries often work in a non-transparent way to receive their own benefits due to absence of systems and institutions. In order to avoid such intermediaries, the farmer collectives with legal set-up becomes utmost necessary to enhance profits to the members.

FPCs require technical and managerial expertise to carry out their businesses including forward-backwards linkages, Packages of Practices, Seed production,, other value addition, branding, marketing etc. to sustain their business operation ensure profitability. An inclusive yet affable ecosystem is required for any producer organizations comprising various services like emergency credit, consumer credit, production credit, retail services of inputs for agriculture, storage, transportation and other agricultural production services required by the small and marginal farmers.

Some of the features of FPCs that differentiate from Cooperatives are:

- Membership is open to only producers or companies of similar nature
- FPCs can have professionals on-board as co-opt
- Shares of the FPCs are tradable unlike Cooperatives though amongst the members
- No role of government – one member one vote with no vote for non-producers
- FPC must create reserves and profits are shared on patronage

As on Feb 2020, there are over 843 Farmer Producer Companies in India[71] functional across all states. Their operations range from all agriculture produces, other allied activities and crafts. During Feb 2020, Government of India has announced an exclusive scheme to promote 10000 new FPCs[72] in the country with a budget of USD 642 million over a period of five years.

[71] http://sfacindia.com/UploadFile/Statistics/State-wise-summary-of-registered-and-the-process-of-registration-FPOs-promoted-by-SFAC-(29-02-2020).pdf?var=9958255.25855
[72] http://sfacindia.com/UploadFile/Statistics/Press%20Information%20Bureau.pdf

15.4 Training needs for strengthening capacities of communities

Understanding the role enhanced community capacities for combating rural poverty requires clear grasp of the pathways out of poverty for rural people. Indeed, this should be the central question in the context of rural transformation under PUDC. Given the limited resources to spend on infrastructure and training, what is the right mix of physical interventions vs building knowledge/skills? It is widely acknowledge that building the capacity within the communities both acts as a multiplier to the chosen interventions and enhances the sustainability of them.

Whilst on a different continent the Asian Development Bank (ADB) (2006) asked the question of: How do poor households in rural areas rise out of poverty? The report looked at a number of cases and identified that the constraints in the interventions to reduce poverty were:

a) isolated investments in upgrading rural roads and other infrastructure in remote and poorly endowed regions without linking these or assessing fully the ancillary economic and ecological factors;

b) add-on components satisfying ADB's pro-poor conditions, such as HIV/AIDS or gender-related actions, without sufficient demand from clients; and

c) household and geographic targeting used in investment projects that did not tackle the key causes of poverty, but assumed that funds flowing into poor regions, or intended benefits for socio-economic groups, would automatically lead to poverty reduction.

In implementing the PUDC, institutions must be aware that they avoid the aforementioned pitfalls. Linked especially to bullets a) and c) is the in-depth and detailed understanding of the communities in which interventions are being made and the specific needs of the community – including training. In other words, in order to reduce poverty, it is not enough to just improve infrastructure, but the PUDC must improve the skills, knowledge and expertise of the people.

Whilst many young people will hold basic numeracy and literacy skills across the communities in The Gambia, (although not all will), there is general agreement that literacy and numeracy skills alone are inadequate for success. These skills need to be accompanied by the acquisition of appropriate attitudes, knowledge and skills related to vocations and income-generation, as well as management, entrepreneurship and social, political and cultural life. By the same token, technical and vocational skills, narrowly and specifically defined and taught to carry out certain occupational tasks, are not often enough even for the particular task, not to speak of adapting to the changing and evolving nature of occupations.

One of the aspects which has, and needs to continue to, set the PUDC apart from other poverty alleviating interventions is the extent to which there is programmatic level investment in training local communities to manage, run and develop the PUDC-supported infrastructure and interventions. In Senegal, training received by managerial level individuals within the communities had a demonstrable impact on the successes of new businesses (regardless of the type of community/town considered).

At the simplest level, building the capacity and training individuals and/or community groups in the following skills are considered to be most effective.

Table 43: Training needs

Training needs (to be decided based on the requirements of the community
Farm planning and management
Rational decision-making
Record-keeping, revenue computations, cost accounting
Application of new inputs, varieties, improved farm practices
Storage, processing and food preservation
Supplementary skills for farm maintenance and improvement
Knowledge of government services, policies, programmes, and targets

Knowledge and skills for family improvement (e.g. health, hygiene, nutrition, home economics, child care, family planning)
Civic skills (e.g. knowledge of how cooperatives, local government, national government function)
New and improved technical skills applicable to particular goods and services
Quality control
Technical knowledge of goods handled to efficiently advise customers on their use, maintenance, etc.
Management skills (business planning, procurement and inventory control, market analysis and sales methods)
General skills for administration, planning, implementation, information flows, promotional activities.
Technical and management skills applying to particular specialties.
Leadership skills for generating community enthusiasm and collective action, staff team work and support from higher echelons
Inter-personal skills
Public speaking
Team building and management
Basic numeric and literacy abilities

The training needs do, of course, flow from the chosen sectoral interventions, which once diagnosed and selected will require more in-depth training analysis. Second, rural skills interventions have to be specifically incorporated into the poverty reduction strategies for the communities. Whilst funding may come from the PUDC programme, it is important to recognize the part that the National, Regional and Community Governments, the private sector, NGOs and Community Organisations will play in training the communities. It is neither necessary nor very efficient to have all or most of skills development programmes managed by one mega-agency in the public sector. Many of the activities can be carried out, within a common agreed framework, by UNDP or other NGOs, community organisations and the private sector, with appropriate financial incentive and technical support from the Government and other donors. At present a 10% capacity building cost line has been added to account for the training and capacity building needs.

15.5 Role of UNDP & Government of The Gambia in PUDC implementation

Already highlighted are the various roles that UNDP and the Government will play in the implementation of the PUDC in The Gambia. It is possible for the Government of The Gambia to implement the PUDC without assistance from UNDP, but a number of obstacles can be overcome by using UNDP as the delivery agent.

One of the largest challenges that a public sector organization faces is the speed (or the lack of it) at which it can procure goods and services. PUDC, by its very nature, is an emergency development programme. To rely on the national procurement system will inevitably cause delays, thus defeating the very purpose of the programme i.e. fast-tracked development. A key recommendation from the visits to Senegal is that if public procurement is done through UNDP instead of the national procurement authority, unnecessary delays and can be avoided. Hence, UNDP is introduced as an indispensable partner for the Government to implement the PUDC in The Gambia.

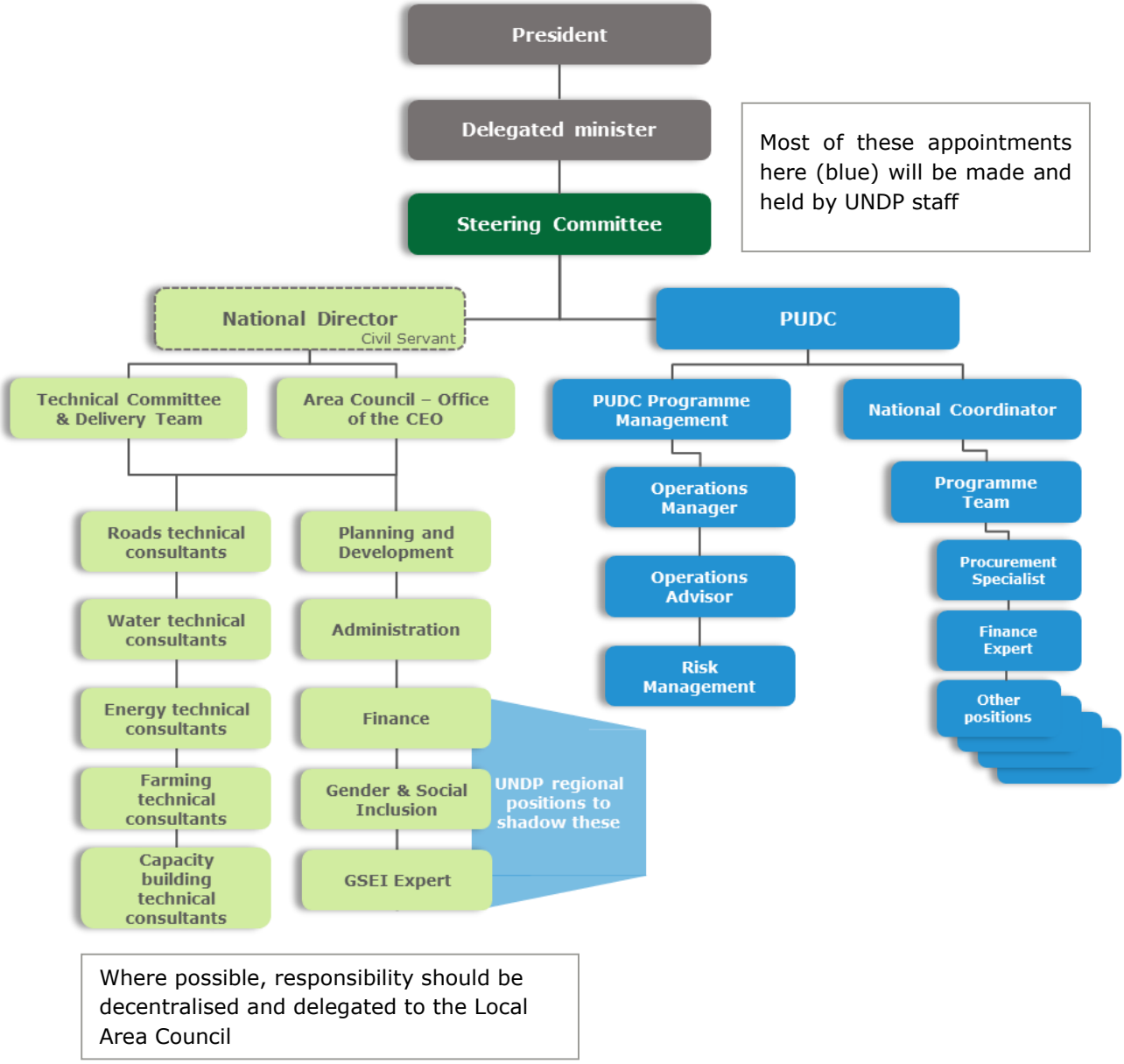
Nonetheless, it is also the case that for a successful implementation of the PUDC model there needs to be a strong political will and commitment of the beneficiaries. It is also likely to require large domestic resource allocation in advance of any potential donor support (both loans and grants). An implementation analogous to the Senegalese model (Phase 1 – Government funding, triggered Phase 2 – donor support).

In addition the Government needs to leverage on the Regional Area Councils to spearhead the implementation within their own communities. It will also be up to the regional area councils to align their current strategic plans. For example, the Brikama Area Council (West Coast Region) has proposed in their plan for 3 boreholes per year to be constructed in their area. This is of course not surprising, since in order

to rationalise and provide seamless throughput in both programming and disbursement in all the projects and by donors to LGAs, Council strategic plans have had to be aligned to the NDP. This means where possible, to align the Strategic Priorities and time horizon of the Strategic Plans of LGAs with those of the NDP.

Since, as discussed in the earlier chapters the PUDC is well aligned to both the SDGs and the NDP there is no coincidence that it correlates well with the Strategic Plans of the LGA.

Figure 21: Role of UNDP and Government



By way of reference, in Senegal there are 13 general staff, one treasurer, one travel coordinator, two procurement officers, one vendor approver, five middle management and one project manager.

16. Implementation plan

It is difficult to exactly articulate the specific activities for each of the interventions, as the exact mix of projects for each village may be different and will have implications for planning. Figure 22 shows the broad headings for the development of a detailed implementation plan as well as the stakeholders involved at each juncture. Since the PACD is already inflight some of these activities may be able to be streamlined and rolled over from the PACD. Approximate timescales have been given under Section 16.1.

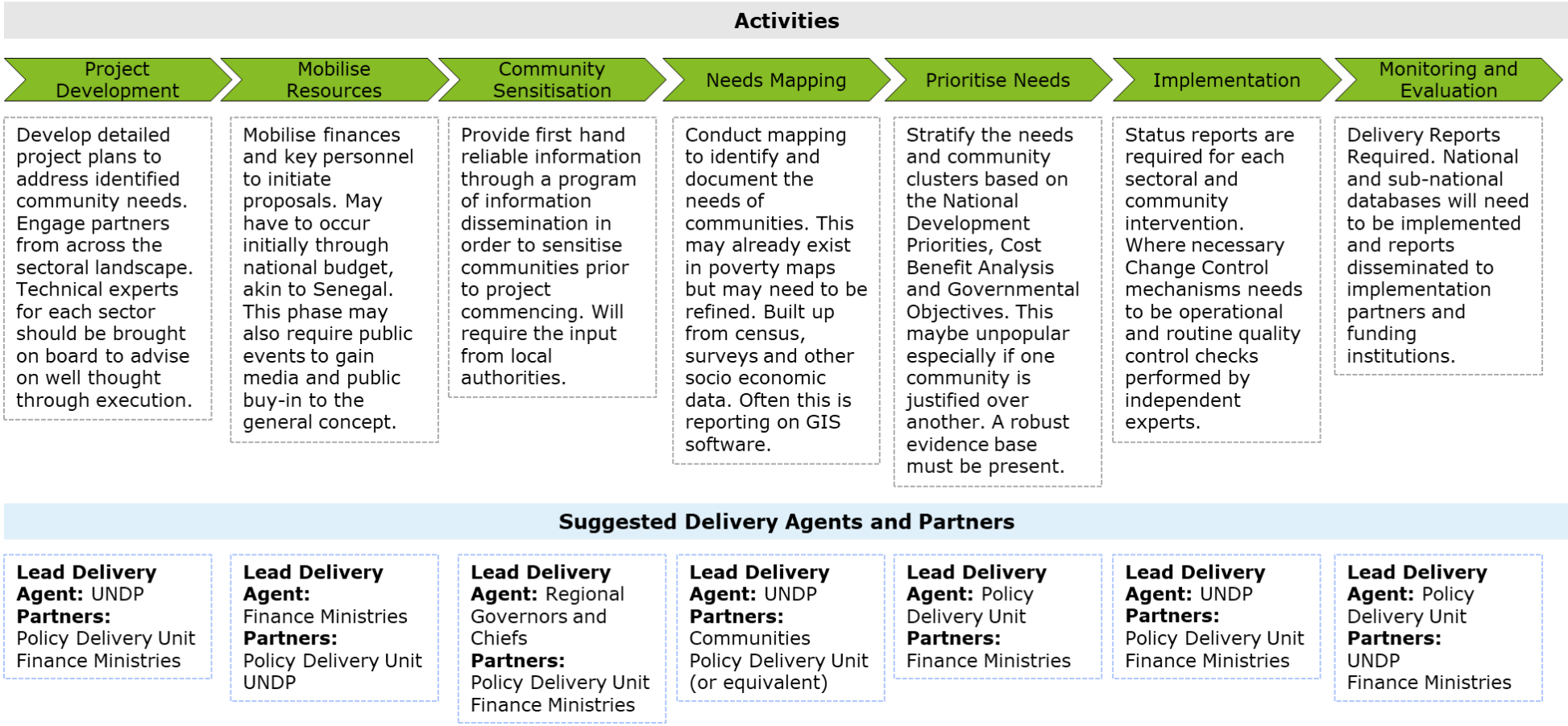


Figure 22: Implementation Plan

16.1 Timing

Activity	Year 1				Year 2				Year 3				Year 4				Year 5			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preparation (Needs mapping and prioritising needs)																				
Baseline Survey (across all rural communities)																				
Prioritise needs																				
Finalisation of communities																				
Finalisation of sectors for communities																				
Resource planning and project development																				
Sectoral intervention plan																				
Environmental & Sustainability & Governance assessment																				
Publication and Sensitisation of programme																				
Sensitisation workshops																				
Donor and partner engagement																				
Raise funding for programme																				
Procurement																				
Procurement - RFP development																				
Procurement – Tender Evaluation3																				
Procurement – Vendor Selection																				
Implementation																				
Capacity building																				
Develop LGA support structure																				
Community Corporation – initial training																				
Community Corporation – formation																				
Community Corporation – board/CEO selection																				
Community Corporation – registration																				
Community monitoring																				
Establish GIS systems																				
Establish community contribution																				
Construction																				
Handover to community																				

Monitoring and Evaluation					
Appoint independent evaluation team					
Mid-term Evaluation					
Ongoing maintenance					
Conduct sub-national and national level evaluation					
Reporting					
Stakeholder Review					

17. Monitory & Evaluation

17.1 Monitoring plan

The M&E plan for the PUDC project in The Gambia will need to be further refined once the inception of the project has taken place. This will require close collaboration with the project coordinators in regions across The Gambia. The recommendation is that UNDP, Government and other implementation partners develop the plan during collaborative and participatory work sessions. Independent guidance and technical input should be secured.

A sound Monitoring and Evaluation strategy will be developed around the principles of mutual learning and stakeholder participation. Evaluations will be interpreted as "shared reflections" and the process of monitoring would also be of "revising" strategies in the light of freshly acquired knowledge through group reflection. These "evaluations" will look at both quantitative and qualitative dimensions and will adopt gender-sensitive and participatory tools and processes.

Once fully formed the M&E plan should include two components addressing the target indicators in the project log frame:

M&E of Project Performance

Monitoring focuses on the management and supervision of project activities, seeking to improve efficiency and overall effectiveness of project implementation. It is a continuous process to collect information on actual implementation of project activities compared to those scheduled in the annual work plans, including the delivery of quality outputs in a timely manner, to identify problems and constraints (technical, human resource, and financial), to make clear recommendations for corrective actions, and identify lessons learned and best practices for scaling up, etc. The project will be monitored closely by UNDP through semi-annual reports, quarterly implementation reviews, technical reports, and regular technical supervision missions fielded as required to enhance success.

M&E of project impact

Evaluation of the project's success in achieving its outcomes will be monitored continuously throughout the project. The key indicators can be found in the logical framework (Results Framework Table). The indicators will need to be further reviewed/refined during the development of the M&E Plan, and tools and methods and indicators for measuring impact determined and agreed to ensure that a standardized framework is shared by the participating institutions.

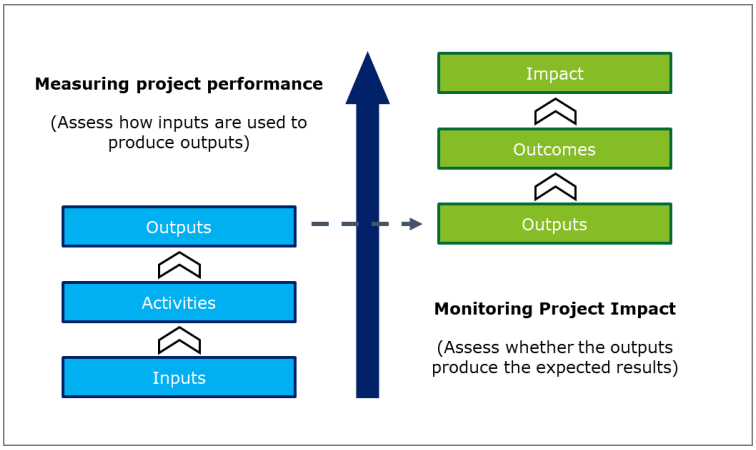


Figure 23: Project Performance and Impact

Both project performance and impact M&E will contribute to improve decision making and management, by keeping the project on track towards achieving the outcomes and environmental and development objectives and by integrating lessons learnt into planning.

Reporting:

It is suggested that the following reports are used by UNDP (at the designated frequency) to monitor project performance:

Monthly Progress Reporting:

The implementing agencies will provide to the regional Hubs brief monthly updates on progress against planned activities and budgets. These monthly reports will be consolidated, as required, by UNDP's Hub Team for progress review meetings.

Quarterly Progress Reporting:

The regional Hub will prepare a quarterly report based on the review of monthly reports submitted by the implementing agencies. This will feed into the UNDP's project management system and to the progress report and agenda of the Project Steering Committee (PSC) meetings.

Bi-Annual Project Implementation Reports

- an account of actual implementation of project activities compared to those scheduled in the annual workplan, and the achievement of outputs and progress towards achieving the project outcomes, based on the indicators as contained in the Project Logical Framework and as further defined in the M&E matrix (when developed)
- an identification of any problems and constraints (technical, human, financial, etc.) encountered in project implementation and the reasons for these constraints;
- clear recommendations for corrective actions in addressing key problems resulting in lack of progress in achieving results;
- lessons learned; and
- a detailed work plan for the next reporting period.

Annual Review Report

An Annual Review Report shall be prepared by the Project Manager - PUDC. The Annual Work Plan for the next year will be prepared aided by this report.

Annual Project Review

Based on the above report, an annual project review shall be conducted during the fourth quarter of the year or soon after, to assess the performance of the project and appraise the Annual Work Plan for the following year. In the last year, this review will be a final assessment. This review is driven by the PSC and may involve other stakeholders as required. It shall focus on the extent to which progress is being made towards outputs, and that these remain aligned to appropriate outcomes.

Field Visits

A representative from the UNDP office shall visit each region at least once a year. Field visits serve the purpose of results validation and should provide latest information on the progress for annual reporting preparation. Field visits should be documented through brief and action-oriented reports, submitted within the week of return to the office.

The evaluations under PUDC would be an opportunity for all those associated with it to examine their own experience, analyse and understand what is happening and identify their own areas of strengths and weaknesses.

Mutual Learning Visits

These will be undertaken by a group comprising of participating communities between regions to understand and compare the processes and progress made towards outcomes. This participatory review report will help in fostering greater buy-in by the communities and their institutions, greater transparency and sustainability of the initiatives. It will also be worth setting up a technical M&E working group.

There will be an **External Evaluation** at least once in two years, which will be carried out by development specialists engaged with rural development, women's empowerment and community institution issues to understand the extent to which the envisaged strategy and the expected outcomes have been achieved and what changes need to be made. These "evaluations" will look at both quantitative and qualitative dimensions and will be undertaken in partnership with the implementing agencies and community institutions so that they do not see this as a 'threat' but a positive learning experience.

PUDC Monitoring System (Online Database)

An online database should be developed and ensured all PUDC communities / project areas input data and conduct simple analysis. The system should be design in such a way that UNDP or other Project Management agency will have access to monitor performance of regions. The system will also provide quick information and feedback for management questions and decision making. This system will help consolidate reports on PUDC activities. PUDC indicator and performance narrative should be the official results for PUDC activities. The program should have standard indicators for various components to report on.

The Project can leverage the GIS based IT system developed by UNDP – Senegal for monitoring the PUDC progress in Senegal.

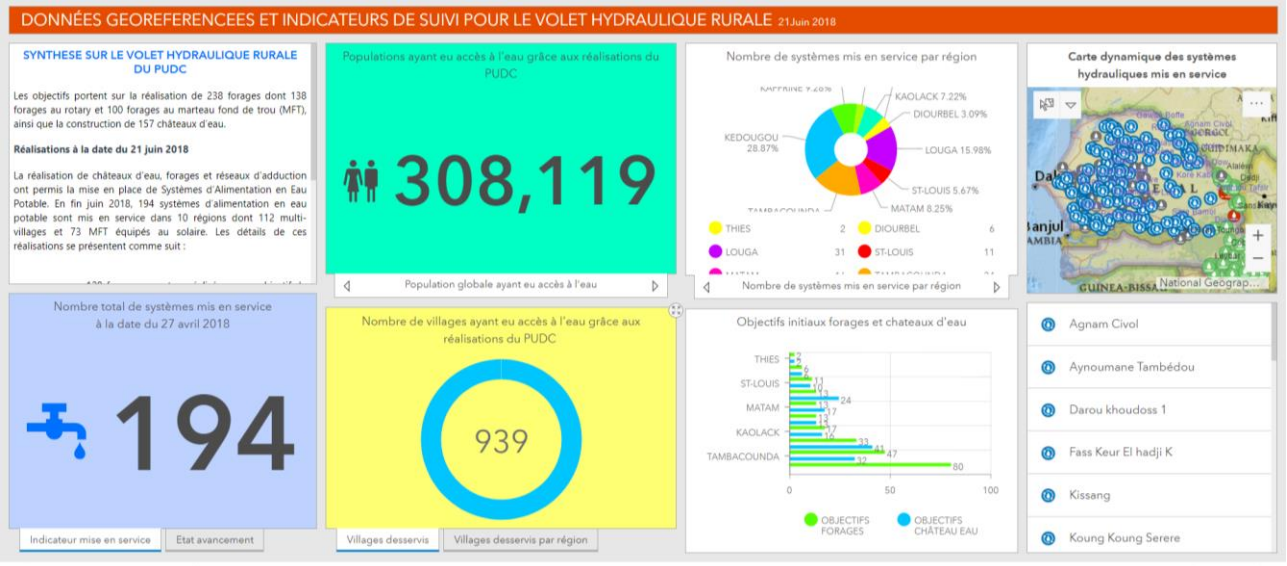


Figure 24: GIS Portal used for PUDC-Senegal

Annual Data Quality Assessment

Quality of data is critical for decision making, to ensure that data reported to UNDP is not compromised, an annual data quality assessment should be instituted and conducted by a third party to independently verify reported data. The data quality assessment should be conducted in line with the following parameters –Integrity, Reliability, Timeliness, Precision and Completeness.

Research Agenda

The project will have a strong research agenda that will be developed at the beginning of the project in consultation with community institutions and the NGOs. Research and academic institutions as well as independent experts and researchers will be involved in studying the processes of the project, particularly for the gender and participation dimensions. Comprehensive and rigorous studies will be commissioned to review the impact of the social mobilisation approach and the project's key interventions aimed at strengthening the household and community level access to basic services, food security, improving access to water, and enhancing the capacity of communities, especially women for effective participation in development at the village level and beyond.

Communication and Advocacy, Lessons Learned, and Upscaling

A concrete action plan will have to be developed at the beginning of the project along with budgetary outlays, to document and disseminate best practices for greater cross learning between regions and project partners as well as for wider learning. The work-plans will reflect the different activities related to documentation (e.g. commissioning case studies, process documentation, issue-based studies, reviews, working papers) and wider dissemination through publications, inputs into websites, monographs and multi-mass media coverage on a regular basis.

The project will encourage effective communication that covers information gathering and sharing documentation with all project partners. It will encourage documentation of baseline as well as key milestones during the project period through use of video and print media; coverage of key events by journalists and others; training of project partners in communication tools and skills; commissioning success stories with a strong human element and; facilitating linkages, wherever possible, with communication staff of the government at district/block levels. It will proactively support design and creation of mechanisms such as workshops to share and review experiences and lessons learnt at different levels within the project as well as implications for programme and policy formulation.

The Project will facilitate the travel of independent journalists to see the work in the field. It will provide funds to local partners to video document the process in the field. UNDP will commission films for national and international TV, organise annual thematic workshops on issues raised through the research studies.

17.2 Results framework[73]

A draft template results framework is shown below, this will need tailoring to the specific indicators used by The Gambia. Where current estimates are available these have been populated.

Table 44: Draft Logical Framework

Results Chain		Performance indicators			Means of verification	Risks
		Indicator	Baseline	Target		
Impact	Sustainably improve the socio-economic and health conditions of people in rural areas	I. Poverty rate	48%		The Gambia Bureau of Statistics (GBoS) PUDC final evaluation reports	
		II. Under 5 mortality rate	58.4			
		III. Chronic malnutrition rate	24.9%			
		IV. Maternal mortality rate	433			
		V. Rural life expectancy	62[74]			
Effects	**Effect 1:** Improved access to basic socio-economic infrastructure for people in rural areas and in the programme area.	1.1 Number of additional people, including vulnerable groups, with improved access to health infrastructure as a result of the project	0	TBC	**Sources:** Reports from relevant ministries Reports and studies from donors and other partners	Mitigation Measures - The Gambian Government should undertake to assign the required staff and include the salaries in the annual budgets concerned. Risks - Delays in procurement - Poor performance of local businesses Mitigation - During Phase 1 of the programme, the PUDC Management Unit should prepare a list of 'preferred partners' who can be vetted.
		1.2 Number of additional people, including vulnerable groups, with access to safe drinking water as a result of the project.	0	133,77		
		1.3 Number of additional people, including vulnerable groups, with access to sanitation infrastructure as a result of the project.	0	TBC		
	Effect 2: Improved access to road and energy infrastructure for people in the programme area	2.1 Number of additional people with access to electricity as a result of the project;	0	280,770		
		2.2Number of operational SMEs (that use electricity).	0	TBC		
		2.3 Number of beneficiaries with improved energy services as a results of the project.	0	TBC		
		2.4 Number of villages with either new feeder roads or where the feeder roads have been resurfaced.	0	TBC		

[73] Adapted from *Emergency Community Development Programme Support Project (PA – PUDC) - AfDB*
[74] Unable to source *Rural* Life expectancy

	Effect 3: Improved access to markets and increased incomes for producers in the programme area.	3.1 % of the population with access to markets within one hour 3.2 Annual household incomes in rural areas 3.3 Number of jobs created or consolidated by the programme	- - -	TBC TBC TBC		
Outputs	**Output 1:** Road and energy infrastructure A1. Rural roads A2. Rural electrification	1. Number of standalone solar plants 2. Number of mini-grids connected 3. Km of MV/LV lines 4. Number of additional households connected to the grid 5. Kilometres of road improved or constructed as a result of the project.	- - - - -	1500 156 TBC 22610 550	**Sources:** • PUDC Quarterly project progress reports • Financer's supervision reports • Annual reports of the Ministry in charge of PUDC monitoring. • Reports of sector Ministries concerned with the programme National Statistics Bureau	
	Output 2: Water supply, health and education facilities B.1. Boreholes with water towers B.2. Drinking water supply systems	1. Number of new boreholes constructed and equipped 2. Number of communities covered by water supply systems 3. Storage capacity of drinking water systems installed in cubic metres 4. Number of households supported with water systems 5. Number of water and sanitation committee formed and operationalised 6. Time taken to travel to a portable water source	- - - - - 	231 231 TBC 16,170 TBC TBC		
	Output 3: Market Gardening Areas, Livestock groups and Agricultural Equipment C.1. Farming areas developed C.2. Rural agricultural societies (RAS) C.3. Livestock Groups C.4. Agricultural equipments	1. Number of farming areas developed 2. Number of RASs created and supported 3. Number of dairy cows and goats production systems provided 4. Hectares of pastures developed 5. Number of agriculture equipment supported 6. Average daily milk production in litres 7. Average increase in annual household income	- - - - - - -	125 TBC 250 TBC 750 TBC TBC		
	Output 4: Studies and capacity building D.1. Development of Communication plan D.2. Preparation of business plans for promoters D.3. Training of Sector Ministry staff D.4 Training of Women/Young People's Groups	1. Number of people sensitized 2. Number of business plans prepared 3. Number of Ministry staff trained 4. Number of women and young people trained 5. Number of workers trained	- - - - -	TBC TBC TBC TBC TBC		

	D.5 Training of local authorities' workers					
	Output 5: Sustainability of services/assets E.1. Asset management plans E.2. Revenue Generation E.3. Private Sector involvement E.4. Community Corporation	1. Number of local asset management plans and budgets are available in areas where PUDC is implemented. 2. Amount of Revenue Generated from PUDC Assets 3. Value of enduring PPP contracts signed 4. Number of community corporations founded	0 0 0 0	TBC TBC TBC TBC		

18. Gender mainstreaming

18.1 Overall Mainstreaming

Gender mainstreaming helps to produce higher quality policy-making, legislative work and interventions with greater relevance for society because it helps policies and interventions respond more effectively to the needs of all citizens – women and men, girls and boys. Mainstreaming is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of the PUDC in all political, economic and societal spheres so that women and men benefit equally.

Notwithstanding the efforts taken up by the government to move the national gender agenda forward, gender-based inequalities persist in many areas in The Gambia. In 2019, The Gambia was ranked 174 out of 189 countries in the Human Development Index and 150 on The Gender Inequality Index out of 162 countries. It is a known fact that women occupy a major share amongst the poor/extremely poor owing to their low socio-economic status within the country. This was corroborated by the poverty discrepancies between men and women which is mainly due to the limited access of women to productive resources like land. In The Gambia, Women are not entitled to land ownership as per the legal statutes of GoTG.

The PUDC should also attempt to put in place mechanisms to prevent / avoid potential sexual exploitation, a type of gender-based violence which may increase when workers from outside the country especially from the neighbouring Senegal are brought to work in the project components. Because of increased male workers, there might be an increase in demand for sex work and increased use of drugs and alcohol, which are known drivers for violence against women and girls. This might lead to women and girls from the project areas being exposed to sex trafficking, disease transmission, physical, or verbal violence.

GoTG recognizes that sustainable economic and social development of the country requires full and equal participation of women, men, girls, and boys. However, gender disparity on youth employment has been highlighted in the NDP (2018-2021), the 2018 Gambia Labour Force survey, National Gender Policy (2010-2020) and the revised National Youth Policy (2015). As per The Gambia Labour Force survey – 2018, the unemployment rate for youth aged 15-35 years is 44.7 % for males whereas it is 55.3 % for females. The study further highlighted that rural areas (69.4 %) have a significant proportion of unemployed youth than the urban areas (30.6 %).

Concerning employment, women are more likely to be discriminated against even for an unskilled job opportunity due to a lack of facilities to accommodate their needs. These projects are more likely to disrupt their economic activities, and they are often not compensated in terms of resettlement due to the land tenure system[75].Policies should target both men and women in training, employment, and entrepreneurship in energy projects. Also, support gender and social impact assessments of an energy infrastructure project on the lives of women and girls[7677].

Some of the generic measures that can be incorporated to bridge the Gender gaps within PUDC are as

- A specific gender specific guidelines including the prevention of sexual harassment policy within the project – PUDC shall be formulated. This should address the concerns of both the staff and the community.
- Anonymous reporting mechanisms, and
- Code of conduct for the contractors to be hired for different components
- Enhancing capacities of project staff to recognize and address these issues at the project level during implementation.

Under PUDC, efforts to be made to identify young women and girls within the identified communities / villages and provide livelihood activities aiming at increasing their annual incomes. At the same time, care

[75] https://www.jica.go.jp/english/our_work/thematic_issues/gender/c8h0vm0000f3jmj6-att/gender_mainstreaming_05.pdf
[76] https://www.jica.go.jp/english/our_work/thematic_issues/gender/c8h0vm0000f3jmj6-att/gender_mainstreaming_05.pdf
[77] https://file.scirp.org/pdf/OALibJ_2018121909074036.pdf

should be taken to ensure that necessary safeguards are in place for their safety and to prevent violence and also a platform for reporting violence if any.

In order to implement, gender mainstreaming under PUDC, it is suggested to have a gender focal person or Gender & Social Inclusion – (GESI) who can focus on addressing the gender gaps in all priority components of PUDC.

PUDC shall be adopting gender-sensitive and sex-disaggregated indicators to monitor progress and assess the impact of the gender-targeted interventions. These indicators will be included in the Results Framework.

18.2 Sector Specific Gender Mainstreaming

Electricity

Studies have shown that incorporating the views and concerns of women and men can help improve and utilize the access to electricity, be it grid or Off-grid. Electricity needs of women and men and those of boys and girls vary from the context of purposes. For instance, access to electricity improves lighting in homes and sustainable cooking technologies for improved health and livelihoods for women and girls[78]. Failure to recognize these different needs of men and women can restrict the effectiveness of energy programs and policies, as well as other development activities that involve energy utilization.

As electricity has been identified one of the priority sectors under PUDC, there is a tremendous potential for rural households to enhance their productive hours especially during nights. Access to electricity not only reduces the expenditures in lighting but also enables the poor households to access to external world including TV, Radio and mobile charging. This reduction in expenditures enables them to save and reallocate the saved resources to other priority needs such as food, health and education, or use them to meet the needs of children, the elderly and people with disabilities.

Over 93 % of urban and 99 % of rural households use firewood or charcoal as fuel for cooking, and only 2.9 % of the rural population possesses a modern stove[79]. In addition, the National Energy Policy does not explicitly address gender considerations in its design, planning, and interventions. Evidence across the globe proves that access to electricity for socially marginalized groups such as women and youth, especially widows and those with no formal education, presents opportunities for income generating which could empower them move up the economic ladder. Providing the access to the electricity / energy means they should be affordable to the community especially poor / women or their ability to pay for the tariffs.

The project will explore specific ways in which the proposed components can reduce the identified gender gaps in the energy sector in The Gambia. PUDC can address the gender gaps in electricity identified above through the below activities:

a. organizing gender-sensitive awareness / outreach activities targeting mainly women / girls and other vulnerable groups about the electrification services from PUDC
b. holding regular consultations with women / communities on enhancing their involvement in design and the pricing modalities
c. imparting technical skills training to the electricity management committee having more than 50% women member
d. facilitating the recruitment of more female in electricity related component

Rural electrification, where gender mainstreaming is involved, will help to:

- strengthen existing activities carried out by women, particularly in the processing and marketing of agro-pastoral products;
- create new income-generating activities for women; and
- improve safety for women and children by way of streetlights
- In addition, the PUDC will reduce the time spent in search of energy sources, especially for girls and women who may use the time saved for productive, educational or recreational activities.

[78] https://www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/PB3_Africa_Gender-and-Energy.pdf
[79] 2008 Light Poverty Report

Transportation

As explained in the chapter 6, having an all-time accessible road is the top priority for rural communities of The Gambia. With road connectivity, they will have an improved access to markets, jobs, schools, and health services. However, improved road network could have unintended consequences such as human trafficking and vulnerability to HIV/AIDS in poor communities. Therefore, there must be a plan to mitigate against such unplanned consequences[80]. Due to improved roads, there might be an increase in road accidents claiming innocent lives and leading to permanent / severe injuries.

With reference to women and girls, they are no exception to these accidents. They are more likely to be involved in traffic accidents as they travel on foot more than men. Some parts of rural Gambia, motor cycles and horse/donkey carts are mean of transportations for marketing, social gatherings and seeking health care, pregnant women and some having their children on their backs without any protective measures such as helmets. Women and girls are also vulnerable to sexual harassment when they utilize public transportation[81].

One could address the gender-gaps in Road sector by having the following measures.

- organizing gender-sensitive awareness / outreach activities targeting mainly women / girls and other vulnerable groups about the road interventions under PUDC
- holding regular consultations with men and women (mixed communities) on enhancing their involvement in road construction
- Gender equality in labour-based road construction and maintenance could provide significant social benefits to participating households and communities. Women's job can include repairing potholes, cleaning pavements, cleaning ditches, and culverts. Women can maintain embankments and plant and care for trees that protect against erosion[82].
- Equal pay for equal work for both men and women.
- Capacity development activities to promote a better understanding of the differential gender impact of poor infrastructure and the social benefits of improving it.
- Mandatory recruitment procedures or quotas to female participation[83].

Rural roads, where gender mainstreaming is involved, will help to:

- strengthen existing activities carried out by women, particularly taking the agricultural produce to the markets
- improved health benefits especially to women because rapid access to nearby health centres
- improved safety for women and children
- improved access to schools for both boys and girls

Water and Sanitation

According to the World Health Organization, Sub-Saharan Africa represents more than 40% of the global population that does not have access to clean drinking water[84]. The Gambia is no exception to this statistic with majority of its rural population lacking access to safe drinking water and hence sanitation. The distribution of water resources and the challenges in water resources management is a significant factor in access to potable water in rural communities of The Gambia especially for women and girls. Women and girls are mostly responsible for the collection, distribution, and management of water resources at the household level. The time spent on this daily routine prevents women opportunities to quality education, decreases their productivity, and exposes them to the risk of violence and poor health[85]. Besides, it also affects their income-earning opportunities and active political participation within their communities.

Open defecation is still practice in both rural and urban areas of the Gambia. In urban areas, the practice is most common in growth centres. Inequitable access to water, sanitation and hygiene, and the limited facilities and capacity to address issues around waste management by municipalities is a significant

[80] https://www.adb.org/sites/default/files/project-document/63107/42334-01-cam-gap.pdf
[81] https://www.jica.go.jp/english/our_work/thematic_issues/gender/c8h0vm0000f3jmj6-att/gender_mainstreaming_05.pdf
[82] https://www.adb.org/sites/default/files/project-document/63107/42334-01-cam-gap.pdf
[83] http://www.fao.org/3/i2008e/i2008e05.pdf
[84] https://www.who.int/water_sanitation_health/monitoring/jmp2012/fast_facts/en/
[85] https://www.globalcitizen.org/en/content/4-reasons-water-and-sanitation-are-a-gender-issue/

constraint in sanitation improvements. Therefore, leaving these communities vulnerable to preventable WASH-related diarrheal diseases. PUDC's focus on improved access to potable drinking water and sanitation services, will not only lead to increased health but also better gender equality.

PUDC can address the gender gaps in water and sanitation identified above through the below activities:

- organizing gender-sensitive awareness / outreach activities targeting mainly women / girls and other vulnerable groups about the water and sanitation services under PUDC
- holding regular consultations with communities especially women on enhancing their involvement in design and the pricing modalities for water usage
- imparting technical skills training to the water management committee having more than 50% women members.
- Having community institutions built for implementation and maintenance of the water systems should have equal participation from both men and women. These institutions will eventually address the concerns of both gender and safeguard their interests thus maintaining the balance.
- facilitating the recruitment of more female members in water component

In a nutshell, gender mainstreaming in Water and Sanitation would help:

- Material wellbeing of women and girls and the wider community through the delivery of services to enable them to spend less time collecting and managing water resources[86] thus reducing their drudgery.
- Access to factors of production: land, water, labour, credit, training, and all publicly available services and benefits on an equal basis with men[87].
- Increased access to quality education and recreation for girls and boys due to reduced time in collection of water
- Improved access to health and sanitation due to access to clean drinking water
- Building an understanding of the difference between sex roles and gender roles, and that the latter are cultural and can be changed[88].
- Women's equal participation in the decision-making process, policymaking, planning and administration in building and strengthening the water and sanitation infrastructure[89].

Agriculture & Livestock

Women play a pivotal role in the Agriculture and animal production value chain in Rural Gambia. They are engaged in multitude of agriculture activities ranging from seed production to harvesting to marketing. However, their hard work is seldom recognized in terms of economic returns – that the incomes from agricultural produce are generally realised by their male counterparts. Under PUDC, there should be activities which will give additional fillip to women particularly enhancing their productivities and also allow them reap direct economic benefits. Vegetable gardens are proven model in rural Gambia wherein hundreds of thousands of women have successfully come out of poverty. With the sustained institutions at their back, women should be able to unleash their latent potential.

Similarly, the women own and manage the livestock productions systems. However, there are challenges faced by them in terms of backward and forward linkages for successful operations of these systems. Proposed Dairy interventions under PUDC should be designed aptly considering these challenges of women in rural Gambia. There are success stories in small ruminants rearing in which traditionally women and girls will be given sheep/goat and after the ruminant gave birth once the second one is given to another beneficiary by the time the project is 5years many women and girls will have small remuneration that can be a source of income.

The PUDC project shall attempt to enhance the capacity of women groups to cooperative societies and credit unions to help increase access to credit. This will help women to compete with middle men who come to buy from women and make more profit than them.

[86] https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf
[87] https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf
[88] https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf
[89] https://www.wsp.org/sites/wsp.org/files/publications/WSP-gender-water-sanitation.pdf

Communication and outreach

According to studies, gender inequities in access to and use of ICTs cannot be addressed through ICT policies alone but would require policy interventions to incentivize other important sectors such as vocational education and ICT skill training to promote employment options. This can boost women's earning and increase empowerment and equity[90].

The telecommunications sector, especially internet data usage, requires much transparency in The Gambia. If harness well, it could be a crucial tool to bridge the rural-urban gender divide in education, health, and agriculture and the support to rural governance structures in terms of capacity building. The platform could be utilized to promote female entrepreneurs in the fight against poverty[91].

Finally, social marketing should be utilized in the implementation of these rural infrastructure projects and develop guidelines for promoting gender mainstreaming in PUDC infrastructure projects. Gender-disaggregated data is essential data in evaluating the impact of the Programme on the lives of women and girls.

[90] https://researchictafrica.net/
[91] https://researchictafrica.net/

19. Risk analysis

The project environment for the PUDC is far more complex than a comparable domestic project. There are many internal and external, visible, and invisible factors that influence the environment that create high risk in accomplishing project objectives. Some of the contributing factors are:

- Influence of various stakeholders such as International Development Financial Institutions (IDFIs), citizen groups, Non-Government Organizations, media, political ruling class, and bureaucrats
- Cultural, socioeconomically, technological, and political environment
- Lack of managerial and technological capabilities in the country
- Unclear project objectives
- Shortage of resources
- Lack of ownership
- Poor infrastructure for project development
- External driving forces such as inflation, currency exchange, and international politics.

The implementing partner needs to ensure that their understanding of risk is in fact grounded in 'country realities.' This will be inherent for UNDP as a longstanding operator within The Gambia but new partners may not have the same knowledge of the landscape. Where the operating context is understood, organisations feel more comfortable taking and managing risks. Where The Gambia context is less well understood, there is a greater chance of lapsing into programming based on risk avoidance rather than risk mitigation. The former being damaging and often leads to projects only tackling issues where short-term results are guaranteed and can exacerbate fragility and poverty disparity in the long-run.

Second, it will be important for UNDP to get the balance right between the different types of risk, and to understand the interaction between mitigation measures. For example, measures taken to mitigate fiduciary risk may lead to heightened programmatic risk (failure to deliver), if the entity responsible for programme implementation lacks the capacity to manage the stipulated fiduciary safeguards. Measures taken to limit programmatic risk - for example, by only partnering with tried and tested institutions or only working with populations that have had previous exposure to donor programmes - may contribute to heightened contextual risk in the form of marginalisation, and ultimately undermine the higher goals of peacebuilding and state building.

More detail is provided on a selection of risks below:

19.1 Operational Risks

Community withdrawal

The PUDC is a community-based development programme. One risk that is faced relates to the withdrawal or disengagement of the chosen communities from the PUDC interventions. Whilst not evident in either Togo or Senegal, there is a possibility that due to the types of interventions selected or the method of delivery that is pursued that communities (though at first were accepting and receptive) turn their back on the project. One aspect of the project that may present a risk is the need to convince the communities to pay for the services provided (e.g. water). Whilst in this way the interventions are more sustainable there is likely to be pushback from communities. This occurred in Senegal and it took sustained sensitisation and tangible benefits brought by PUDC to convince communities. The risk of co-option of community leadership into political dynamics needs to be addressed too through thorough capacity building of leaders and members, and continuous & transparent monitoring. There may also be the risk of conflict between technological interventions and community beliefs which can be overcome by ensuring involvement of the community in all processes.

Weak Institutions

Within The Gambia the strength of the institutions - legal, political, financial, law and order, and media are still developing. The political environment is still catching up with stability after the decades of autocratic rule. The development of the society's institutions has not always been the top priority for leaders. Less developed institutions create an atmosphere of uncertainty, political turbulence, and social unrest, all leading to lack of investor and donor confidence. Strong institutions are of obvious significance to the PUDC as the projects have planned budget and schedule. Any change in the politico-economic environment could severely impact success.

Project Scope Creep

With lack of accountability and regulatory institutions often lead to scope creep resulting in addition of unrelated objectives to the project goals, later requiring larger funds for operations. At times of financial stringency, there are budget cut backs by the recipient countries and the allocated funds may not be sufficient for effective operation of "gold-plated" assets. Scope creep might be a critical factor in PUDC as it is intended to be mostly quick-wins rural infrastructure projects fixing the scope might be challenging.

Equipment and services

The PUDC will involve equipment and services supplies from many international companies, as well as those procured locally. Due to lack of resources and technology, quality level of the locally procured equipment and services may not conform to the international standards. In addition, convergence of deviations during construction and installation of equipment may result in the final product not matching anticipated performance. International and local equipment and services integration requires expertise in similar endeavours. There, however, can arise the risk of too much dependence on external experts. This needs to be addressed through capacity building of community-based and governance institutions, and creation of strong cadre of Community Resource Persons who are equipped with enhanced knowledge and tools.

Reputational Risk

Reputational risks closely mirror fiduciary risk (see below). In cases where funds have been lost or have been diverted, the PUDC (UNDP and others) may face reputational and political damage. This is most apparent where the media (both local and foreign) take a particular interest in the performance and cases of misuse of funds, a trend that has become more apparent in OECD countries affected by budget austerity.

19.2 Financial Risk

Procurement Risk

Simply put, procurement risk is the potential for failure in the procurement process. This could be due to quality of services or good being procured, cost of these items, lead time taken for procurement and possibility of potential fraud.

UNDP provides one aspect of mitigation if it follows the recommendations from the Senegal visits but given the speed at which goods and services will be required to be procured the risk is heightened. In addition, the risk of fluctuation in the market for products and inputs also needs to be managed through use of technology for better market intelligence and insurance.

Fiduciary risk

DFID defines fiduciary risk as the risk that funds are not used for the intended purposes; do not achieve value for money; and/or are not properly accounted for. This is often best in cases where using these services brings access to specialist expertise. If this risk is manifested, agencies that are often subject to high level of domestic public and parliamentary scrutiny will be particularly concerned, which in some cases threaten their ability to continue operating in The Gambia.

Tax implications

Raised on the trip to Senegal is the tax treatment of the services and equipment procured by the PUDC. The UNDP enjoys a tax exception/duty waiver on all its items. This posed an issue for the tax authorities in Senegal due to the scope and scale of the items being procured, as well as the nature of the funding coming from the Government.

Currency exchange rate

It has been witnessed that international development projects invariably involve import of equipment and/or services from industrialized countries, which makes it all the more necessary for the project manager to have a working knowledge of the existing foreign exchange regulations. In addition, inflation, devaluation, shortage of foreign exchange resulting in limiting foreign exchange practices aimed at conserving it is a fact of life in developing countries. Since 2015 the GMD relative to the USD has devalued by about 35% whilst this means that local goods and services are cheaper for international investors/donor it means that any Government finance, where goods or services are procured in a foreign currency become more expensive.

19.3 Governance related

Governance issues have been seen as a major factor undermining the effectiveness of spending in any development project. These are characterized by, among others, excessive involvement of political parties during selection and implementation of projects; and increasing level of fraud, mismanagement, and corruption. In general, mobilization of financial resources is hampered by lack of a sound financial management system and innovative approaches to develop institutional capacity to manage their financial affairs. The revenue of local government agencies is usually overestimated to match budgets for capital and current expenditure. The tendency for an annual increment in revenue targets by a certain percentage without a systematic assessment of the portfolio is prevalent. However, in reality, revenue generally falls short of planned targets, thus, adversely affecting expenditure outruns.

19.4 Risk Mitigation

Risk management strategies

Potential risk	Risk Mitigation
Community Withdrawal	That the PUDC is by very nature, a community led programme somewhat mitigates the risk of withdrawal however the decentralization of the programme to local governments will mitigate this further. By giving the LGAs the power to interact and coordinate with the communities, they will be able to not only better decide with the areas which sectors are the most worthwhile, but which have the best chance of succeeding in the long run. Where communities will be expected to pay for services, it is important that the programme conducts a study on the ability and willingness to pay. This will inform the likelihood of any potential issues with tariffs.
Weak Institutions	As part of the PUDC programme the Government should commit to a concurrent programme of institutional strengthening. There is already some aspect of mitigating response here, given that the first strategic priority of the NDP is to strengthen institutions and the rule of law etc… If the Government can show good progress, or at least commitment to enacting this plan then the risk of creating an unhelpful atmosphere of uncertainty is minimized.
Project Scope Creep	A clear definition and programme initiation and sensitization should take place. This will educate the requisite stakeholders and funding partners on what is within and outside of the boundaries of the PUDC. By obtaining the buy-in from the programme decision makers will minimize future issues of scope creep. In addition a wide reaching sensitization workshop plan will assist in setting the appropriate limits to the PUDC interventions.
Equipment and Services	Previous projects have demonstrated that there is unlikely to be an issue with obtaining quality goods and services. Wide reaching NGO involvement in the country means that there is are well established links to quality local companies. PUDC in The Gambia will however need to decide on the acceptability for international organisations (private) to be involved in the construction of infrastructure and whether there would be a requirement for companies to have a local presence or part-ownership by Gambian stakeholders
Reputational Risk	It should be ensured that a rights-based/Do no Harm approach is used throughout project life cycle and only select experience partners experienced to work in complex environments (in particular pillar assessed organisations). There should be timely audits, internal and external monitoring & evaluation.
Procurement Risk	Often within developing countries this risk is exacerbated with the limited availability of suitably trained and equipped procurement

	professionals. However, within The Gambia (as described by UNDP) there is a relative abundance of individuals with the requisite skills knowledge and experience. In addition, maintaining UNDP due process, even when proceeding at speed should help to mitigate this.
Fiduciary Risk	The Project implementing agency (ies) shall leverage its well set out and widely adopted framework to manage such a risk. One option is to use third-party services to monitor corruption and fiduciary risks, and security conditions.
Tax implications	Early and consistent engagement with the Government and Tax authorities will limit the PUDC exposure to potential tax and duty implications on finance.
Exchange rate	The PUDC programme cannot directly mitigate this risk, and the largest impact of this risk is dependent on 1) the amount of funds provided locally and 2) the proportion of those funds procuring goods and services denominated in a foreign currency. If the programme can where possible minimize the flows from 1 to 2 then this risk is mitigated somewhat.
Governance	The existence of the PACD and the multi-dimensional poverty mapping will enable to PUDC to robustly justify its selection criteria for communities. The independence of this process must be maintained in order for interventions to be free from interference by political actors. The use of UNDP and the contracting vehicle provides stability and familiarity for donors as well as a strong existing governance structure.

20. Recommendations and Sustainability Plan for PUDC

20.1 Sustainability Plan

Project sustainability poses a critical challenge to any program implementation either by the government funded or donor funded. Sustainability becomes even more concern for most of the community development programmes with studies indicating that the 40% of the programmes continue to run or terminates in the first few years of their implementation or once funding is exhausted. Community based programmes must sustain itself to make a long term impact for the communities. Unfortunately, 'sustainability' per say is not included in the program planning and the programme focuses on immediate outcomes and often neglecting sustainability in the long term. Accordingly, sustainability is reflected in the capacity of the communities and their abilities to cope with change and hence adapt to newer situations.

Some dimensions of Sustainability for Community Based Programmes (CBPs) like PUDC include

i. Programme related - aspects like project design, planning, target population, monitoring, implementation efficiency, effectiveness etc.,
ii. Community related- aspects like community participation, involvement, ownership roles and responsibility, community leadership, inclusiveness especially gender balanced etc.,
iii. Funding related – aspects like mode of funding, continuity of funds, contribution from the community, transparency etc.,
iv. Implementing Organisation – Involvement of staff, partnering with community, leadership style, systems and procedures, accountability, etc.,

Some of the ways to ensure the sustainability of PUDC include but not limited to the following. In fact, it is suggested that these elements are integrated in the project design for ensuring long-term sustainability.

Community Ownership through innovative institutions

The institution structure for the programme implementation or monitoring shall be designed suitably involving the community especially women members. These institutions can be new or built around the existing institutions prevailing within the community like Village Council etc. In the Gambian context, the existing Village Development councils can be leveraged and the newer management bodies for the PUDC can be woven around that for every sector. The Community Corporation (Section 9.3) is the suggested structure, leveraging on the success of similar examples based in South Asia, where operational problems faced by co-operatives are managed.

By implementing structures such as these the consultation of communities is built into the implementation and selection process. If communities are not adequate consulted and sensitised it can lead to the infrastructure becoming disused after a short period of time, or in some cases not used at all. By keeping the PUDC's focus on the needs of the communities and villages the "white elephant" effect can be minimized. In The Gambia, for example, feedback from some specific villages on WASH (specifically the provision of toilets) was that they did not want, and see the need for toilets. This means that for the PUDC to be successful in these communities, either other interventions are selected or more resources are spent to educate the communities.

Robust Implementation architecture

As PUDC focusses on building the rural infrastructures in a relatively quicker period, the overall management including procurements plays a vital role in its success. As seen in the Senegal and Togo PUDC experience, UNDP had steered the program implementation and produced the results within the expected time. This was mainly due to leveraging its established practices of procurement (emergency for PUDC), programme management and resource deployment including financial and human resources. Notwithstanding the continuous support given by the respective governments, role played by UNDP in taking the PUDC to newer heights was instrumental.

Similarly, in the Gambian context to ensure the program to be sustainable, the elements of Government oversight along with the efficient program management by agencies like UNDP is required, undeniably. Government oversight shall be in terms of Steering Committee and Technical Committee while UNDP sets-up its own Project Management Office. This is mainly to expedite the otherwise slow procurements, limited

transparency and less monitoring under the Government implementation. By giving responsibility to UNDP, and declaring these projects an emergency the fast track procurement processes can be ensured. This, of course requires the UNDP office to have the right set of expertise within The Gambia which needs to be a pre-requisite for the inception of the PUDC. The benefit of UNDP managing key aspects of the PUDC is the inherent knowledge of both subject matter and funding partners.

Active involvement of staff

It is all the more important that the staff involved in the project must be community oriented and drive the project accordingly. As PUDC being a multi-sectoral programme, there is a possibility of staff with different skill-sets involved. And hence it becomes even more significant that these staff should be convergent in their approach while dissemination of knowledge and project implementation. There should be adequate and trained staff for the project implementation and monitoring. Care shall be taken that the shortage of staff should not to become the reason for non-implementation. There should be dedicated staff for community development / mobilisation from the beginning of the project who would in turn be acting as an interface between other staff members and the community.

Responsiveness or adaptability

Any community managed or run programme may have different challenges during implementation. It is important for the program team to acknowledge such challenges and be prepared with the alternative solutions. Generally, responsiveness refers to the projects ability to adapt to community needs and contextual change, which strongly influences its ability to continue providing services. This means ensuring that the activities or interventions planned under PUDC address local needs, and that all those involved with the project.

Availability of resources / funding

The key element for project sustainability is the availability of resources required for community-based projects including PUDC. This means that resources should not only be made available for the projected future but also be provided with alternative funds in the event of project failure, due to inadequate funding. Inadequate funding detracts from a project's ability to be sustained (Bamberger & Cheema, 1990). However, there are many ways that funding can be linked to a project's ability to be sustained. Holder and Moore (2000) support developing local resources for enhanced sustainability emphasizing the importance of adequate local capacities to generate funds after external funding ceases.

In the Gambian Context, leveraging funds from key Donors mainly Delegation of EU, World Bank Group, ADB, IsDB and other international organisations shall be attempted from the inception of the programme. Though these funds cannot be guaranteed whether they would be sanctioned as grants or loans pledged, it is always beneficial to have them secured for the programme continuity. At the same time, the government should also be earmarking its funds dedicated for the program implementation over the project period.

Availability of data / information

It is suggested that the PUDC shall have a dedicated MIS (preferably GIS) platform for capturing the progress / status of the project. Data and information thus collected shall be disseminated to the community on a continuous basis. There should also be a feedback mechanism continuously to improve policy, program, and projects. These dissemination of data will aim at promoting transparency and efficient use of project resources.

Private sector partnership

It has been witnessed that the projects that build links with different organizations are more likely to be sustainable. They support and learn from each other, and are able to leverage others' agendas, for example, for new funding opportunities. It has also been found to be essential for the long-term survival of community-based programs like PUDC. In this context, it is suggested that the role of private players should not be overlooked and their participation in PUDC should be promoted. They can play a vital role in the areas of electricity or solar energy, agricultural / gardens, livestock promotion etc.

Asset transfer and maintenance

The assets purchased / set-up under PUDC need to be properly designated and handed-over to the community or the respective line departments for their operation and maintenance. For example, the roads laid under PUDC will more likely to be taken up by National Roads Authority, Grid based electricity systems

by NAWEC. In case of water supply, solar based electricity systems, and agriculture / livestock assets, the ownership can be given to the community institutions.

The following recommendations have been developed based on the feasibility study carried out for implementing PUDC in The Gambia. These recommendations were arrived based on the situation analysis, learnings from Senegal, Togo and the field interactions with various stakeholders. They can be validated during the workshop and will be further revised with additional inputs.

20.2 Key Recommendations

Innovative and strengthened community institutions

As stated earlier, community institutions prevailing in rural Gambia can be leveraged for focussed implementation of PUDC. At the same time, care can be given to build new-age institutions like Farmer Producer companies for implementing economic activities like Vegetable gardens, etc.,

Ensuring community ownership through wide-spread sensitization

First and foremost aspect of the PUDC is to sensitize the communities on the need for their involvement and ownership of the programme right from the inception stage. Improved information about the programme leads to better results, along with the community also learning about what and how they should go about things. Community awareness and involvement in project planning and implementation are important elements in the sustainability of a project. The project should have clearly laid-out roles and responsibilities for the community institutions for maintenance of assets and collection of levies / revenues over the period.

Continuous Capacity building of all stakeholders

The PUDC should primarily focus on enhancing the capacities of all stakeholders – beginning from the PUDC staff, community and others involved. There should be continuous / regular capacity building programmes throughout the project period. Community members must be encouraged with more knowledge and skills to cooperate so that they can handle the assets be it the Water supply systems or Energy solutions or Agricultural Gardens. There can be separate ownership mechanisms for each of these assets.

Effective Project implementation

With the established processes and systems, UNDP, Gambia may be given the role of project implementation mainly to secure fast-track procurements, resource mobilisation, efficient project implementation and monitoring. It is expected that the Project Management Unit will be operational both at Banjul and also at all regional headquarters of The Gambia for efficient implementation and monitoring.

GIS based decision support solutions

Similar to the Senegal way of monitoring, it is recommended that Decision support systems based on GIS should be availed for monitoring the progress upkeep on a real-time basis. With the aid of DSS, the project team can not only monitor the progress but also provide necessary assistance as and when required. The DSS system should be able provide data / information at the community level.

Continued Political buy-in and Government funding

It is highly imperative for success of any scheme / programme to have continued political will and the bureaucratic skill. In case of PUDC, the Government of The Gambia has been showing a greater interest for its implementation and it is expected that this keenness shall continue till the project is handed-over to the community or respective line departments. Also, the funding from the government for the first year has been earmarked. Similarly, the government funds to be provided for PUDC implementation shall be ensured for the project period.

Robust policy guidelines / SOP

It is suggested that the adequate policy guidelines be published for PUDC by the Government of The Gambia as a first step. These guidelines should clearly define the objectives of the programme, roles and responsibilities of the various stakeholders and the community organisations, funding / costing etc. Also the standard operating procedures meant for different priority components of PUDC shall be prepared in both English and Local language before commencement of the programme. These guidelines and practices with standard operating procedures on PUDC implementation, monitoring, and evaluation will support

ensuring sustainability of the programme. In addition, there should be clear operation standards asset handing over to the community along with the maintenance after hand-over.

Involvement of private sector

Efforts can be made such that private sector can be actively involved in the components like solar based electrification, water supply systems and agriculture gardens. Provided their financial and operational risks are covered / backed up under PUDC in a way or other.

Annexure

#	Annexure
Annexure 1	Detailed costing assumptions – Grid based Electricity
Annexure 2	List of persons interacted
Annexure 3	Field visit questionnaire template
Annexure 4	List of PACD villages – Pilot phase
Annexure 5	Senegal- Field Experience
Annexure 6	SDG Performance in The Gambia and Africa Union
Annexure 7	List of reference documents

Annexure 1: Detail Costing model – Grid based electricity

Less than 200m cost breakdown

	unit	cost/unit Material and Installation (US$)	# of units/ Substation	Total Cost (US$/SS
30kV Medium Voltage Network	km	19,069	0.20	3,813.87
400V Low Voltage Network	km	17,957	4.00	71,828.85
250 KVA Low Voltage Distribution Sub-station for average population size of 700 - 1000	set complete	26,267	1.00	26,267.05
		TOTAL COST (US$)		101,910

Less than 5km cost breakdown

	unit	cost/unit Material and Installation (US$)	# of units/ Substation	Total Cost (US$/SS
30kV Medium Voltage Network	km	19,069	3.00	57,208.12
400V Low Voltage Network	km	17,957	4.00	71,828.85
250 KVA Low Voltage Distribution Sub-station for average population size of 700 - 1000	set complete	26,267	1.00	26,267.05
			TOTAL COST (US$)	155,304.02

Greater than 5km cost breakdown

	unit	cost/unit Material and Installation (US$)	# of units/ Substation	Total Cost (US$/SS
30kV Medium Voltage Network	km	19,069	10.00	190,693.73
400V Low Voltage Network	km	17,957	4.00	71,828.85
250 KVA Low Voltage Distribution Sub-station for average population size of 700 - 1000	set complete	26,267	1.00	26,267.05
			TOTAL COST (US$)	288,789.62

Annexure 2: List of persons interacted

#	Category	Department / Organization	Designation
1.	Government	Office of the President-Strategic Policy and Delivery Department	Director General, Advisor
2.	Government	Ministry of Finance and Economic Affairs	Director of Planning
3.	Government		Coordinator, Central Projects Coordinating Unit, Ministry of Finance
4.	Government	NAWEC	Managing Director
5.	Government	Ministry Lands and Regional Government	Director, Department of Community Development
6.	Government	Ministry of Fisheries and Natural Resources	Director, Department of Water Resources
7.	Government	Ministry of Women's Affairs	Permanent secretary
8.	Government		Executive Director, Women's Bureau
9.	Government	Ministry of Agriculture	Director, Department of Planning, Ministry of Agriculture
10.	Government		Director, Agricultural Engineering, Ministry of Agriculture
11.	Government		Director General, Department of Agriculture
12.	Government		Director, Department of Livestock
13.	Government		Coordinator, Central Projects Coordinating Unit, Ministry of Agriculture
14.	Government	Ministry of Works, Transport and Infrastructure	Permanent Secretary,
15.	Government	National Roads Authority	The Director General,
16.	Government	The Gambia Chamber of Commerce and Industry	The President, The Gambia Chamber of Commerce and Industry
17.	Government	Statistician General, The Gambia Bureau of Statistics	Statistician General, The Gambia Bureau of Statistics
18.	Private Sector	Director, Gamsolar	Director, Gamsolar
19.	Private Sector	The Manager, Radville Farms	The Manager, Radville Farms
20.	Private Sector	The Manager The Gambia Horticultural Enterprise	The Manager The Gambia Horticultural Enterprise
21.	UN Agencies	UNOPS	Country Representative
22.	UN Agencies	UNCDF	Project Coordinator

#	Category	Department / Organization	Designation
23.	UN Agencies	FAO	Asst Country Representative
24.	Donor Agencies	World Bank	Country Head
25.	Donor Agencies	European Union Delegation	Country Representative
26.	NGOs	National Association of Food Processors	President,
27.	NGOs	CARITAS, The Gambia	Representative

Annexure 3: Field visit questionnaire template

Village profile	**Name of the Village**				**District**		**Region / County**	
	Total population		Total children		Total households / Compounds			
VDC & CBOs	**VDC Details**	Total members		Female		**Ward Dev Committee (WDC)**		
	Functional CBOs	**Name of CBO**	**Major functions**	**Thematic areas**	**Total members**	**Total executive members**	**Operational since**	**Projects associated**
	CBO 1							
	CBO 2							
	CBO 3							
	CBO 4							
	CBO 5							
Ongoing / completed projects in the village	**Projects in the village**	**Name of the project**	**Donor (if available)**	**Department implementing**	**Major interventions**	**Total families benefitted**	**(Completed / ongoing)**	**Time duration**
	Project 1							
	Project 2							
	Project 3							
	Project 4							
Amenities		**Nearest Health Centre (Primary / Secondary)**	**Nearest primary schools**		**Nearest bank**	**Nearest market place**	**Distance to WDC / Town**	
	Distance-km							
	Challenges							
	Priority areas of infrastructure							
Agriculture	**#**	**Major crops**	**Total families involved**	**Total hectares of farming**	**Average yield production per hectare**	**Challenges faced**		
	1	Rice						
	2	Groundnut						
	3	Casava						
	4	Onion						
	5	Others						
Fisheries			Total families involved		Average income / harvest	Challenges faced		
Livestock	**#**	**Livestock**	**Total families**		**Average holdings per family**	**Challenges faced**		
	1	Cattle						
	2	Small ruminants						
	3	Horse / donkey						

			Distance	**Status**	**Challenges faced**
Road & transport		Main road availability			

		Village feeder road status							
		Internal roads for connecting Farms							
		Vehicles in the village	Tractor	Bikes	Cars	Horse carts	Others		
		Total numbers							
Drinking Water		Total Hand-pumps available			Total functional hand-pumps				
		Any borehole available	Yes / NO		Supported under which project				
		Borehole requirement			No. of taps required		Ground water level		
		Community agree for common maintenance			Community willingness to give land for boreholes				
		Challenges faced							
Electricity		Total households not having electricity			Nearest feeder line from Grid available				
		Any poles laid down in the village?			Any Solar available?		Total HHs with solar		
		Requirement per household	Lighting		TV / Mobile		Other purposes		
		Street lights required		How do they manage street lights					
		Do they require lighting for facilities?		How do they manage lights for Health centre, Schools & Mosque?					
		Challenges faced							
Sanitation		% Households having toilets		Open defecation	Yes/No	Are there any drains for waste water?			

Challenges faced in other priority areas	
Financial institutions	
Health care	
Education	
Skill centres	
Any other priority	

Enumerator names and Signatures:

Date of visit:

Annexure 4: List of PACD villages – Pilot phase

Region: LRR

District	Villages for Water supply	District	Villages for Electricity	District	Roads selected
Jarra East	Demanti Kunda	Jarra central	BUIBA MANDINKA	Kiang West	Mandaur - Tankular (kiang West)
Jarra East	Darsilameh	Jarra central	FULA KUNDA	Kiang Central	Wurokang Barteling (Kinag Central)
Jarra East	Jasong			Kiang East	Kolior - Njolfen (kiang East)
Jarra West	Gikoko			Jarra West	Soma - Sankwia Tenda (Jarra West)
Kiang Central	Madina Anglai				
Kiang Central	Jirroff				
Kiang East	Jasobo				
Kiang East	Kolior				
Kiang East	Jomar				
Kiang West	Jula Kunda + Burong				

Region: WCR

District	Villages for Water supply
Foni Bintang Karanai	Bintang
Foni Bintang Karanai	Jifanga
Foni Bintang Karanai	kusami
Foni Bondali	Jorem Manokang
Foni Bondali	Bambarang
Foni Bondali	Fass Chamen + Nyantempo
Kombo Central	Marakissa
Kombo Central	Makumbaya + Ker Gallo + Bafuloto
Kombo Central	Dimbaya
Kombo East	Faraba Manokang
Kombo North	Daranka Freetown
Kombo South	Kunkujang Mariama

Region: URR

District	Villages for Water supply	District	Villages for Electricity	District	Roads selected

Jimara	Julangel	Jimare	Sotouma Samba	Lumo	Main Road — Sare Bojo (Lumo)
Jimara	Sandi Kunda + Sahadatou	Tumana	Simuto Tuba	Basse	Demba Kunda - Basse Road
Jimara	Sotuma Sireh	Tumana	Sare Alpha		
Tumana	Sanunding				
Tumana	Badari + Samba Kunda + Ceesay Kunda				
Tumana	Sanunding				
Tumana	Kulkulleh				
Wulli East	Murreh Kunda				
Wulli East	Sare Modou Jawo Cluster				
Wulli East	Passamasi Fula + Mandinka + Tabanding				
Wulli East	Bantunding				
Wulli West	Farato				

Region: NBR

District	Villages for Water supply	District	Villages for Electricity	District	Roads selected
Jokardou	Ker Jain + Ker Njugari + Ker Wally Cluster	Upper Niumi	Kerr Mama	Hakalang	Nuimi Hakalang Road Project (Estimated 70Km)
Jokardou	Toro Alasan		Kerr Samba Kala	Sabach Sanjal	NgainSanjal - Sarrakunda (Sabach Sanjal)
Sabach Sanjal	Mbapa Marega	Jokardou	Dasilami	Sabach Sanjal	Sabach Sanjal Loop (Dibba Kunda, Bambali, Nyagen) (Est 30Km)
Lower Nuimi	Ndungukebbeh		Sikka		
Lower Nuimi	Mannen		Kerr Demba Holleh		
Lower Badibu	Toro Bah		Nuimi Lamin		
Sabach Sanjal	Numu Kunda + Yallal Bah Cluster		Munyagen		
Sabach Sanjal	Bambally		Bakindick		
Sabaha Sanjal	Kumbija		Kuntair		
Upper Badibou	Kubandar		Njoufain		
Upper Badibu	Kekuta Kunda Complex		Bakalar		

Upper Badibu	Dadol Fulbeh Complex		Madina Sering Mass		
Upper Nuimi	Jurunku		Fass Omar Saho		
			Kerr Cherno		
			Kerr Jarga		
			JUFFREH		
			BREENDIN		
			CHAMEN		
			BUNIADU		
		Jokardou	KERR JARGA JOBE		
		Upper Nuimi	Jurunku		

Region: CRR

District	Villages for Water supply	District	Villages for Electricity	District	Roads selected
Fulladou East	Sare Pirasu	Nianija	Batijoll	Lumo	Sami Pachonki - The Gambian Boarder with Senegal (Lumo)
Fulladou West	Sare Unfally + Lamoi Samboido + Murtabeh Cluster	Upper Saloum	Mamud Fana		Kaur—Jimbala Musa Road
Fulladou West	sare_soffie				Kerr Gibbi—Kerr Auldi Road
Fulladou West	Galleh Manda				
Fulladou West	Sare Ngai				
Fulladou West	Ker Ousman Boye				
Fulladou West	Alulai + Sare Butti				
Fulladou West	Librass + Kerewan Dumbo Kono				
Fulladou West	Dobong Kunda + Manneh Kunda complex				
Niamina East	Kerewan Demba				
Niani	Kayai				
Niani	Mbolbuk Cluster (3 Communities)				
Niani	Palloli Fula + Wollof Cluster				
Niani	Kayai				
Niani	Kass Wollof				
Niani	Mbolbuk Cluster (3 Communities)				
Niani	Palloli Fula + Wollof Cluster				
Niani	Kataba Omar Ndow				
Niani	Barajally				
nianija	Chamen				
Sami	Doboo				
Sami	Changai Toro + Wollof				
Upper Saloum	Tento Cluster				
Upper Saloum	Njaw				

Annexure 5: Senegal Site Visits

Two field visits were organized by UNDP, Senegal at the request of Deloitte where the PUDC implementation were seen.

Figure 26 - Water Tower in Sewekhaye

Séwékhaye, Thies District

The PUDC team met the Village Chief of Séwékhaye, the President of the Agricultural Area, community members and the workers of the community managed garden. Two PUDC interventions were witnessed at the village. In addition, PUDC also had provided technical assistance to set up a community managed garden.

Water Supply system

The project installed a borehole water supply system which covers 18 villages in and around Séwékhaye.

The village's old borehole water supply system covered only a few of the hamlets.The water was not sufficient for the increased number of families over the years. This seemed to be the prioritized demand of the community.

We were informed of a village level committee which manages the collection of charges from families on the basis of usage. Meters are installed at every household for assessing the usage. A private company, chosen through the government tendering process, manages the water supply system.It is a public-private ownership

Figure 25 - PUDC Agricultural Area

Figure 27 - PUDC Agricultural Area

structure whereby the Government contributed the infrastructure and the private company runs and maintains the service. In order to ensure that the price of the service (provision of water) remains within affordable limits of the villagers, the private company has been made to sign an agreement pegging the chargeable price to the national price.

Community managed village garden

This agricultural intervention is one of 150 similar projects implemented under PUDC across the country. It is set up in 5 hectares with approximately 400 families from 7 villages in and around Séwékhaye having ownership.The garden is irrigated with water supplied from the reservoir. Tomatoes, Peppers, Okra, Cucumber, Onions etc. were growing in the garden.

This is a community-contribution model.In order to receive the funding from the PUDC, the villages needed to mobilize their own funding. The agricultural area was partly funded by the owners of the land. Each family contributed USD 30 initially, which collectively became the social capital of c.CFA 6 mn or USD 12,000 towards drip systems. Based on the contribution from the community, another c.CFA 16 mn or USD 27,000 was provided by the PUDC towards cost of the infrastructure (piping, fencing, etc.). In addition, PUDC assisted in the setup of the organizational structures that were required for the area to function sustainably. These structures helped to ensure that the physical management of the land was according to the holistic village requirement and it also assisted with the financial management of the land.

The PUDC engaged with the Chief and the President of the Women[92] to assist in the setup of the structures. The PUDC engaged a company to train the committee/workers in administration and financial management matters.

The project development committee for the garden comprises 10 executive members including the President as the chairperson. These executive members cover all 7 villages. In order to manage operations, the community has engaged three workers who are employed (at c.$100 per month). There is also a 'foreman' type individual who oversees the workers. The committee has a bank account with three signatories.

The main role of the women is in the harvesting and selling of the produce. The produce is sold either in the local market or in Dakar with all of the proceeds being re-invested into the garden. Currently, according to the president, none of the money has been paid back in 'dividends' to the 400 families as it is being used to scale up the agricultural area – through more equipment and more workers.

The workers and the President said that they contracted and paid for a 3-month training course themselves.However, the PUDC project manager had a different version of the story.

Figure 29 - Water pipes for the agricultural area

Figure 28 - Growing tomatoes

Figure 30 - Harvesting Peppers

Figure 31 - Discussing with the Village Chief

A conversation with the PUDC Project Manager revealed that the workers, the Village Chief and the President were under the impression that the village (400 families) was the sole contributor to the project. However, the village contribution was only c.10% of the cost with PUDC bearing the balance cost. This apparently, was a deliberate strategy in order to ensure buy-in and ownership of the village. This was perceived as a positive measure ensuring lower possibility of project failure. However, it should be

[92] Unofficial position given to the leader of the women in the community

considered that lack of transparency is never a good idea.It leads to breach of trust and is also highly prone to corruption in the future.

Monitoring and Evaluation is undertaken by the PUDC organization and quarterly reports submitted, which are shared with the PUDC Steering Committee. Any issues within the report are resolved quickly as all the necessary decision makers are present at the steering committee. In addition, if there is an issue with the PUDC it is always treated as an 'emergency'. An example was given of a land dispute for the creation of an agricultural area, and resolved at the steering committee level because the Village Chief, who is able to arbitrate, is part of the committee.Some cases may be dealt with by a payment to the disputed party/parties.

1) Fanden Community

The PUDC team met the Mayor - the secretary of the Fanden Community under the district Keur Moussa. It was roughly around 15 km from Thies town.There is a total of 40 villages in the Fanden community with a total population of around 28,050 (13,367 women).

The PUDC interventions in this area are fourfold:

1. Three Boreholes
2. Electrification
3. Agriculture (identified for phase 2)
4. Feeder roads

There were previous attempts to improve the infrastructure in this area, but whilst they were promised (e.g. the main road in mid 1990s), development was accelerated since the new President has taken office and implemented the PUDC.

Boreholes

Out of the total of six boreholes installed in the community, three new boreholes were installed under PUDC. Remaining villages were connected to the direct water supply system. We were informed that new borehole did not supply as much water as the original ones because of the reduced ground water levels and as a result they have had to drill deeper (over 400 metres) at higher cost.

Figure 32 - PUDC Pumping Station for the water tower

Where houses are connected to the water network through pipes, their usage is metered. If they are not connected to the water network (as in the case of 7 villages), they are connected to boreholes. National Water agency / company manages all the boreholes across the country. However there is a committee at the village level (under the management of the water company) that deals with the physical infrastructure, billing, etc., a separate committee for the 7 villages and subcommittees to deal with different aspects of the boreholes. Eventually, the seven villages too will be connected to the water network through pipes.

Earlier, the pumps that used to transfer water from the boreholes to the water tanks / reservoirs used to be powered by generators which was not cost effective due to the high fuel cost. Now, the pumps are connected to the grid and the cost of electricity is factored into the cost of the water.

Each water tower/reservoir has the capacity for 50 – 200 cubic meters of water.

Electrification

95% of villages are electrified under PUDC. Where they are not connected to the grid they are provided with solar kits. Only 6 villages do not currently have access.

Before the electrification of the villages, households were using candles, oil lamps, gas lamps (kerosene, etc.) to light their homes. Now these families are connected to the grid and usage is metered.

It was reported that there are hardly any families which are unable to pay the electricity bills (none reported to us). The women and men are both economically active. Women in general are involved in agriculture or 'trading'. It was reported that there were often at least 2 economically active individuals in each household. Now many families have televisions, fridges and freezers.

Figure 33 - PUDC Water tower

Feeder roads

Feeder roads were reported to be a big challenge. While there is a very good new road through the centre, the roads to the outlying villages are very poor and often non-existent.

Agriculture

Agriculture is the main employer of the economically active individuals, with others involved with in cattle rearing and trading. Common produce are millet, groundnut, cassava and butter beans (or similar).

It was reported that there was a growing group of economically active young men wanting to develop agriculture businesses. This was seen as a positive sign to stem growing trend of migration to other countries.

We were informed that 2 gardens of 5 hectares each were being sanctioned for the next phase under PUDC.

The reported impact of the interventions:

Individuals now have access to better quality potable water.With this initiative, children no longer need to fetch water making the free to attend schools.The children also are able to study at home under bright electric lights instead of the light from stoves/gas lamps that were being used earlier. A combination of these factors has had a large social impact on the families.

The change in cooking methods continues to develop with a gradual switch from firewood to gas.

Indicative costs of the measures:

- For 1 km of tarred road – 100 mn CFA
- For 1km of gravel road – 23 mn CFA
- Per borehole – 60 mn CFA
- Average electrification cost per village – 5-7 mn CFA

Annexure 6: SDG Performance in The Gambia and Africa Union

In September 2015, at the United Nations General Assembly in New York, the Government of The Gambia committed to the achievem ent of the 17 Sustainable Development Goals (SDGs) targets set by World Leaders. As member to the Convention, The Gambia has shown its commitment to achieving the goals by 2030. The table below show the current progress of SDGs by The Gambia

Figure 34: Sustainable Development Goals (SDGs) Progress in The Gambia[93]

Goals and Description		Attained SDG Targets or Significant Achievement	Unattained SDG Targets as on 2018	Remarks
SDG 1	No Poverty		Poverty headcount ratio: still high Proportion of the population living under the national poverty line: insignificant progress Population covered by social protection: insignificant progress	The Gambia is still struggling to make an appreciable gain to end poverty. The level of poverty is still high. **The Gambia scores 31.2% for SDG 1**
SDG 2	Zero Hunger		Prevalence of undernourishment Prevalence of stunting (low height-for-age) in children under 5 years of age (%) Prevalence of wasting in children under 5 years of age (%) Prevalence of obesity, BMI ≥ 30 (% adult population) Cereal yield (t/ha) Fertilizer consumption (kg per hectare of arable land)	The level of hunger in The Gambia needs further improvement, the agriculture sector is unable to meet the demand required, which leads to food import. **The Gambia scores 40.8% for SDG 2**
SDG 3	Good Health and Well-Being	Percentage of surviving infants who received 2 WHO recommended vaccines (%)	Traffic deaths rate (per 100,000 population) Adolescent fertility rate (births per 1,000 women ages 15-19) Universal Health Coverage Tracer Index (0-100) Age-standardised death rate attributable to household air pollution Life Expectancy at birth (years) Subjective Wellbeing (average ladder)	There has been a significant improvement in terms good health and well-being through the support from the development partners. Despite the efforts, the country still needs to pay attention to the health sector **The Gambia scores 44.6% for SDG 3**
SDG 4	Quality Education		Net primary enrolment rate (%) Mean years of schooling (years)	Education sector requires further reform to attract more people and

[93] https://www.gm.undp.org/content/The Gambia/en/home/sustainable-development-goals/goal-3-good-health-and-well-being.html
http://The Gambia.opendataforafrica.org/kjyhzad

Goals and Description		Attained SDG Targets or Significant Achievement	Unattained SDG Targets as on 2018	Remarks
			Literacy rate of 15-24 year olds, both sexes (%) Gross intake ratio to last grade of lower secondary education	increase the level of literacy across the country. **The Gambia scores 36.9% for SDG 4**
SDG 5	Gender Equality	Ratio of female to male labour force participation rate has increased significantly	Proportion of women aged 20-24 years who were married or in a union before age 18 Proportion of girls and women aged 15-49 years who have undergone female genital mutilation/cutting, by age Seats held by women in national parliaments Women in ministerial positions (%) Demand for family planning satisfied by modern methods (% women married/in union, ages 15-49) Ratio of female to male mean years of schooling of population age 25 and above (%)	Gender equality remains a challenger in The Gambia due to cultural and Islam religion precepts. Institutions responsible for gender equality must take further action. **The Gambia scores 32.5% for SDG 5**
SDG 6	Clean Water and Sanitation	Freshwater withdrawal as % total renewable water resources	Population using at least basic drinking water services (%) Population using at least basic sanitation services Freshwater withdrawal as % total renewable water resources Imported groundwater depletion (m3/year/capita) Anthropogenic wastewater that receives treatment	There are lot of projects and ongoing support from the development partners to increase access to clean water and sanitation. **The Gambia scores 60% for SDG 6**
SDG 7	Affordable and Clean Energy		Access to electricity (% population) Access to clean fuels & technology for cooking (% population) Renewable energy share in the total final energy consumption Consumer affordability of electricity	Affordable and clean energy remains a challenge, as many villages and communities do not have access to the electricity. **The Gambia scores 32.8% for SDG 7**
SDG 8	Decent Work and Economic Growth	Starting a Business	5-year average GDP Growth per capita (%) Employment-to-population ratio Prevalence of Modern Slavery (victims per 1,000 population) Adults (15 years above) with an account at a bank or other financial institution or with a mobile-money-service provider (%)	Because the majority of the population depends on agriculture, it contributes significantly to the growth of the economy. Workers are also taxed as a source of revenue generation for the state.

Goals and Description		Attained SDG Targets or Significant Achievement	Unattained SDG Targets as on 2018	Remarks
				The Gambia scores 55.1% for SDG 8
SDG 9	Industry, Innovation and Infrastructure		Infrastructure score Logistics performance index: Quality of trade and transport-related infrastructure (1=low to 5=high) Research and development expenditure (% GDP) Number of scientific and technical journal articles (per 1,000 population) Mobile broadband subscriptions (per 100 inhabitants) Population using the internet (%)	There is a serious industry and infrastructure gap in the country **The Gambia scores 18% for SDG 9**
SDG 10	Reduced Inequalities		Gini Coefficient adjusted for top income (1-100) Palma ratio	When the parameters of the economy improve, the Gini Coefficient will also improve **The Gambia scores 53.1% for SDG 10**
SDG 11	Sustainable Cities and Communities		Proportion of urban population living in slums Improved water source, piped (% urban population with access) Satisfaction with public transport (%) Annual mean concentration of particulate matter of less than 2.5 microns of diameter (PM2.5) in urban areas	These indicators are driven by the improvement of the parameters of the economy **The Gambia scores 48.5% for SDG 11**
SDG 12	Responsible Consumption and Productions	Municipal Solid Waste (kg/year/capita) E-waste generated (kg/capita) Production-based SO2 emissions (kg/capita) Imported SO2 emissions (kg/capita)	Natural Resource Value Realization	Most of the targets have significantly improved. **The Gambia scores 95.3% for SDG 12**
SDG 13	Climate Action	Energy-related CO2 emissions per capita (tCO2/capita) Imported CO2 emissions, technology-adjusted (tCO2/capita) CO2 emissions embodied in fossil fuel exports (kg/capita)	People affected by climate-related disasters (per 100,000 population)	Most of the targets have significantly improved. **The Gambia scores 93.5% for SDG 13**

Goals and Description		Attained SDG Targets or Significant Achievement	Unattained SDG Targets as on 2018	Remarks
SDG 14	Life Below Water	Mean area that is protected in marine sites important to biodiversity (%) Fish caught by trawling (%)	Inadequately managed plastic waste (%) Ocean Health Index Goal-Clean Waters (0-100) Fish Stocks overexploited or collapsed by EEZ (%)	Required further action in terms of technology and policies **The Gambia scores 45.9% for SDG 14**
SDG 15	Life on Land	Red List Index of species survival (0-1) Imported biodiversity threats (per million population)	Mean area that is protected in terrestrial sites important to biodiversity (%) Permanent Deforestation (5-year average annual %)	Great work has been done, many species are now thriving **The Gambia scores 74.9% for SDG 15**
SDG 16	Peace, Justice and Strong Institutions	Conflict-related deaths per 100,000 Access to justice	Homicides (per 100,000 population) Proportion of the population who feel safe walking alone at night in the city or area where they live (%) Children 5-14 years old involved in child labour (%) Property Rights Corruption Perception Index (0-100) Public Sector Accountability & Transparency Birth registrations with civil authority, children under 5 years of age (%) Freedom of Press Index (best 0-100 worst)	Transition from dictatorship to democracy will take some time to reflect **The Gambia scores 60.5% for SDG 16**
SDG 17	Partnerships for the Goals		Tax revenue (% GDP) Government Health and Education spending (% GDP) Level of customs duties on imports Visa Requirement Governmental Statistical Capacity	Great work has been done, need more improvement. **The Gambia scores 59% for SDG 17**

Annexure 7: List of reference documents

Sector	Title of Document	Type of Document (Policy/Plan/Project Document/Report/ Assessment/ Data)	Year	Source (Organisation, Ministry, Department or Agency)
Agriculture	The Gambia Agricultural Transformation Programme	Plan	2019	Ministry of Agriculture
Agriculture	GCAV - Project completion report	Report	2019	Ministry of Agriculture
Education	Education Policy 2016-2030	Policy	2016	Ministry of Education
Energy	Gaps Analysis - Sustainable Energy for All	Assessment/Data	2012	National Water and Electricity Company/ACP Secretariat / EU
Energy	Development Of Investment Prospectus For Sustainable Energy For All In Africa – Support To The Gambia To Develop Its SE4All Action Plan And Investment Prospectus	Project	2014	National Water and Electricity Company/ACP Secretariat / EU
Energy	The Gambia Electricity Restoration and Modernisation Project	Project	2018	National Water and Electricity Company International Development Association/World Bank
Energy	The Gambia Electricity Access Project - Appraisal	Project	2019	National Water and Electricity Company/African Development Bank
Energy	List of Electricity Projects and Donors	Data	2019	National Water and Electrical Company
Energy	Nationally Appropriate Mitigation Actions for Rural Electrification with Renewable Energy in The Gambia	Plan		National Water and Electrivity Company/Ministry of Environment/UNDP-Global Environment Facility
Energy	The Gambia Renewable Energy Act	Act	2013	Ministry of Energy
Energy	The Gambia Renewables Readiness Assessment	Assessment	2013	Ministry of Energy
Gender	National Gender Profile of Agriculture and Rural Livelihoods, The Gambia	Assessment	2019	Food and Agriculture Organisation (FAO), Ministries of Agriculture/Women's Affairs
Gender	The Gambia State Building Contract 1 Complementary Support (SBC1 CS)	Project	2019	European Union/ Ministry of Women's Affairs
General	National Development Plan - NDP	Plan	2018	Finance and Economic Affairs
General	The Gambia NDP Flagships and Priority Projects	Plan	2018	Finance and Economic Affairs
General	Strategies for the Follow up of Pledges made at the International Conference on The Gambia (May 2018) and the Strengthening of the Institutional Framework of The Gambia National Development Plan (2018-2021)	Plan	2018	Finance and Economic Affairs
General	Directory of Settlements-The Gambia	Report	2014	The Gambia Bureau of Statistics
General	Comprehensive Food Security and Vulnerability Analysis, The Gambia	Assessment	2016	World Food Organisation (WFP)
General	The Gambia Integrated Household Survey (IHS) Vol 1, Statistical Abstract	Data	2015/16	The Gambia Bureau of Statistics
General	The Gambia Integrated Household Survey (IHS) Vol II, Socio Economic Characteristics	Data	2015/17	The Gambia Bureau of Statistics
General	The Gambia Integrated Household Survey (IHS) Vol III, Prevalence of Poverty	Data	2015/18	The Gambia Bureau of Statistics

Sector	Title of Document	Type of Document (Policy/Plan/Project Document/Report/ Assessment/ Data)	Year	Source (Organisation, Ministry, Department or Agency)
General	The Gambia Multiple Indicator Cluster Survey 6	Assessment	2018	The Gambia Bureau of Statistics
General	The Gambia Labour Force Survey - Analytical Report	Report/Data	2018	UNICEF/The Gambia Bureau of Statistics
General	The Gambia Youth and Employment Skille Development Study	Assessment	2010	The World Bank
General	Public Utilities Regulatory Act	Act	2001	NAWEC/Ministry of Justice
PUDC	Back to Office Report, Study Tour to Senegal on the Emergency Community Development Programme (PUDC)	Report	2019	Office of the President
PUDC	Back to Office Report Study Tour to Senegal on the Emergency Community Development Programme (PUDC), The Ministerial Visit	Report	2019	Office of the President
PUDC	High Level PUDC Study Tour Revised	Report	2019	Office of the President
PUDC	Programme for Accelerated Community Development (PACD)	Plan	2019	Office of the President
PUDC	PUDC Exchange Visit to Senegal	Report	2019	Office of the President
Water	Water Act	Act	1979	Department of Water Resources/ Ministry of Justice
Water	The Gambia Water Bill	Bill	2014	Department of Water Resources/ Ministry of Justice
Water	National Water Policy	Policy	2006	Department of Water Resources
Water	The Gambia Water Resource Management Strategy	Plan	2015	Department of Water Resources
Energy	List of villages not electrified in the country	Data	Latest	Ministry of Energy / NAWEC
Energy	List of villages to be connected to the national Grid	Data	Latest	Ministry of Energy / NAWEC
Energy	District wide % villages electrified	Data	Latest	Ministry of Energy / NAWEC
Energy	Operational Manual for installation of extension lines	Manual	Latest	Ministry of Energy / NAWEC
General	List of all villages district wide with population based on directory of settlements preferably in excel	Data	2013	The Gambia Bureau of Statistics
General	List of projects funded by international donors (grants & loans) in the country during the last 5 years (including those in the pipeline)	Data	Latest	Ministry of Finance
Health	Health strategy and regional wide map	data/plan	Latest	Ministry of Health / WHO
PUDC	List of villages selected for PACD-Phase 1	Data	2019	Office of the President
Roads	National Road plan supported by World Bank / UNOPS	Plan	2018	National Roads Authority / UNOPS
Roads	List of Villages not having feeder roads connecting to the primary / secondary roads	Data	Latest	National roads authority
Roads	List of feeder roads supported by UNOPS with EU funds / Status Report	Data	Latest	UNOPS
Roads	Regional wise electrification trend over the last 5 years	Data	Latest	Ministry of Energy / NAWEC

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