REPORT ON THE COLLECTION OF ADDITIONAL DATA AND INFORMATION FOR THE UNDP CONCEPT ON ENHANCING RESILIENCE OF COASTAL AND ESTUARINE/RIVERINE ECONOMIES AND LIVELIHOODS OF THE DISTRICTS OF SERREKUNDA, JOKADU AND UPPER BADDIBU TO CLIMATE CHANGE

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Acronyms

ANR	Agriculture and Natural Resources
CRR	Central River Region
CAADP	Comprehensive Africa Agriculture Development Programme
ECOWAS	Economic Community of West African States
FARA	Forum for Agricultural Research in Africa
GAMWORKS	Gambia Public Works Agency
GBOS	Gambia Bureau of Statistics
GCCA	Global Climate Change Coalition
GDP	Gross Domestic Product
GIEPA	Gambia Investment Export Promotion Agency
GNAIP	Gambia National Agricultural Investment Programme
GRA	Gambia Revenue Authority
HDI	Human Development Index
IMF	International Monetary Fund
INDC	The Intended Nationally Determined Contribution
LDC	Least Developed Country
NAMA	Nationally Appropriate Mitigation Actions
NAPA	Gambia National Adaptation Programme of Action
NARI	National Agricultural Research Institute
NASS	National Agricultural Sample Survey
NEA	National Environment Agency
NEPAD	New Partnership for Africa's Development
NERICA	New Rice For Africa
PAGE	Programme for Accelerated Growth and Employment
SLR	Sea Level Rise
TDA	Tourism Development Area
TANGO	The Association of Non- Government Organisations
VDC	Village Development Committee
WAMZ	West African Monetary Zone

Background

Climate change predictions suggest sea level rise (SLR) of 0.13 m in 2025 and 0.35 m in Gambia by 2050 compared to 1995 level[1]. As a consequence, coastal flooding and erosion rates are predicted to increase and seriously hit the tourism sector[2] and the lowland rice cultivation[3]. SLR will take a huge toll on Gambia's economy[4&5]. Neither public resources in The Gambia, as a heavily indebted LIE-LDC, nor private firms (made up of principally the tourism industry) alone are likely to have the required financial capacity to afford international standards for coastal protection and even low-tech/low-cost defense measures. Also, rice growers do not have the required technical and financial capacity to design and implement strategic approaches to water management capable of addressing SLR impacts on flow and salinity of the river Gambia and future renewal rates of ground water resources. Moreover, the coastal framework policy, although being improved, is silent on provisions to address the main policy, regulatory and governance barriers that prevent the private sector to participate in the financing of the climate resilience of the coastal development.

To address these barriers for a climate sound management of coastal development in Gambia, the project aims at: i) increasing resilience to SLR impacts of current coastal defense systems in Kololi coastline, ii) Increasing resilience of 500 ha of lowland rice production systems in Jokadu and Upper Baddibu and livelihood resilience of more than 5,000 peoples, and iii) strengthening the policy, institutional and regulatory framework for climate-responsive coastal management and development planning and help removing the main barriers for preventing individual, communities and private groups to contribute in the attainment of sustainability and up scaling of the investments supported by this project.

The project is aligned with the NAPA (2007) the Gambia's Programme for Accelerated Growth and Employment (PAGE, 2012-2015), the action plan of the Gambia Tourism Master Plan (2006), the Gambia National Agriculture Investment Plan, the Gambia Vision 2020. These entire policy documents have identified the need for the implementation of coastal protection measures given the importance of the coastal assets for the Gambia economic development.

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[1] *Brown and All, 2011*

[2] *The structure of the Gambian tourism sector is concentrated with …. approximately 20 hotels along the coast (according to the Gambia Economic Outlook, 2014)*

[3] *The low-land and flooded plains rice production make up 64% of all cropland area that will be drowned by the 1-meter sea level rise*

[4] *According to the World Tourism and Travel Council , the total contribution of Travel & Tourism to GDP was $188.10 million (21.8% of GDP) in 2013, and is forecast to rise by 3.9% p.a. to $284.26 million (17.9% of GDP) in 2024. The total contribution of Travel & Tourism to employment, was 18.7% of total employment (125,500 jobs) and is expected to rise by 1.5% p.a. to 144,000 jobs in 2024 (15.4% of total).*

[5] *Gambia produces only 6% of its national requirements for rice (major staple food) and the GNAIP (Gambia National Agriculture Investment Programme) programme 1 has targeted the cultivation of 24,000 ha of lowland rice by 2015 with the objective of attaining an annual production of 70,000 metric tons of rice and reduce the food deficit, the import of rice and the commercial balance gap.*

Objective of the Assignment

The objective of the assignment is to collect additional information to complete the draft proposal. Below are the key areas where the information required has been provided.

Information Areas

The information required is provided in the following areas:

1. The scale and intensity of vulnerability of the country and beneficiary groups

Climate change poses a serious threat to low-lying countries such as The Gambia. The country is very vulnerable to climate change because most of the productive base of the economy, such as agriculture, tourism, fisheries and livestock, are very much climate sensitive and any adverse impacts of climate change on these sectors will affect the socioeconomic development of the country and undermine the existing livelihood systems of the local communities. In the coastal zone climate change and its associated impacts can result in the loss of the beach area, loss of productive agricultural lands due to saline intrusion and the destruction of fish landing facilities as a result of beach erosion.

Sea level rise is projected to result in the inundation of low-lying areas of the country. A 1-meter sea level rise, for instance, is projected to result in the inundation of about 92km^2 of the coastal zone, including the low-lying coastal areas around Banjul (Jallow *et al* 1996). The City of Banjul is predicted to be lost because a larger proportion of it is below 1m. Mangrove systems on St. Mary's Island in Kombo St. Mary (Kanifing Municipality, Plate 1) and those on the north Bank from Barra to Buniadu point, are also expected to be lost. This will lead to loss of wetlands and fish spawning grounds (Jallow et al. 1996). The loss of wetlands and salinisation of lowland areas will reduce rice production and general agricultural productivity may drop as much as 40% as in the case of groundnut (Cole et al. 2005).

Analysis of the value of land and sample properties between Banjul and Kololi Beach Hotel revealed that 1950 billion Dalasis (US$217 million) of property will be lost (Jallow et al. 1996). Moreover, the total cost of sea level rise for The Gambia including the costs of sea floods, river floods, land loss, salinisation and forced migration has been projected to be US$71.9 million per year for 2050 and US$313.4 million per year for 2100 (Brown et al. 2011).

Plate 1: **Kotu creek that could all be lost with a 1 metre sea level rise**

All these studies help to show the vulnerability of the Gambia to climate change and the magnitude of the challenges facing the country in its effort to address the climate change risks. The socioeconomic groups to be affected will include those in the hotel industry, farmers, fisher-folks herdsmen etc and in these broad categories women will be particularly vulnerable as the main producers of food and with limited coping capacity.

2. Information on the fiscal or balance of payment gaps and how they hamper efforts aimed at addressing the needs of the country

Over the past 5 years, the Government of The Gambia has experienced a negative overall budget balance. Prior to 2014, the overall budget deficit had been less than 10% of GDP. In 2014, increased fiscal slippages and unfavourable weather conditions resulted in a widening overall deficit amounting to 12.9% of GDP for that year. The persistent fiscal deficits have largely been financed by short-term domestic borrowing, pushing up interest rates and crowding out private sector investments[6]. Faced with mounting pressures, the exchange rate depreciated by about 10 percent during the first four months of 2015 while inflation has been hovering around 6½–7¼ percent since late 2014, up from around 5½ percent in the summer of 2014 (IMF Report, 2015). The growing budget deficits and the increased borrowings have reduced investment in growth

6 The Gambia: Policies to Foster Growth – Volume Two (World Bank, p52)

and social services as a substantial part of the budget goes to pay wages and debt servicing. Table 1 below shows the Domestic Tax Revenue and Government Expenditure from 2010 to 2015.

Table 1: Domestic Tax Revenue and Government Expenditure

	2010	2011	2012	2013	2014 (prel.)	2015 (est.)
As a percent of GDP						
Domestic Tax Revenue	18.9	21.2	25.3	18.5	22.4	26.3
Government Expenditure	24.0	26.0	29.7	27.1	31.4	30.6
of which: Wages	5.7	6.4	6.2	5.8	5.6	5.6
Overall Balance	-5.8	-4.5	-4.5	-8.8	-12.9	-4.0
Basic Primary Balance*	-0.4	1.5	1.6	-1.2	-2.8	4.7

Source: IMF and Gambia authority estimates, April 2015

3 The Gambia's indebtedness and how the IMF, WAEMU and ECOWAS criteria constitute an impediment for more debt for the Gambia

The Gambia has a high level of public debt. The total public debt to GDP ratio reached 100 percent at end-2014. (IMF 2015). Table 2 below shows the debt to GDP ratio (total, domestic and foreign) and the proportion of the government budget dedicated to making interest payments on debt which is estimated at 29.4 % of total Government revenue for 2014.

Table 2: Debt stock as a percentage of GDP

As a percent of GDP, unless otherwise stated						
	2010	2011	2012	2013	2014 (prel)	2015 (est.)
Public Debt stock	69.6	77.3	77.0	83.3	100.2	
Domestic Debt stock	29.4	33.2	33.3	37.1	47.0	
Foreign Debt stock	40.2	44.1	43.7	46.2	53.2	

Public Debt	5.3	4.3	4.3	8.8	13.2	
Domestic Debt	3.8	3.5	3.2	7.0	12.1	
Foreign Debt	1.5	0.8	1.1	1.8	1.1	
As a percent of Government Revenue, unless otherwise stated						
Interest payment	19.3	22.7	22.5	24.8	29.4	35.2

Source: IMF country Report 15/104, April 2015

In recent years domestic debt has been on the increase and in 2014, domestic public debt increased by 12.5% of GDP which increased the debt stock to 100.2% of GDP in 2014. Unlike the external debt, which is largely concessionary, domestic debt attracts high interest rates (19% for 1 year Treasury bill) which makes the cost of borrowing very high.

Against the background of the high public debt it will be difficult for the Gambia to continue to contract non-concessionary loans for its development. In fact in the recent consultations with the IMF (**The Gambia: 2015 Article IV Consultation)** it was clearly stated that for The Gambia … "In the immediate future, a scaling up of investment is not feasible given this debt situation, and hence strict prioritization of available resources is essential." Only two projects were excluded- i) a project to connect The Gambia to the regional hydropower grid and the Trans-Gambia River bridge construction- which are already in the pipeline.

With respect to ECOWAS convergence criteria some challenges can also arise when it comes to borrowing for investment in a situation of high public debt. One of the four ECOWAS Primary Convergence Criteria is a fiscal deficit of no more than 4% of the GDP. Currently, as stated above, that of The Gambia is 12.5%. The government's reliance on public debt to finance expenditures leads to a higher budget deficit. An overall assessment of convergence indicated for the first half of 2013, shows that The Gambia has missed fiscal deficit and central bank financing criteria.(see: '**Report of the 33rd Meeting Of The Convergence Council Of Ministers and Governors of Central Banks of The West African Monetary Zone (WAMZ)'). Meeting these criteria will require, amongst others, reducing the debt burden particularly the domestic debt, which although important for macroeconomic stability can limit the amount of loans that the country can contract for its development programmes.

4. Economic development and social information of the Gambia (text with the most recent table of socioeconomic indicators for the Gambia)

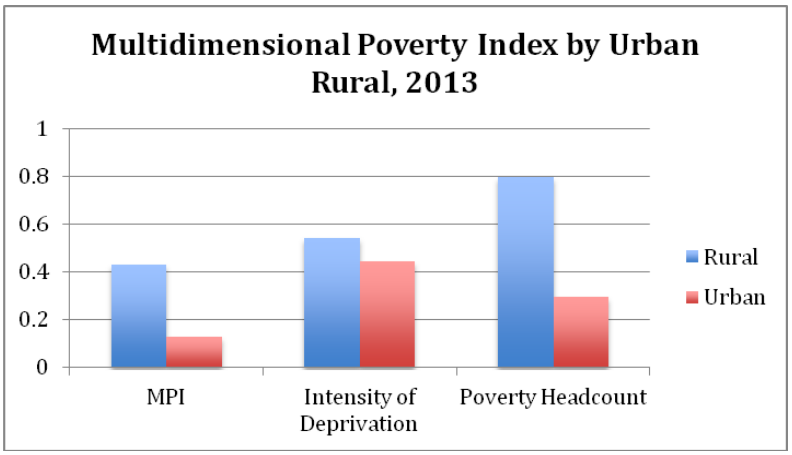
The World Bank estimates the 2012 gross domestic product (GDP) in The Gambia at $944 million (current prices) and $707 million (constant prices). The Gambian economy had been generally strong in the past decade, with an average annual real GDP growth rate of about 6% during 2003-2006, and a slight reduction to 5.3% during 2006-2010. Despite the global economic crisis in 2007-2008, economic growth has remained robust, mainly owing to the good performance in the agricultural and service sectors. In 2011 the country experienced a major drought with serious consequences for the agricultural production which resulted in a negative growth rate of -4.4%. The country's economy recovered moderately in 2012 and in 2013. However the decline in GDP growth in 2014 resulted in an estimated contraction of about -0.7%. The principal factors behind the poor growth rate were the decline in tourism earnings and reduced agricultural outputs due to delayed rains in 2014. Although not directly affected by the disease, the Ebola epidemic in the sub-region has had an adverse effect on tourism and related sectors and is estimated to have cut tourism receipts for the 2014/15 season by more than half (IMF 2015).

The Gambian Human Development Index (HDI) increased from 0,438 in 2012 to 0,447 in 2013; but still remains in the Low Human Development ranking: 172nd out of 187 countries (2013).

Poverty continues to be a major challenge for the country although poverty assessments have indicated that it is on the decline (2008 Poverty Assessment).The overall national poverty rate at $ 1.25 per person per day is 48. 4% (2010) compared to 55.5% in 2008. Recent studies, including the Integrated Household Survey (IHS[7]) of 2010 and Drivers of Growth studies (2014[8] and 2015[9]) have shown that growth has been inclusive in The Gambia, with both rural and urban populations seeing a fall in the poverty headcount over this period. Unfortunately, the benefits of growth have been skewed towards the urban areas with 30% of urban households (in 2013) multi-dimensionally poor (poverty headcount) as opposed to 80% in the rural areas. Poverty levels remain extremely high in rural areas even though there has been an effort by the government to provide basic social services such as schools, health care services and electricity to rural settlements

[7] Integrated Household Survey, GBOS, 2010
[8] Growth Drivers, Poverty and Inequality in the Gambia, GBOS, 2014
[9] Study on Multidimensional Poverty and Inclusive Growth in The Gambia, UNDP, 2015

Figure 1: Multidimensional Poverty, Intensity of Deprivation and Poverty Headcount by Urban/Rural



Source: Study on Multidimensional Poverty and Inclusive Growth in The Gambia, UNDP, 2015

The unemployment rate, as estimated by the Labour Force Survey, stands at 29.2% national, with the male and female unemployment rates at 20.9% and 38.3% respectively. There also exists a slight rural-urban difference in unemployment rates with the rural unemployment rate at 31.1 versus 28.4 for urban areas. The youth unemployment rate, defined as any person between the ages of 13 and 30, stood at 38%. (The Labour Force Survey (LFS) 2012).

5. Economic development and social information of the targeted areas (districts of Serekunda, Jokadu and Upper Baddibu): size of population, indicators of employment, main sources of livelihoods, income per capita, gender issues, climate change risks and vulnerability;

Serekunda

Serekunda is situated in the Kanifing municipality and Table 3 shows the profile of Kanifing Municipality

Table3: Kanifing Municipality Profile

General Information		
	Head Quarters	Kanifing
	Land Area(km^2)	76
Demography	Total Population	382,096
	male	192417
	Female	189679
	Sex Ratio	101
	Population Density/km2	6057.52
	Percentage share of Total national Population	20.3
	Household Size	5.7

Poverty Rate	$1/per person /day	15.0
	$1.25/per person /day	26.0
Health and Nutrition	Infant Mortality	76
	Under 5 Mortality	102
	HIV Prevalence among pop. aged 15-49	1.5
	% of children age 6-59 months with severe anaemia	3.9
	% of women age 15-49 with severe anaemia	2.0
Education	GER Early Childhood Education	43.3
	GER Lower basic Education	108.9
	GER Upper Basic Education	103.7
	GER Senior Secondary Education	52.6

The Kanifing Municipality is among the largest in the country with a population of 382,096. Most of the country's tourism Infrastructure is situated in this area along the coastline.

Major road infrastructure linked to Banjul the capital and the all the major towns along the coast. The Herman Mainer Highway links the heart of Serrekunda to the Kombo Coastal Roads. The construction of these roads facilitated access to all the major hotels and beaches in the Gambia and the fish landing sites along the coast. In addition to the road network the municipality has important artisanal fish landing sites at Bakau, Kololi and Bijilo.

The main sources of employment are the service sector- government, hotel industry and business.

The current environmental challenges are waste management and the risks of flooding due to poor drainage and inadequate enforcement town planning rules. The major risks posed by climate change however is sea level rise. A I metre sea level rise is expected to destroy the entire tourism infrastructure including roads thereby creating massive unemployment. Sea level rise would also destroy agricultural lands as well as the Bijilo forest park.

Jokadu District

Jokadu District is situated in the North Bank Region and it has a population of 22,132 (10,486 males and 11,646females) (2013). The area is served by a major trunk road linking it to other parts of North Bank Region. Other development infrastructures include a basic cycle schools and primary healthcare centres in many of the villages. The main sources of livelihood in the district are agriculture (farming) fishing and livestock rearing. Generally the women are engaged in rice production which is the staple food of the household and the men engage in cash crop production (mainly groundnuts and upland cereals such as millet and sorghum). The women also engage in salt production and horticulture which are exclusively women's occupations.

Current major environmental challenges include, salt intrusion, flooding and erosion all of which result in the destruction of productive farmlands. With climate change and the expected sea level rise these risks are likely to increase in frequency and severity with increased hardship for the communities.

Upper Baddibu District

Upper Baddibu District is in the North Bank Region and it has population of 41,603 (20,987males and 20,616 females) (2013 census). The dominant activities are subsistence farming (with women growing rice and men cash crops such as groundnuts and upland cereals) and fishing. During the dry season the women grow vegetables.

The key environmental challenges are flooding from tidal movement of the River Gambia, the destruction of mangrove vegetation resulting in mangrove die-backs and erosion all of which contribute to salt intrusion and the destruction of the rice fields, siltation of lowlands and low fish catches. The flooding is exacerbated by seasonal storm surges, the construction of the north bank trunk road and a dam said to be constructed in Senegal. With climate change these phenomena are likely to increase in frequency and severity.

Table 4: North Bank Region Profile

General Information		Regional Head Quarters	Kerewan
		Land Area(km^2)	2255.7
Demography		Total Population	221,054
		Male	104,931
		Female	116,123
		Sex Ratio	93
		Population Density/km2	98.0
		Percentage share of Total national Population	11.7
		Household Size	9.9
Poverty Rate		$1/per person /day	48.2
		$1.25/per person /day	60
Agriculture	**Crops**	Area Cultivated (Ha)	73,684
		Production(Mt) major Field Crops	74,072
		Production (Mt) of Cereal (incl. findi)	43,252
	Livestock	Cattle	30,429
		Goats	13,547
		Sheep	1460
Health		Infant Mortality	77
		Under 5 Mortality	101
		% of children age 6-59 months with severe anaemia	3.6
		% of women age 15-49 with severe anaemia	1.5
		HIV Prevalence among pop. aged 15-49	1.3
Education		GER Early Childhood Education	35.1
		GER Lower basic Education	121.5
		GER Upper Basic Education	61.8
		GER Senior Secondary Education	35.6

6. The number of direct and indirect beneficiaries of the project, per district and gender

A total of 445, 831 people (382,096 in Kanifing, 22,132 in Jokadu and 41,603 in Upper Baddbu District) will benefit from the project. In terms of gender, 192,412 males and 189,697 females

will benefit in Kanifing; 10, 486 males and 11,646 females in Jokadu; and 20,987 males and 20,616 females in Upper Baddibu (Table 5).

Table 5: Number of direct and indirect beneficiaries of the project per district and gender

Local Government Area	District	Male population	Female population	Total population
Kanifing	Kanifing	192,412	189,697	382,096
Kerewan	Jokadu	10,486	11,646	22,132
	Upper Baddibu	20,987	20,616	41,603

Source: The Gambia population and housing census preliminary results (Republic of The Gambia 2013).

7. Contribution of the Kololi stretch of hotels and businesses to the Gambian economy: GDP, employment, trade balance, etc.

The tourism sector is a significant contributor to the Gambian economy. The sector contributes an estimated 12 per cent of The Gambia's real GDP (2010); provides more than 16, 000 formal and informal jobs. (PAGE 2012-2015); and contributes significantly to foreign exchange earnings. After agriculture, tourism is one of the country's main sources of employment. The total tourism revenues remaining in the country are estimated at US$50 million. (Master Plan 2006). In 2013 the total number of tourist arrivals in the Gambia was 171,200 (GTB). In 2014 the season performed poorly largely because of the Ebola pandemic even though The Gambia has remained Ebola free

The Kololi stretch (between Kololi Point and Bald Cape along the coastline) is situated in the Tourism Development Area (TDA) which extends from Cape Point in the north to Kartong in the south and stretches over a distance of 800m from the high water mark into the land. The Kololi stretch constitutes one of the important tourism cluster area in the TDA with a high economic value as it contains major hotels including 2 five star and 2 four star hotels. The hotels and other tourist attractions along this section include the Senegambia Hotel, the Kairaba Resort Hotel, the Holiday Beach Club Hotel and the Kololi Beach Club Hotel as well as many restaurants, beach bars and hair dressing salons. There is also the Bijilo Forest Park located on the cliffs to the northwest of Bijilo.

In addition to the hotels the area also has a high concentration of many tourism related businesses. Table 6 below shows the types and numbers of business in the Kololi stretch relative the rest of the TDA. In the case of hotels the total number in the TDA is 42 and 17 out of these or 40.5% are located in the Kololi stretch. Over 60% of the restaurants in the TDA are located in the Kololi stretch area while slightly over 50% of beach bars are also in this area.

Table 6a: types and numbers of business in the Kololi stretch relative the rest of the TDA

No.	Type of Business	Total in TDA	Total in Kololi Stretch	% of TDA Total
1	Hotels	42	17	40
2	Restaurants	75	46	60
3	Beach Bars	21	11	52.4
4	Juice Processors	200	98	49
5	Tourist taxi	750	272	36.3
6	Hair dresses	75	35	46.7

Source: Gambia Tourism Board

Table 6b: Hotels: room and bed capacity and employment

No.	Type of Business	Total in TDA	Total in Kololi	% of TDA Total
1	Room Capacity	2661	1190	41.7
2	Bed Capacity	4821	2037	42.3
3	Employment	2857	1284	45

Source: Gambia Tourism Board

Table 6b shows the contribution of the Kololi area to employment and the provision of hotel facilities. The picture that emerges from these tables clearly shows the relative importance of this area to tourism and the socioeconomic development of the Gambia.

8. The contribution of the Kololi coastal stretch in the stability of the Gambian coast and the River Gambia

The Coastal Protection Project divided the Gambian coastline into nine cells based on geomorphology and susceptibility to erosion (Haskoning 2000). Each cell consists of a section of the coast with distinct character and definable limits. The Kololi coastal stretch is part of cell 6: Kololi point to Bald Cape. This is one of the cells most vulnerable to climate change.

This cell has been the subject of several coastal management interventions over the past decade. The first major tourist resorts were built in this area in the 1970s and 80s. However, a combination of beach sand mining near Bijilo and natural coastal erosion led to concerns for hotel beaches. Although legal mining was stopped in 1995, the erosion continued at a reduced rate. A variety of measures such as sand bags, geotextile tubes filled with sand, wooden walls and concrete walls, were taken to defend the beachfront (Plate 2, Coates and Manneh 2014). However, all these measures failed due to lack of proper planning and designing.

Plate 2. Kololi beach front

One of the possible adaptation options for this cell is a sloping revetment to stabilize coast and stop erosion (Hills and Manneh 2014). Although this can be a very effective measure with long durability, it is very costly with environmental consequences. Preventing erosion of the backshore along this area may increase erosion of the beaches to the south and north. The erosion could partially block longshore transport. Sand transport to the north would be reduced under south-westerly conditions and transport to the south reduced under north-westerly conditions (Coates and Manneh 2015).

Drift rates and direction south of Kololi Point are considered variable, giving rise to a drift divide. Haskoning (2004) suggested that the divide was close to Bald Point and that the dift northwards from Kololi Point towards Banjul was relatively strong while others (Bijl 2011; NIRAS 2015) proposed that the there is a drift in either direction and that the divide is close to Kololi Point at the Senegambia area. This shows that the Kololi coastal stretch is very important in the stability of the Gambian coast. However, more work is required to clarify the difference of opinion.

9. Description of the current markets for rice, fish and salt: sources, consumers, different stakeholders and their roles / places in the value chains,

9.1.Rice

Rice is the staple food of The Gambia and the country's per capita consumption is117kg of milled rice per annum (Department of Agriculture, National Agriculture Sample Survey (NASS) report, 2013). The current annual requirement stands at about 219,960MT out of which only 41, 822 MT is produced locally (Department of Agriculture, NASS report, 2013). A deficit of 178,138MT has to be imported.
A recent policy development, Vision 2016, has the overall objective of increasing domestic rice production in order to meet national rice requirements by 2016 and thereby reduce rice imports.

Sources

The main sources of rice are local production, commercial imports and grants. Local production consists of upland rice which is grown in the upland areas throughout the country. The potentials for this system of rice production has greatly increased with the introduction of the New Rice for Africa (NERICA– a drought tolerant rice variety) into the farming system of the country in 2005. The total hectares under upland rice production is 48,946 (NASS 2013 Report)

Swamp Rice is produced in the lowland areas mainly in the Central River Region (CRR) and in some low land areas in other regions of the country. Key constraints in swamp rice production relate to timely operations, access to swamp land, salt intrusion and low input use. The total area cultivated in 2013 is 17,434hectares (NASS 2013)

The main operatives involved in rice production are largely women although a limited number of men are also involved and mainly in the upland perimeters. There are a total of 58,651females in rice production as against 6576 males and 986%. (NASS 2013).

Commercial Imports

The gap in the production shortfall is filled by commercial importers with sufficient financial resources. The imports in the last few years come from Asia, Europe and America.

Grant Aid

Grant aid happens where there is crop failure, drought or other natural calamities that impact adversely on the livelihood of the farming community for example the 2008 soaring food prices, and the crop failures as a result of drought in 2011. Grant in aid may also be given as a form of bilateral assistance to support the under-privileged farmers. The Japanese KR Project falls under

this category (Japanese Grant Assistance for the Food Aid Project (KR) provided to developing countries with food shortages for the purpose of buying rice, maize or other grains.)

Markets for the Local Rice

The markets for local rice comprise:

- Lumos – the local name for weekly markets that are held throughout the country in specific locations;
- Syndicate – Designated location within the market place in the urban and semi-urban areas where the middlemen, wholesalers and retailers meet for the marketing of rice and other agricultural products;
- Local Markets in urban and semi urban;
- Local shops – some time used as retail outlets for clean local rice;
- Cooperative Stores for wholesale of clean and paddy rice; and
- Research Centers – For cultivation, distribution and marketing of special rice varieties such as NERICA as seed to farmers.

Stakeholders and their roles in the rice marketing value chain

Tables 7a and 7b show the stakeholders and their roles in the rice marketing value chain.

Table 7a: Stakeholders in the rice marketing value chain

No.	Stakeholder	Role /Activity in the value chain
1	Individual Producers	Grow the rice for consumption and/ or for sale
2	Producer Associations such as CRR Rice Growers Cooperatives, NERICA Farmers Association	They produce, process, package and market the clean rice through the Genda Njais and Banabanas' whoare middlemen
3	Processors - Include Producer Associations and private rice millers	They provide milling services for the producers at a fee. Some of the processors would also buy the paddy rice from the farmers and mill it for resale to consumers and or rice marketing agents.
4	Banabanas and Gende Njais (Middlemen)	These are middlemen who link the producers with retailers in the urban and semi-urban markets for sale of the rice to the individual consumers.
5	Rice seed growers	Growers that specialize in growing rice seeds for sale to the farmers
6	Government Agencies such as MoA	Provide technical advice to farmers
7	Consumers	The end users of the rice including the farmers themselves whether for human consumption or as seeds

Table 7b: Stakeholders in the marketing of Imported rice marketing value chain

No.	Stakeholder	Role /Activity in the value chain

1	Importers of rice	Investors with the required financial capacity to import large quantities of rice into the country
2	Distributors	Agents of Importers who sell the rice on behalf of the importer through the retail stores.
3	Retail Store Owners	Own large stores, which they use to sell variety of commodities including rice at whole sale price
4	Retail Outlets	Shop keepers who buy rice at wholesale price from the retail stores and sell to the consumers
5	Government agencies-GRA	They collect duties and other taxes on imported rice on behalf of Government

9.2 Fish

Fish plays a significant role in providing vital, cheap and quality animal protein supplement to the Gambian populace and also as an important source of employment. It contributes about 3% to GDP. Fish and fish products account for approximately 15 per cent of merchandise export earnings. (ANR Policy 2009-2015).

Sources

The main sources of fish are artisanal and industrial fishing**.** Artisanal production is estimated between 15,000 and 20,000 tons annually. The small pelagic species such as *Ethmalosa fimbriata* (bonga) constituted the bulk of total landings (ANR 2009-2015). The catch is landed at special fish landing sites and there are currently 158 such sites in the country consisting of 7 main ones along the coast and 151 others inland along the river.

Industrial fishing, is estimated to be around 8,000 metric tonnes annually. The fishing is carried out by trawlers with a valid licence to fish in Gambian waters. Almost all of the industrial production is exported directly from the fishing grounds and not reflected in the country's export figures. (ANR 2009-2015)

Consumers

Per capita fish consumption is highest in the coastal areas and settlements around fish landing sites along the river where access to fish products is easier for the communities. Inadequate facilities and services such as cold storage facilities to preserve fish and reduce spoilage and improved distribution networks have limited the consumption of fish products country-wide.

Stakeholders

The stakeholders in the fish market value chain are classified under two categories as follows:

- Artisanal Fisheries; and
- Industrial fishing.

Tables –8a &8b show the different stakeholders in the value chain and their roles

Table 8a: Stakeholders of the artisanal fisheries value chain

No.	Stakeholder	Role /Activity in the value chain
1	Fishermen	Responsible for catching and transporting fish to the landing sites and selling the fish to the BanaBanas (distributors). Fishermen may own the fishing equipment or may be hired by the owners of the boat and equipment.
	Fishing Equipment Owners	This includes people who do not go fishing themselves but they make fishing gear available to others on hire.
2	Banabanas	These are middlemen who buy the fish in their various forms (fresh and/or processed) and distribute and sell to customers (individual consumers and or retailers).
3	Fish Processors	Responsible for the drying, smoking, packaging and sale of processed fish to Banabanas, individual consumers and /or for export
4	Outboard Engine Mechanics	Provide repair and maintenance services of the fishing gears notably the outboard engines
5	Consumers	The end users of the fish product and as such pay for the end value as well
6	Ministry & Dept. of Fisheries	Responsible for regulation of the industry including issuance of licence as well as provision of technical support,
7	Gambia Revenue Authority (GRA)	Responsible for the collection of annual taxes levied on the fishing canoes
8	Local Govt. Authorities	Collection of annual rates and taxes as well as management of fish marketing centres.

Table 8b: Stakeholders of the industrial fisheries value chain

No.	Stakeholder	Role /Activity in the value chain
1	Owners of fishing vessels(Investors)	Licensed companies and/ or individuals that are registered and possess vessels licensed to fish in Gambian waters.
2	Licensed companies and or individuals that are registered and allowed to use fishing vessels in The Gambia waters to catch fish and export.	Licensed companies and or individuals that are registered and allowed to use fishing vessels in The Gambia waters to catch fish and export. – These are trained and qualified individuals that are hired by the vessel owners to operate and maintain the vessel. They include fishermen, engineers and support staff.
3	Government- Ministry & Dept of Fisheries	Regulation of the industry through issuance of licenses and the provision of technical support as well as the management of fisheries resources
	Government-The Gambia Navy	Provides surveillance of territorial waters.
	GRA	Collection of taxes on commercial operators

Table 8c: Profile of the Fisheries products, main operatives and markets

	Product	Main Operatives	Market	Remarks
1.	Fresh Fish	Male, Female and companies	Local and International	Attracts large foreign exchange
2.	Dried Fish	Mainly Women	Local and Sub-region	Generates CFA that facilitates sub-regional trade. Insignificant quantity for export beyond sub-region
3.	Dried Salted Shark	Women	Local and Sub Region – Mainly Ghana	Generates CFA that facilitates sub regional trade
4.	Dried and smoked	women	Local / Europe and USA	Limited quantity but generates significant amount of foreign exchange earnings for the exporters

9.3 Salt

Salt is considered as the cheapest and most effective way of supplying iodine to the body and as such the production and marketing of salt has received attention of the Government in its effort to promote iodised salt. National estimates of salt consumption is at 80,000MT per annum and only 10% of this is produced in The Gambia (Study on Iodine Deficiency Disorders 2001).

Sources

The main sources of salt are local production and imports. The local production techniques consist of trapping the water from the sea in evaporation basins of 25 sq meters and half a meter deep. The evaporation takes 4 months (January to April) to obtain crystallization in block forms which are then manually broken to obtain large crystals that are washed before drying and stocking. Production is mainly centered in the western half of the country where sea water is available, notably Darsilami, Bakang, Tanbana, Massembe, Buiba, Jomar, Bintang and Kombo Darsilami.

Local production is supplemented by imports mainly from Senegal which provides about 80% of the Gambia's requirements and the remaining 10% is imported from Europe.

Table9a : Stakeholders involved in the local salt marketing value chain

No.	Stakeholder	Role /Activity in the value chain
1	Individual Producers	Harvest salt for consumption and or for sales
	Producer association- National Association of Salt Producers and Traders	Provide support to individual producers and cooperatives in the form of skills/capacity training in production and iodisation of salt and also provide oversight for the end product
2	Banabanas and Gende Njais (Middlemen)	They link the producers with retailers in the urban and semi-urban markets for sale of salt to the individual consumers.
3	Retail Outlets	Shop keepers that buy salt at wholesale price from the middlemen and sell to the consumers
	Consumers	The end users of the salt including the salt producers themselves

Table 9b : Stakeholders in the imported salt marketing chain

No.	Stakeholder	Role /Activity in the value chain
1	Importers	Import salt from Senegal in canoes
2	Banabanas and Gende Njais (Middlemen)	They link the producers with retailers in the urban and semi-urban markets for sale of salt to the individual consumers.
3	Retailers	Traders including shop keepers that buy the salt at wholesale price from importers/banabanas and sell to the consumers
4	Government agencies (Customs , security)	-For collection of customs duty and veification that all imported salt are iodised
5	Consumers	The end users of the salt odincluding the producers themselves

10. Information on the projected markets for the next 5, 15 and 25 years

For rice, the current demand is around 219,960MT out of which only 41, 822 MT of 19% is produced locally (NASS report, 2013). With population growth rate of about 3.3% it is clear that the market for rice will continue to grow. However, the New programme Vision 2016 may significantly alter the market projections as farmers become increasing self sufficient.

11.The pricing mechanisms and structures of these 3 commodities including the government involvement in the pricing of these commodities, the provision of subsidies and the roles of the relevant institutions

11.1 Pricing structure for rice

The factors that contribute to the price structure of the local rice are production costs (seeds and other inputs such as fertilizer), cost of milling, bagging and transportation to the market. At the market the vendors pay daily duties levied by the local government authority. The government is not involved in the pricing of local rice and no subsidies are provided by government. The Ministry of Agriculture, through its technical departments, provides technical advice to the farmers and assistance in the provision of farm inputs.

For imported rice the price structure includes the cost of the commodity to Banjul port, government taxes, transportation and storage at the warehouse. In addition, the business operator has pay central and local government taxes to operate the business. From the warehouse the costs involved include transportation to the retail store/shop.

In summary the taxes /levies that apply are:

- Import tax at the time of clearance;
- Annual business tax for all categories of stakeholders except for Individual farmers and farmer associations

10.2 Pricing Structure for Fish and fish products

The cost elements that go into the price of fish include the cost of labour, fuel, unloading of the canoes and transportation of the fish to the market or processing centres. There are no direct subsidies for fisheries products except that no export tax is levied on fisheries products. There are also no price controls. The pricing is generally based on supply and demand. Factors that may influence the amount of catches include weather conditions, time of the season, traditional Muslim feasts and policy environment.

12. Provide details of government licences or permits required for implementing and operating in the agriculture sector and the coastal business and, the issuing authority

12.1 Rice: Licenses / Permits

For the local rice there are no government licences or permits required at the production level. However, the large scale traders need to have a registered business certificate to conduct business and this is issued by the Gambia Revenue Authority (GRA). They also need to pay municipal taxes if they operate from a premise.

Similarly rice importers will need to be in possession of a valid business registration certificate and pay municipal taxes for doing business in the local government area.

12.2.Fisheries:

For fisheries the following license / permits are required:

A Permit is required to operate as fisherman at both industrial and artisanal levels. At the artisanal level the rate of the permit is categorised into foreign and local fishermen with the former paying higher rates. The amount to be paid is also dependent on the size of the canoe. The issuing authority is the Department of Fisheries

At the industrial level the operators are required to have a fishing licence to fish in Gambian waters issued by the Department of Fisheries.

In addition to permits, fishermen and other stakeholders in the industry also pay annual tax to the GRA as well as the local government authorities.

Regulation

The fisheries sector is regulated by the Department of Fisheries under the Ministry of Natural Resources and The Environment through the Fisheries Act and Regulations.

Through the Ministry, government provides support to the sector in the form of infrastructural development, and policy guidelines to enhance the development of the sector.

12.3 Salt:

License / Permit Requirements

Currently there are no permits or licences required for salt production. Importers are required to have a valid business registration certificate issued by GRA

12.4 Tourism

In the tourism sector, operators are required to businesses are required to have valid business registration certificate to operate.

In addition there are the municipal taxes for the provision of waste collection and other services.

13. Describe applicable taxes and foreign exchange (export/Import) regulations for the commodities targeted by the project Salt, fish and rice, including the quantity of rice imports per year and the rice import growth rate per year

The applicable taxes on imports are as follows:

Rice-

Import duty of 5% on Cif value
ECOWAS tax 1%; and
Processing fees 1.55%

Fish exports do not attract any export duty.

Salt

Import duty of 20%;
ECOWAS Tax 1%
Processing fees 1.55%

14. The government rules for implementing and operating in the water sector

The main legal and policy instruments for the management of the water resources sector in The Gambia are the National Water Resources Act (1979) and the National Water Policy (2006). In many respects the Act has become obsolete as it fails to take account of developments in the sector since the 1980s.

The National Water Policy is the planning and management framework for managing the water resources in The Gambia. The National Water Policy also needs to be updated to reflect the changing circumstances. Furthermore, a Water Resource Strategy is also required to translate the policy guidelines in to action. An Integrated Water Resources Management Roadmap has been prepared for The Gambia, outlining the transition from traditional to integrated water resources management.

The state privatized the provision of water supply facilities in 1994. Since then, several people have been trained in well-digging and/or borehole drilling. There are currently no updated rules

for implementing and operating in the water sector. For instance, anyone can dig a borehole without acquiring a permit. To address these issues rules and regulations for the drilling of boreholes have been prepared and submitted to Cabinet for approval before subsequent submission to the National Assembly for enactment. Under the proposed rules, a permit is required for the drilling of a borehole (A. Jabby, Pers. Comm.).

15. The part of the budget allocated to Climate change, coastal management, coastal development, rice growing and to the targeted district (Serrekunda, Upper Badibu, Jokadu) and if possible to the targeted sectors within the districts (coastal management, rice growing, rural development)

The estimates of revenue and expenditure for the year 2015 could not be accessed by the consultant. So, the estimates of revenue and expenditure for 2014 have been used in the report.

It is very difficult to identify budget allocation figures for the listed sectors. There were no sector-specific budgetary allocations for climate change, coastal management, coastal development and rice growing in 2014. These are cross-sectoral issues which require an integrated approach for sustainable management. However, the Ministry of Fisheries and Water Resources was responsible for climate change issues in 2014, and the Ministry of Agriculture, for rice growing issues. The National Environment Agency is the coordinating institution for coastal management and coastal development, within the framework of the Coastal and Marine Environment Working Group. In 2014, D157.67 million (1.59%) was allocated to the Ministry of Fisheries and Water Resources and D467.43 million (4.71%) to the Ministry of Agriculture (Estimates of Revenue and Expenditure, Republic of The Gambia 2014).

16. The Gambian experience in salt, rice, and fish technology, integrated rice growing and fish harvesting, and integrated rice growing and salt harvesting

Salt, rice and fish technology

Salt, rice and fish technology has not yet been implemented in The Gambia. However, the GOTG/UNDP GEF project, 'Enhancing resilience of vulnerable coastal areas and communities to climate change' being implemented in The Gambia has proposed a salt-rice-fish wetland land reclamation management system for the communities of Darsilami in the Jokadu district and Illliassa in the Upper Baddibu district of the North Bank Region. The approach consists of rehabilitating the wetland areas and improving the communities' livelihood systems (UNDP 2013). This will reduce the vulnerability of the target communities to climate change-induced risks. The proposed intervention is expected to benefit over 54,000 people in the two districts. The project is in the process of recruiting a contractor for the construction works which will start once the contractor is recruited.

Plate 3. Darsilammeh mangrove swamp, Jokadu.

Integrated rice growing and fish harvesting The Fisheries and Aquaculture Unit of the National Agricultural Research Institute (NARI) has conducted the first trials of integrated rice growing and fish harvesting in The Gambia, in Sapu in the Central River Region. Two fish species, *Oreochromis niloticus* and *Clarias gariepinus*, have been used in the trials. The project aimed to conduct at least four trials. However, the project had to be abandoned after two trials due to lack of funding. Since the project has not been finalized, no report is available.

Integrated rice growing and salt harvesting

Integrated rice growing and salt harvesting has not been practiced in The Gambia as far as records show.

17. The Gambian experience in pisciculture

The practice of pisciculture, the controlled breeding rearing of fish, is relatively new in The Gambia. The first fish pond was established in Bansang in 1979 through a joint intervention by the Catholic Relief Services, US Peace Corp Volunteers and the Department of Fisheries (Darbo 2013). However, many considerations such as soil characteristics, topography and climate, were not taken into account. Therefore, the trial was faced with terminal constraints ranging from water loss during hot periods, frequent pump breakdown leading to water eutrophication (Darbo

2013). This trial prompted private rice growers to establish fish ponds in their rice irrigation plots. However, they were faced with similar constraints.

In 1995, a one-hectare trial pond was established in the CRR by the Department of Fisheries for the trial culture of three indigenous fish species: African sharptooth catfish *Clarias gariepinus*, African bonytongue *Heterotis nioticus* and Nile tilapia *Oreochromis niloticus* . The trial proved the cultivability of the species in our system and also raised national awareness of the need to diversify fish production through aquaculture (Darbo 2013).

Aquaculture is gradually and steadily moving from infancy status of one trial pond in 1979 to over 60 ponds in 2014. In addition, there are about 20 private ponds.

The Fisheries and Aquaculture Unit of the National Agricultural Research Institute (NARI) are breeding *Oreochromis niloticus* and *Clarias gariepinus* in a concrete pond in Yundum in the West Coast Region. An old reservoir has been rehabilitated using locally-available material. The aim was to uncover how one can culture indigenous species under different environmental conditions. However, additional ponds could not be constructed due lack of funds (A. Mboge, Pers. Comm).

NARI also has a capture-based aquarium system using an earthen pond, in Sapu, in the Central River Region. The aim of this aquarium is to identify different species in the wild. It can also be used as stock for breeding as well as a training centre for fish farmers.

18. The GNAIP Evaluation or yearly implementation reports and information on the successor of the GNAIP /on the extension of the GNAIP

The Gambia National Agricultural investment Plan (GNAIP) 2010-2015, is the medium-term strategic plan of The Gambia towards achieving the vision for the agriculture and natural resources sector and food security in the country within the framework of the Comprehensive Africa Agriculture Development Programme (CAADP) the New Partnership for Africa's Development (NEPAD) (Republic of The Gambia 2010). The GNAIP is expiring this year. The Agriculture and Natural Resources sector (ANR) Working Group is currently reviewing the plan, in consultation with the Economic Community of West African States (ECOWAS) and the Forum for Agricultural Research in Africa (FARA), with a view to extending it. The aim is to review the plan in order to align the successor programme with climate SMART, gender issues, agricultural training education, etc. A consultant has already been recruited with support from the West and Central African Council for Agricultural Research and Development (CORAF). Moreover, a technical review report of the GNAIP has been prepared by the African Union.

19. NARI works, reports or publications on lowland rice growing : salt tolerant varieties, technology package, origin of supply of the seeds and other required inputs,

The national Agricultural Research Institute (NARI) does not have any official reports or publications on lowland rice growing according to a senior official of the institute. However, it is screening for salt tolerance rice varieties in the Lower River region, in collaboration with Africa Rice Centre (Africa Rice) in Cotonou, Benin and now in Abidjan, Ivory Coast. NARI receives the seeds and other materials from Africa Rice and conduct the screening. After the screening, NARI sends the data to Africa Rice for publication. Currently, there are three salt-tolerant varieties in the system: Rok-5, War-1 and War-77-3. However in the mangrove ecologies, more traditional varieties are being grown. NARI is trying to introduce improved varieties in these areas. These varieties also mature earlier and produce higher yields than the local ones. One improved variety: IR 63275-B-1-1-3-3-2 is informally released. This variety can also be used in the irrigated areas. There used to be several varieties in the system but with the advent of new varieties, old varieties are abandoned.

The improved varieties are selected using participatory variety selection involving farmers and other stakeholders. Once the variety is screened, the seeds are introduced to farmers on a trial basis. The varieties the farmers select are the ones that are promoted in the on-farm trials. A national seed council has also been established to take charge of the release of varieties.

20. Details on insurance policies related to project/programme

There are different insurance policies that can cover projects or programmes. These include medical insurance, motor insurance, fire and all perils and insurance against burglary and theft. The insurance policy is an agreement between the employer and the insurance company to provide specific services for a given period of time, usually one year. When an organization wants medical insurance for its employees, it has to discuss the terms of the policy with the insurance company. A minimum of 10 people are required for the Medical and Health policy. The fee for the policy will depend on the type of job the company does.

Following an agreement, the insurance company will provide the organization with a list of approved medical service providers for the given period of time. The medical insurance policy will normally cover 90% of medical cost of the employees and their dependents. At the end of each month, medical bills will be sent to the insurance company for payment. The policy can be renewed at the end of the year. A motor insurance ensures a vehicle for a period of one year. A fire and all perils policy can insure a building or a building and its contents. However, before such a policy is agreed on, the insurance company has to do an assessment of location of the place and its neighborhood, the types of buildings and their qualities, etc. A burglary and theft insurance insures an organization's properties against burglary and theft for the given period of time. Before, the policy is agreed on, the insurance company has to do an inventory of the items in the building and its security precautions.

21. The rules and traditions of transfer of project assets to national entity in Gambia

The transfer of project assets to national entity in The Gambia depends on the agreement between the government and the project implementing partner. However, usually project assets are transferred to the national executing agency after project closure. In most cases, immovable items such as buildings are transferred to the national executing agency. In some cases, the movable items are transferred to the target community of the project.

22. The Gambia's national climate change strategy and how the project/programme contributes to country's identified priorities for low – emission and climate resilient developmemt, and the degree to which the activity is supported by the country's enabling policy and institutional framework, or includes policy or institutional changes. Please include reference to the UNFCCC INDC or NC or TNA or NAPA or NAMA or (etc)

The Gambia is very vulnerable to climate change and to address some of the climate change risks the Government has developed a number of strategic documents which include the National Adaptation Programme of Action (NAPA) to address the impact of climate change at national and local levels by:

- Delivering immediate adaptation benefits
- Contributing to building local and national adaptive capacities
- Creating awareness and build foundations for maximising long-term adaptation benefits

The specific intervention projects concepts developed by NAPA are shown in Table 9 below.

Table 10: NAPA Priority projects

Priority Listing	Title Of The Project	Coverage	Cost Estimates
1	Restoration/Protection of coastal environments	Banjul and Kanifing Municipalities	**2,300,000**
2	Rehabilitation of Early Warning Systems on Climate-Related Natural Hazards	All Regions	**450,000**
3	Improvement of Fresh Water Availability	All Regions	**910,000.00**
4	Diversification and Intensification of Agricultural Production, Processing,and Marketing	Nationwide	**2,710,000**
5	Expansion of Community Participation in the Management of Forests and Protected Areas	All Regions	**1,412,000**
6	Expansion and Intensification of Agro-forestry and Re-forestation Activities	All Regions	**2,753,000**
7	Briquetting and Carbonization of Groundnut Shells Briquetting and Carbonization of Groundnut Shells	Western Region, Banjul Municipality	**230,000**
8	Reduction of climate change related diseases	Kanifing Municipality, Central River and Upper River Regions	**1,217,000**

9	Improved livestock and rangeland management for food security andenvironmental sustainability	North Bank, Lower River, and Upper River Regions	**2,800,000**
10	Increasing fish production through aquaculture and conservation of post harvest fishery products	Coastal and inland zones	**300,000**
TOTAL			**15,082,000**

The Gambia has also developed the Nationally Acceptable Mitigation Actions (NAMA) to reduce greenhouse gas emissions and thus contribute to the global effort of lowering the cumulative build-up of greenhouse gases in the atmosphere. More recently the government has developed the Intended Nationally Determined Contribution (INDC) in which the Government commits itself to reducing GHG emissions by about 44.4% in 2025 and 45.4% in 2030 through unconditional mitigation actions (the use of renewable energy sources and reafforestation programmes) and conditional actions in sectors such as agriculture and energy.

For adaptation the INDC measures identified include:

- "Enhancing Resilience of coastal and estuarine/riverine economies and livelihoods of the districts in the coastal zone by reducing their vulnerability to sea-level rise and associated impacts of climate change of Gambia‟s most important coastal economic development assets, notably the tourism infrastructures of the Kololi coastline and the lowland rice growing landscapes of the districts of Jokadu and Upper Baddibu.
- Large scale ecosystem restoration of the River Gambia Watershed.

The proposed project will therefore be very much supportive of the identified priorities for low – emission and climate resilient development. The Government is currently developing a national climate change policy to provide an overarching framework that will address institutional as well financial and other arrangements to address climate change.

23. The executing entity for the project: experience in managing projects, yearly managed budgets including the projects financed by other development partners and the budget allocation from the government, staffing (number and type of staff)

The executing entity for the project is the National Environment Agency (NEA), the lead agency responsible for environment policy formulation and coordination of all environment related activities. An important area of responsibility for NEA is the coastal estuarine zone management where the Agency seeks to promote an integrated management that protects the resources whilst allowing the local population to derive socioeconomic and other benefits from its exploitation

The Agency's programmes are grouped into two networks:
(I) The Inter-Sectoral Network (ISN) which deals with coastal and marine environment, agriculture and natural resources, environmental education and environmental information management; and
(II) The Technical Services Network (TSN), which addresses environmental impact assessment, environmental legislation, environmental quality, pesticides and hazardous chemicals, ozone depletion and disaster preparedness.
(III) The Inter-Sectoral Network and The Technical Services Network are both supported by an Administration and Finance section.

The Admin and Finance section has a staff complement of 5 comprising the Director with masters degree in accounts and business management, an accountant, an Accounts Clerk and an Accounts Assistant.
The Agency has been implementing major projects including the:
-Enhancing Resilience of Vulnerable Coastal Areas and communities to Climate Change
- GCCA Support Project to the Gambia for Integrated Coastal Zone Management and the Mainstreaming of Climate Change.

(Budget and other staff details will be provided once they are made available to the consultant)

24. The multi-stakeholder engagement plan: what role key institutions could play in the project

As part of the preparation phase of the project, a wide range of consultations should be held with the stakeholders in order to understand the key issues and to determine the roles and responsibilities they can play in the implementation of the project. The success of the project will depend largely on the involvement and active participation of all stakeholders. The following are key stakeholders that should be engaged (Table 11).

Table 11. Key stakeholders and their roles

Number	Institution	Role
1.	National Environment Agency	Advice on environmental affairs
2.	Department of Water Resources	Coordination
3.	Department of Fisheries	Technical advice
4.	Department of Forestry	Technical advice
5.	Department of Parks and Wildlife Management	Technical advice
6.	Ministry of Environment, Climate Change, Water Resources, Forestry, Parks and Wildlife	Coordination
7.	Ministry of Fisheries	Advice on pisci-culture
8.	The Gambia Tourism Board	Advice on tourism potential
9.	Ministry of Finance and economic Affairs	Advice on the funding opportunities
10.	Geological Department	Advice on geological matters
11.	Department of Lands and Surveys	Advice on lands
12.	Department of Physical Planning and Housing	Advice on planning
13.	Gambia Ports Authority	Technical advice
14	Gambia Maritime Administration	Technical advice on maritime affairs
15.	National Disaster Management Agency	Technical advice on disaster preparedness
16.	Ministry of Transport, Works and Infrastructure	Technical advice on construction works

17.	National Assembly Select Committee on Environment	Lobbying and support
18.	Women's Bureau	Advice on gender issues
19.	Kanifing Municipal Council	Local government support
20.	Kerewan Area Council	Local government support
21.	The Association of Non-Governmental Organizations (TANGO)	Technical advice and support
22.	Office of the President	Overall administrative support
23.	National Agricultural Research Institute (NARI)	Technical advice on fish farming
24.	Gambia Investment and Export Promotion Agency (GIEPA)	Advice on investment
25.	Gambia Agency for the Management of Public Works (GAMWORKS)	Technical advice on construction works
26.	Village Development Committees (VDCs)	Project implementation

25. Other partners of the project and their role: GCCA project; the Hotels, the youth association, other relevant projects

Other partners of the project are listed below (Table 12).

Table12. Other partners of the project and their roles

Number	Name of project	Role
1.	GCCA support project to The Gambia on integrated coastal zone management and the mainstreaming of climate change	Technical advice on integrated coastal zone management
2.	Enhancing the resilience of vulnerable coastal areas and communities to climate change in the republic of The Gambia	To complement the community livelihoods component of the project
3.	The Gambia Hotel Association	Technical advice on tourism
4.	Youth Associations	Support for community-based initiatives

26. Other sources of financing

In addition to the present LDCF and GEF funding there are other sources such as that of the European Union under its Global Climate Change Alliance. There are also the multilateral financing institutions such as the World Bank, the African Development Bank as well as IFAD that support development and strengthening of livelihood systems as a way of promoting resilience and adaptation to climate change. This and similar funds could be used to address the challenges of climate change.

27. Main risk for the implementation of the project activities and solution to mitigate them.

The main risks for the implementation of project activities are:

1. Inadequate stakeholder support due to conflict between different groups with different agendas. This risk can be mitigated through a mass sensitization of all stakeholders prior to the launching of the project combined with an effcetive stakeholder engagement plan. Moreover, the stakeholders should be involved in the design and implementation of the project.
2. Inadequate financial resources is a major risk for the implementation of project activities. This risk can be mitigated by active fundraising and diversifying potential sources of funding for the project.
3. Inadequate local expertise can hinder the implementation of project activites. In order to mitigate this, the project should ensure the availability of regionally-based experts for the implementation of project activities and building the capacities of local stakeholders.

Annex 1: List of Persons contacted

Number	Name	Organization	Position
1.	Matarr Bah	Department of Fisheries	Director
2.	Saloum Jatta	Department of Fisheries	Fisheries Office
3.	Babanding Kanyi	Department of Fisheries	Fisheries Officer
4	Ebou Mbye	Department of Fisheries	Snr. Fisheries Officer, Statistics
5.	Lamin Mai Touray	Department of Water Resources	Director
6.	Alagie Jabby	Department of Water Resources	Head Rural Water Supply Division
7.	Ousman Jarjusey	Department of Water Resources	National Project Coordinator, Climate Change Early Warning System Phase 2
8.	Dodou Trawally	National Environment Agency	Coordinator of the GOTG/UNDP GEF project on climate change
9.	Salmina Jobe	National Environment Agency	Coordinator of the GCCA project
10	Momomdou Suwareh	National Environment Agency	Director, Intersectoral Networks
11	Momodou Denton	National Environment Agency	Director, Finance and Administration
12.	Abdoulie B. Mboge	National Agricultural Research Institute	Senior Research Officer
13	Ebrima Sonko	National Agricultural Research Institute	Research Officer
14	Absa Jaw	National Agricultural Research Institute	Senior Research Officer, overseeing the Directorate of Research
15.	Bakary K. S. Sanyang	Planning Unit, Department of Agriculture	Officer in Charge
16.	Alex Williams	Great Alliance Insurance Co. Ltd	Underwriting Clark
17.	Siaka Sanyang	Great Alliance Insurance Co. Ltd	Motor and Claims Manager
18	Alagie Fadera	Director of Planning	Min. of Finance and Economic Affairs
19	M. Dahaba	Senior Programme Officer	National Nutrition Agency
20	Mamodou Bah	Director	Gambia Tourism Board

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