

**Ministry of Environment,  
Climate Change and  
Natural Resources**



**Fisheries and  
Aquaculture Sector  
Strategy  
2017-2021**

**Department of Fisheries**



Fisheries and Aquaculture Sector Strategy

2017 - 2021



**CONSULTING CO. LTD.**

Final Fisheries and Aquaculture Sector Strategy

2017 - 2021

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## Vision Statement

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To be recognised as one of three<sup>1</sup> most critical contributors to national economic growth, food and nutrition security, employment creation and exchange earnings

## **Mission Statement**

Through the recognition of fisheries and aquaculture potentials as natural economic resources and by ensuring responsible and ecologically sustained fishing and aquaculture practices, to optimally harness The Gambia's fisheries and aquaculture resources and to deliver employment, foreign exchange support, food and nutrition security in achieving accelerated national growth and development.

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<sup>1</sup> Currently, this includes agriculture and tourism.

## List of Abbreviations and Acronyms

CBO	-	Community-Based Organisation
CCRF	-	Code of Conduct for Responsible Fisheries
CECAF	-	Fishery Committee for the Eastern Central Atlantic
COMHAFAT African States	-	Ministerial Conference on Fisheries Cooperation among Bordering the Atlantic Ocean
DoF	-	Department of Fisheries
EFCA	-	European Fisheries Control Agency
ESD	-	Ecologically Sustainable Development
EEZ	-	Exclusive Economic Zone
FAO	-	Food and Agriculture Organization
GBOS	-	Gambia Bureau of Statistics
GCCI	-	Gambia Chamber of Commerce and Industry
GDP		
GEF	-	Global Environment Facility
GIEPA	-	Gambia Investment and Export Promotion Agency
GMA	-	Gambia Maritime Administration
GN	-	Gambia Navy
GTTI	-	Gambia Technical Training Institute
JD	-	Job Description
MCS	-	Monitoring, Control and Surveillance
MECCNAR	-	Ministry of Environment, Climate Change and Natural Resources
MOFA	-	Ministry of Foreign Affairs
MOHERST	-	Ministry of Higher Education, Research, Science and Technology
MOHSW	-	Ministry of Health and Social Welfare
MOJ	-	Ministry of Justice
MORGL	-	Ministry of Regional Government and Lands
MOTIE	-	Ministry of Trade, Regional Integration and Employment
MOU	-	Memorandum of Understanding
NA	-	National Assembly
NAAFO	-	National Association of Artisanal Fisheries Organisation
NaNA	-	National Nutrition Agency
NAQAA	-	National Accreditation and Quality Assurance Authority
NASCOM	-	National Sole Fisheries Co Management
NEA	-	National Environment Agency

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NGO	-	Non-Governmental Organisation
OP	-	Office of The President
PAGE	-	Programme for Accelerated Growth and Employment
PMO	-	Personnel Management Office
PPP	-	Public Private Partnership
PSD	-	Programme for Sustainable Development
SRFC	-	Sub-regional Fisheries Commission
SWOT	-	Strengths, Weaknesses, Opportunities and Threats
TAGFC	-	The Association of Gambia Fishing Companies
TOR	-	Terms of Reference
UNDP	-	United Nations Development Programme

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Finally, we wish to thank all the stakeholders that participated in the strategy development of this plan.

## **Foreword by the Minister of Environment, Climate Change and Natural Resources**

Planning is a task in perpetuity as a nation and its variety of sectors engage in a continuous strive towards optimising the use and therefore the harnessing of available resources for improving the welfare of its citizens. It does not matter if the resource being planned for is available in abundance or even acutely inadequate; either way, it is imperative that a deliberate and proactive approach to its harnessing and utilisation for development is adopted since it makes the distinction between societies that deliver optimal development even with very little resources from those that even though well endowed, still continue to wallow in poverty.

The case of many countries in Africa and many other parts of the world endowed with hydrocarbon and high value metal resources and yet continue to drown in poverty and of others such as Singapore, Mauritius and Seychelles who have no claim to these major resources but through proper planning and utilisation of their human skills have been able to transform their nations to havens of prosperity is glaring for all to relish.

The Gambia like these nations is not very much endowed with these high value development-supportive resources but adequately endowed with a youthful population, which if properly educated and skilled and institutionally structured and supported, should be able to harness the available resources such as fish, to also transform this beautiful nation into a place that most people in many parts of the

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world would crave to come to. It is against this background that as part of the national developmental transformation that began with the economic development plans to the Vision 2020 for which government adopted and continues to implement medium term plans such as the PAGE, that the fisheries and aquaculture sector recognising the developmental potential in abundant fish stock and high potentials for fish farming, undertook with the support of the Food and Agriculture Organisation (FAO) the study, consultations and elaboration of a strategic plan for optimising the utilisation for development of the natural fish stocks and potentials for fish farming.

The Fisheries and aquaculture strategic plan 2017 – 2021 aims to transform the resources concept of fisheries and therefore its contribution to development and put in place an environment that will attract requisite investment that will generate significant contribution to national economic growth, employment and balance of payments through exports. The vision is ***To be recognised as one of three<sup>2</sup> most critical contributors to national economic growth, food and nutrition security, employment creation and exchange earnings***, by 2021. This will be made possible from achieving the fisheries sector policy objectives by ensuring over this strategic plan period, growth in net contribution of the fisheries and aquaculture sector to GDP of up to at least 5% by 2021, 15% of exchange earnings and monetary stability and 25% to employment. This feat is expected to be realized by striving for and achieving the mission which will ***Through the recognition of fisheries and aquaculture potentials as natural economic resources and by ensuring responsible and ecologically sustained fishing and aquaculture practices, to optimally harness The Gambia's fisheries and aquaculture resources and to deliver employment, foreign exchange support, food and nutrition security in achieving accelerated national growth and development.***

This strategy is a commitment by government through the medium term to reprioritize investment in the sector and throughput public investment and donor support to it so that its potency for significant economic growth and development, employment and exchange earnings are realized and women and the youth, who

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<sup>2</sup> Currently, this includes agriculture and tourism.

constitute more than 60% of the Gambian population and are the major players in the fisheries and aquaculture sector are empowered and gendered poverty is resolved.

It also is an invitation to the private sector and all investors, both national and international and the donor community as a rallying basis for support to the sector that will not only improve the welfare of people and achieve the much needed SDGs but also place a smile in the face of humanity in this part of the world.

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Minister of Environment, Climate Change and Natural Resources

## Statement by the Director of Fisheries

In a bid to redefine and enhance the implementation of the Fisheries and Aquaculture Sector Policy 2007 and national development plans including Vision 2020, PAGE and its successor, the National Development Plan, coupled with the expiry of the Fisheries Strategic Action Plan 2012 – 2015, Department of Fisheries in collaboration with the United Nations Food and Agriculture Organization undertook the development of Fisheries and Aquaculture Strategy 2017 – 2021. This strategy is built on the work of sector and strategy experts who were hired and engaged wide ranging consultations with key sector stakeholders.

The Fisheries and Aquaculture sector is key to the sustainable economic development of The Gambia as it has a huge potential to address poverty and gender inequality and increase foreign exchange earnings through value addition and exportation. Although relatively abundant and underexploited, fisheries and supporting natural resources have not been sustainably managed and are underexploited. It is a result of the above that Fisheries Act, 1998, Fisheries 2007 and other relevant international rules were put in place. Thus the development of this strategy is to help enhance the effective implementation of the above and other sectoral and national policy and development plans.

The areas of special emphasis for this strategy are institutional restructuring and capacity strengthening; key stakeholder capacity building and sensitisation; and inter-sectoral linkages and optimisation of overall value chain of the fisheries and aquaculture sector. The deliberate and full implementation strategic actions of the above strategic pillars coupled with improved collaboration with key stakeholders will go a long in addressing the current challenges confronting the sector.

The Fisheries and Aquaculture Strategy 2017 – 2021 will serve as planning guide for all stakeholders and operators including member associations of the National Fisheries Platform who are very critical for the effective implementation of this strategy and indeed sector policies.

I wish to enjoin all our stakeholders including the government, local operators and associations and development partners especially FAO to take ownership of this document and to continue to collaborate and partner with the Ministry of Environment, Climate Change and Natural Resources and indeed the Department of Fisheries so as to ensure the realisation of the strategy goals and objectives.

*Director of Fisheries*

## **Executive Summary**

The fisheries and aquaculture strategy is a culmination of well informed and studied sector reviews and plans by eminent scientists and consultants, which were highly utilised by the strategy consultants to piece together the evolved strategy direction of this very important resource, seeking to optimise its harnessing for national development.

Resulting from various reviews and consultations with stakeholders, this plan is a statement of the recognition of the overarching importance of fisheries and fish resources to The Gambia in terms of capacity to accelerate national economic growth, employment and the reduction of poverty, especially gendered poverty. This plan also feeds on the Fisheries Action Plan 2012 – 2016, Aquaculture Action Plan 2016 – 2010, and the Fisheries and Aquaculture Sector Strategic Plan, 2016 – 2020, all of which were well studied endeavours in generating a plan that is implementable in dynamiting this highly potential sector for development.

The Gambia, a small and densely populated country with a narrow economic base and not known for the usual rich resources-supportive development resources is endowed

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however with significant fish stocks and a potential for fish farming. The Gambia is one of the poorest countries in the world and because it does not have the comfort of depending on any major development supportive economic natural resources, it needs to strategically and with a high degree of effectiveness plan the utilisation for economic development of the few resources at its disposal. In spite of this abundance in fish stock most of the Gambia's fish catches are landed, processed and exported from foreign ports because the country lacks the domestic technological and entrepreneurial capacity to effectively police its territorial waters and optimise the exploitation of its fishery resources in economic development. Towards changing this tide, the Gambia now intends as part of this strategic plan to re-designate fishery resources as an economic resource and intensify its utilisation for economic development.

The strategic environment within which this plan has evolved is characteristic of strong public support and re-prioritising fisheries in its medium term planning and enabling redirection of public investment in the sector, given that it is one of the sectors that though minimally at the moment contributes to GDP (2%), has significant potential to contribute to growth and employment, especially female employment; and makes it an effective tool for fighting gendered poverty.

It is on the basis of this and its potency to sustainably accelerate growth, employment and stability, nutrition and food security that this strategic plan intends to redefine the fisheries and aquaculture resource and reposition it as a main pillar for attaining economic growth and development in The Gambia. In this respect, the intention is to ensure from achieving the fisheries and aquaculture sector policy objectives the growth in net contribution to GDP of this sector to at least 5% by 2021, 15% of exchange earnings and monetary stability and 25% to employment. In a bid to realise the above, key strategic actions including restructuring of the Department of Fisheries will be implemented. The restructuring programme will include its transformation into a Fisheries Commission for increased operational and financial autonomy and thus improve organisational efficiency and effectiveness.

This sector shall now be seen in national medium term planning as a critical pillar and prioritized as such; and attract appropriate attention in the allocation of public

resources and re-engineered in such a manner that it would transform by 2021 into one that is “Recognised as one of three most critical contributors to national economic growth, employment creation and exchange earnings”.



## 1.0 Introduction

### 1.1 The Gambia, a Synopsis

The Gambia, a small coastal country, running deep into Senegal for most of its meandering and snakelike length has a short coastline measuring 80 kilometres from Buniadou Point in the North to River Allahein in the South. Given this structure, The Gambia has only two neighbours, Senegal on the North, South and Eastern tip and the Atlantic Ocean on the West. Apart from the navigability related trade and commerce advantages as a result of its river, The Gambia is amply known for its quiet, white sandy beaches for which tourists pay so much to take advantage of, and as such recognised as a premier tourist destination, nicked named and branded the smiling Coast. The river and therefore the coastline hold ample socioeconomic and biodiversity significance to The Gambia. The Gambia extends about 500 km inland, with a population density of 174 persons per square km. The width of the country varies from 24 to 28 km and has a land area of 10,689 square kilometres. The Gambia is the smallest country in continental Africa.

Overall, provisional results of the 2013 population and housing census show that 1,882,450 persons were enumerated in The Gambia, and revealed that there are more females (50.5%) than males (49.5%) in the country. The population primarily comprises of youth due to a high fertility rate and low life expectancy. Nearly 40% of the population is below 15 years, 21% between 15 - 24 years, and only 3.2% above 65 years. This demographic trend contributes to a high dependency ratio, given that the average household size is 8.3. The country is also undergoing rapid urbanization, characterized by significant rural to urban migration. The urban population increased from 50% in 2001 to 58%, with an annual rate of urbanization of 3.7% (MoFEA, 2011; Common Country Assessment of The Gambia 2015, p45).

According to the 2015 UNDP Human Development Index, The Gambia ranks 175 out of 188 countries making it one of the least developed countries in the world. However, it still performed better than some of its West African neighbours including Guinea, Guinea-Bissau, Liberia, Sierra Leone, Mali and Burkina Faso

(United Nations Development Programme, 2015). Although decreased significantly from 58%<sup>3</sup> in 2003 to 48%<sup>4</sup> in 2010, the national poverty level is still relatively high. Based on the \$1.25 poverty line, the poverty level was higher in the rural (73.9%) than in the urban areas (32.7%). From a gender perspective, the 2010 Integrated Household Survey indicated that poverty was more prevalent among male headed households (50.9%) as opposed to 38.3% among their female counterparts. The same study also revealed that agriculture and fishing sectors accounted for the largest proportion of people (79%) living below the poverty line.

Despite the relatively lower level of female headed households poverty, the high level of poverty in the fisheries sector and of which women play a significant role (80% of fish processing activities are done by women), appropriate policies and measures need to be put in place to promote both the socioeconomic development of women and the fisheries and aquaculture sector.

However, the educational statistics including Gross Enrolment Ratio (GER) for basic (Grades 1-9) and senior secondary school level increases from 88.3% in 2010 to 101.2% in 2015. Females witnessed a slightly higher (103.5%) than their male counterparts (99.0%) in 2015.

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. The Gambia has been able to register an average growth rate of 3% over the decade 2004 - 2014, and 3.9% over the period 2012 to 2015<sup>5</sup> (the time period covering the PAGE). The average growth rate masks a disturbing fact though; growth has been extremely erratic over this period. Over the

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<sup>3</sup> Based on \$1 per person per day.

<sup>4</sup> Based on \$1.25 per person per day. This translates to 39.7% based on the \$1.00 per person per day criteria.

<sup>5</sup> Note that growth rate for 2015 is a projection by the Gambia Bureau of Statistics

past 15 years, The Gambia has experienced years of negative growth (2002, 2005 and 2011), one of which was due to policy slippages (2002) and the other two due to external weather shocks. The above, coupled with an average population growth rate of 3.3% between 2003 and 2013 and a depreciating currency has meant that GDP per capita in dalasi has risen but in dollar terms has fallen from \$551 (2010) to \$428 (2014 Estimates.)<sup>6</sup>.

The country's economy has a narrow base with a large re-export trade comprising about 80 percent of the country's merchandise exports, and contributing about 53%-60% of domestic tax. Its total trade was 106% of GDP in 2006 and presently stands at 74% of GDP. The economy is dominated by sectoral contributions to GDP by trade in services (59 %), agriculture (28-30 %; of which includes fisheries at about 1.2%), tourism (12 %), and manufacturing and Construction (12 %) (ANR Policy 2009 – 2015). Real GDP growth at factor cost fell from 4.9% in 2013 to 0.9% in 2014. Of this major contribution of agriculture to national growth, the contribution of the fisheries sector has averaged just about 2% over the last ten years, rising from 1.9% in 2013 to 2% in 2014. Fisheries only outperformed forestry in contributing to overall agricultural contribution to GDP in ten years but significantly lagging behind crops and livestock. The services sector contribution to GDP is becoming increasingly dominant, having contributed 60% of GDP in 2011 (African Economic Outlook, 2013).

Of concern is that the long term GDP growth in The Gambia, which from 1994 through 2013 was highly variable and quite unstable, averaging a modest 3.5 percent a year, against an average of 4.1 percent for sub-Saharan Africa. The performance of the agriculture sector, which partly depends on weather conditions, and the ability of the other sectors of the economy, especially tourism, to eventually counterbalance swings in output are key elements that explain growth variability. For some time, The Gambia has faced a challenging and unpredictable macroeconomic policy environment, characterized by sudden policy shifts, excessive extra-budgetary spending, excessive borrowing, weak institutions, and inefficient resource utilization,

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<sup>6</sup> IMF Country Report 15/104, April 2015

which negatively affected growth. This has generated uncertainty and hampered economic activity, and over the long term could undermine confidence in the economy. The Gambia's economy and macroeconomic stability is also vulnerable to various risks and structural constraints. The two most critical channels of vulnerability include the heavy debt burden and susceptibility to macroeconomic shocks and environmental risks (African Economic Outlook, 2013).

The Gambia since independence has been a basic agricultural and trading nation. The Gambia depended majorly on groundnut production for cash and other economic reasons to the extent that the country became synonymous with groundnuts around the world. However, given the international instability of commodities prices around the world and its impact on The Gambian economy, it became evident that she needed to diversify her source of livelihoods and economic development. Hence, several other sectors including tourism, trade and services, telecommunication, construction and manufacturing have been emphasized as a matter of policy (Vision, 2020; PAGE, 2012). Whilst The Gambia underwent this policy transformation, the fisheries subsector of agriculture also underwent its own metamorphosis – the transformation of emphasis from just for nutritional purposes to include for industrial production and exports; and at the same time recognition was made of the opportunities presented by aquaculture (DoF, 1995<sup>7</sup>; Fisheries Policy, 2007).

Whilst The Gambia continues to be defined by its river which plays a prominent role in the lives and livelihoods of its people from the perspectives of trade using the river as a main inland transport route and for food from its abundant varied fish stock and fresh water for farming, fishing continues to be underdeveloped and underutilised as an economic resource for optimal contribution to economic growth and development.

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<sup>7</sup> Gambia Fisheries Strategic Action Plan 2012-2015.

Table 1.1: Fisheries Contributions to Economic Growth and value Addition, 2004 – 2014

Table : Fisheries Sector Contribution to Economic Growth and Value Addition, 2004 – 2014											
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013 Rev.	2014 Rev. Est.
<b>Real GDP Growth Rates</b>											
<b>Gross Domestic Product (GDP)</b>	-0.90%	17.50%	4.10%	3.90%	-8.30%	-4.30%	0.40%	3.90%	2.50%	3.20%	2.80%
<b>Agriculture</b>		-2.26%	14.57%	-1.81%	26.02%	11.73%	11.19%	24.21%	6.21%	1.75%	-7.24%
Crops		-4.10%	26.30%	15.20%	55.20%	24.40%	15.70%	40.40%	8.50%	6.80%	20.00%
Livestock		0.90%	1.40%	12.20%	2.90%	-4.60%	5.00%	3.40%	4.20%	3.30%	4.20%
Forestry		3.00%	3.00%	-4.00%	1.00%	0.10%	3.00%	3.50%	3.10%	3.40%	3.00%
Fishing		-2.20%	7.80%	18.00%	3.50%	1.10%	1.70%	3.90%	3.40%	4.00%	6.40%
<b>Industry Share of GVA at Current Prices</b>											
<b>Agriculture</b>	18%	12%	9%	14%	17%	20%	12%	12%	11%	9%	20%
Crops	8.70%	9.10%	10.00%	9.70%	8.80%	8.40%	9.00%	8.70%	9.10%	9.10%	9%
Livestock	0.70%	0.70%	0.60%	0.60%	0.50%	0.50%	0.50%	0.50%	0.40%	0.40%	9%
Forestry	1.80%	1.90%	2.20%	2.10%	2.00%	1.90%	2.00%	2.00%	1.90%	2.00%	0%
Fishing	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2%
<b>Industry</b>	2%	2%	3%	2%	3%	3%	3%	3%	3%	3%	3%
<b>Services</b>	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	65%

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Source: UNDP Macroeconomic Data on The Gambia						
Employment Impact						
Persons Employed aged 15+, Sex and Type of Skills Acquired (%)	Urban		Rural		Gambia	
Agriculture	1	0	1.5	1	1.2	0.9
Fisheries	0.7	0.4	0.6		1.2	0.2
Source: Labour Force Survey of The Gambia, 2012 & IMF Article IV, The Gambia, 2015						

In The Gambia, the fisheries and aquaculture sub-sector is regarded as an integral part of agriculture and as such its public administration has for a long time been under the purview of agricultural management. Whilst the local concept of agriculture has always centred on the tilling of the soil, its policy scope expanded with time to include animal husbandry and fisheries (mainly exploitation for domestic consumption) of the natural fish stock and today, these sub-sectors have become significant contributors to overall socioeconomic development, food and employment security with some levels of operational sophistication. Fisheries in itself has expanded in reality, policy and strategic context to include aquaculture or fish farming for which The Gambia has been determined to be significantly endowed, given its generally swampy landscape and significant fresh water tributaries.

Apart from nutrition purposes and exports of fish and fishery products, table1.1 illustrates the growing significance of fisheries to GDP both directly and through manufacturing from its potential for value addition. The potentials of fishing and aquaculture for employment creation continue to be of major policy significance at the rural, urban and national levels.

## 1.2 The Gambia and the Policy Context of the Fisheries and Aquaculture Sector

The fisheries and aquaculture sector policy framework can be traced to 1975, when the first sector five-year development plan (1975 -1979) was launched, followed by another from 1980 – 1984.

The role of the Fisheries Ministry and Department in the management, development and conservation of the marine and inland fisheries resources was functionally redefined and realigned within the context of the intended and expanded role of the private sector to absorb significant human resources freed by Government redundancy in the Economic Recovery Program (ERP) of 1985–1989 and its successor Program for Sustained Development (PSD) of the 1990's. In the National Fisheries Policy, fisheries policy objectives were stated to include:

1. Build the capacity to regulate and monitor industrial fishing to optimize exploitation in a sustainable manner in the Exclusive Economic Zone (EEZ);
2. Rationalize the issuance of fishing licenses;
3. Support artisanal fishermen and groups of women fishmongers to increase productivity and improve market access;
4. encourage sustainable community management of small-scale fisheries; and
5. Encourage the development of aquaculture.

These objectives were revised and expanded during the formulation of the Gambia Fisheries Strategic Plan 1994 – 2004, to reflect a more ambitious agenda based on maximizing the true potentials of the fisheries sector. The revision was meant to bring the new policy objectives in alignment with international trends in sustainable production methods and efficient exploitation of fish stocks, including the FAO Code of Conduct for Responsible Fisheries (CCRF). Furthermore, the Fisheries Strategic Action Plan 2012 - 2015 was developed and designed to address, as of necessity, sustainable use of the country's fisheries resources. That meant that integrated fisheries management was to be encouraged and supported through the application of broader principles of ecosystem-based management and Ecologically Sustainable Development (ESD). The plan posited that as an alternative to capture fisheries and by way of alleviating poverty and facilitating the improvement of the nutritional standards of the population, viable aquaculture development will be facilitated and that priority will be accorded to directing efforts at encouraging fisheries research and management activities as part of the evolving state-wide natural resource management framework.



Although subsumed under the Agriculture and Natural Resource sector in Vision 2020 and the PAGE, 2012 – 2015<sup>8</sup>, - Accelerating and Sustaining Economic Growth pillar, the importance of the fisheries and aquaculture sector continued to be recognized as a key area of focus for increased employment, poverty reduction and overall national development. Thus the Fisheries Policy 2007 was developed to enable the realization of the sector’s Vision 2020<sup>9</sup> goals and objectives.

It is evident therefore that many strategic documents (policies, strategic and action plans) have been developed to improve the performance of the Fisheries and Aquaculture sector. However, there seems to be little implementation of these instruments. Thus the Fisheries and Aquaculture Strategic Plan 2017 - 2021 is not only a means for the realization of the Fisheries Policy 2007 goals but ultimately those of Vision 2020.

### 1.1.2 The Legal Instruments and Policy Frame of the Fisheries Sector

The Fisheries sector management is a department or office as recognised under Section 80 of the 1997 National Constitution of The Gambia, which states that “Subject to this constitution and any act of the National Assembly the President may constitute any public office for The Gambia and make appointments to such office and terminate such appointments”. Further and in providing policy direction and leadership for established offices, the constitution states in Section 72 that “The Vice President and Secretaries of State shall be responsible for such departments of state or other businesses of Government as the President may assign to them”. Under section

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<sup>8</sup> **Goals:** accelerating and sustaining economic growth, improving and modernising infrastructure, strengthening human capital stock to enhance employment opportunities, improving governance and fighting corruption and reinforcing social cohesion and cross cutting interventions.

<sup>9</sup> **Goals:** modernise and improve productivity in the Agriculture and Natural Resource sector, achieve a solid infrastructural base for industrial development that would permit the processing of all primary products by the year 2020, modernise and increase the contribution of the services sector (financial, trade and tourism), improve the human capital stock, ensure a balanced and manageable population, conserve and promote the rational and sustainable use of the nation’s natural resources and environment, providing the enabling environment for the realisation of the full potentials of the private sector and a competent workforce, ensure an efficient and effective public service.



72, the Fisheries sector responsible for both fisheries and aquaculture is currently assigned to the Ministry of the Environment, Climate Change and Natural Resources.

To reinforce the constitutional mandate by which fisheries as a department exist under a ministry, the Fisheries Act 2007 was passed and assented to by the President to establish the detailed legal mandate and institutional operating powers of the department - “to provide for the conservation, management, sustainable utilisation and development of fisheries and aquaculture in the fisheries waters and in the territory of The Gambia” (Fisheries Act 2007, p7). This act elaborates the administrative responsibilities for the sector, basic structures, its scope, rights and responsibilities of its staff and designated committees, licensing arrangements for fishing and aquaculture, prohibitions, etc.

To effectively execute this legal mandate the fisheries department in keeping with changing realities in its operating environment generated a policy and regulations.

In summary, the policy frame of the Fisheries policy includes in its objectives:

**Fisheries Policy Objectives:**

- I. To effect a rational and sustainable utilization of the marine and inland fisheries resources, and develop aquaculture;
- II. To use fish as a means to increase food security and livelihoods in rural areas, and improve the nutritional standards of the population;
- III. To increase employment opportunities, and increase the participation of Gambians, especially women and young men, in all aspects and at all levels of the fisheries sector;
- IV. To increase the net foreign exchange earnings;
- V. To improve the institutional capacity and legal framework for the management of the fisheries sector for sound decision-making in the fisheries sector;
- VI. To improve institutional linkages with other relevant sectors; and
- VII. To strengthen regional and international collaboration in the sustainable exploitation, management and conservation of shared stocks and shared water bodies, promote bio-diversity maintenance and enhancement and prevent environmental degradation.

By extension and to ensure institutional and sectoral competitiveness and effectiveness for optimal contribution to socioeconomic development and the fight against poverty and unemployment, the Fisheries Department generated this strategic plan to ensure proactive development in the sector to 2021, and to render the sector **“Recognised as one of three most critical contributors to national economic growth, employment creation and exchanges earnings”** to be achieved from the sector mission that seeks **“Through the recognition of fisheries and aquaculture potentials as natural economic resources and by ensuring responsible and ecologically sustained fishing and aquaculture practices, to optimally harness The Gambia’s fisheries and aquaculture resources and to deliver employment, foreign exchange support, food security and nutrition in achieving accelerated national growth and development”**.

### 1.1.3 The Resource Structure and Production Potential of the Fisheries and Aquaculture Sector

In The Gambia when reference is made to fisheries it is important to be sure if the person is referring also to processing and manipulation of natural fish stock or fish farming, since both of them are normally referred to as fisheries. However, professionally and legally the Fisheries Act 2007 separately defined both fisheries and aquaculture separately. The fisheries act defines **aquaculture as “the cultivation, breeding, farming, propagation, raising and ranching of fish and aquatic plants in The Gambia and in the fisheries water”**, whilst **fisheries have been defined as “searching for, catching, taking or harvesting by any method including processing, storage, transshipment, refuelling or supplying of other fishing vessels or any other activity in support of fishing operations”** (Fisheries Act, 2007).

In simple language fishing refers to the harvesting and its accompanying activities of natural fish stock, whilst aquaculture simply means the growing of aquatic animals and plants. Whilst fishing refers to and requires natural availability of fish stocks of various types, deep and shallow sea or salt and fresh water, and its accompanying socioeconomic potential if strategically and sustainably harvested, aquaculture

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potential will look at the size of land type suitable for aquatic animals and plants farming, the type of products that can be harvested and their accompanying socioeconomic potential to economic growth, employment and poverty reduction.

### 1.3.1.1 FISHING

The Gambia is said to be very rich in fisheries resources and by the nature of its geography and extensive swamp land, it has huge potential for aquaculture. As elaborated that with a continental shelf area of about 4,000 km<sup>2</sup> and approximately 10,500 km<sup>2</sup> of Exclusive Economic Zone (EEZ), The Gambia is believed to be particularly rich in terms of fish species and diversity. This rich resource base offers great potential for substantial contribution to The Gambia's socio-economic Development, if fisheries resources are managed sustainably (UN, 2014<sup>10</sup>).

Table 1.2: Biomass Estimates of Migratory Fish Resources in The Gambia, Senegal and Morocco

Year	Biomass MT	Biomass MT
	Demersals	Pelagics
1986	43,645	
1992	30,000	160,000
1995	22,000	156,000
1996	-	122,000
1997	-	113,000
1998	-	173,000
1999		510,000
2000		213,000
2001 Jun		217,000
2001 Nov		165,000
2002 Jun		470,000
2002 Nov		242,000
2003 Jun		62,000
2003 Nov		285,000
2004 Nov		212,000
2005 Nov		284,000
2006 Nov	-	153,000

<sup>10</sup> The fisheries sector in the Gambia: trade, value addition and social inclusiveness, with a focus on women.  
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2012 Nov	9243.08	-
2015 Oct	36201.7	965000

Source: Fisheries Department

It has been confirmed in the referred UN report that over 500 marine fish species have been recorded in Gambian waters; usually classified as demersals (bottom dwelling) and pelagics (surface dwelling). The demersals include: shrimps, groupers, sea breams, grunts, croakers, snappers, etc. The small pelagics group consists of the two sardinellas (*Sardinella aurita* and *Sardinella maderensis*), the bonga/shad (*Ethmalosa fimbriata*), horse mackerels (*Trachurus trecae*, *Trachurus trachurus* and *Caranx rhonchus*) and mackerel (*Scomber japonicus*) (DoF, 2016<sup>11</sup>). The high value demersal species (shrimps, sea breams, lobsters, Octopus and cuttlefish, among others) are mostly supplied to fish processing factories for export, mainly to the EU, North America, and Asia. Small pelagics are mainly consumed locally in fresh or traditionally processed product form, or exported regionally. In the inland sub-sector, fish resources are found within The Gambia River system, which runs through the entire length of the country. They comprise mainly fresh water species, such as: the freshwater catfish, (*Clarias spp.*), tilapia (*Oreochromis niloticus*), the bony tongue (*Heterotis niloticus*), Gymnarchus (*Gymnarchus niloticus*), etc. It is important to note that the river and its ecology also serve as a transitional phase for many marine fish species: they spend part of their life cycle there to reproduce, feed and nurse.

Concerns have been expressed over the excessive exploitation of marine fish species. The results of limited surveys and assessments over recent years indicate that the major marine fish stocks are over-fished or fully-exploited. In particular, the most commercially important demersal species appear to be under threat from high levels of exploitation (Mendy, 2009; Tobey et al, 2009).

## **AQUACULTURE**

Though still in an embryonic stage, aquaculture is deemed to have huge growth potential in The Gambia. The development of subsistence, small-scale and commercial aquaculture is a stated Government policy (Fisheries Policy, 2007), given

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<sup>11</sup> Fisheries Sector Review (Strategy and Action Plan 2016-2020)  
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the nutritional and economic potential of this sub-sector. Indeed, aquaculture represents an additional source of animal protein, contributing to food security while reducing pressure on wild stocks (particularly the shrimp and oyster stocks). It can also create new jobs and generate foreign income. The country is particularly well positioned for shell fish farming, and shrimp exports command a high price in Europe.

Pilot aquaculture activities are currently being carried out by the Department of Fisheries, in co-operation with the Department of Agriculture, through an FAO Technical Cooperation Program (TCP) and previously a Taiwanese Technical Assistance program for the development of aquaculture in the country (DoF, 2016b<sup>12</sup>). Only one company (West African Aquaculture) is engaged in aquaculture on a commercial scale in The Gambia. In 2006, only 50 hectares out of its original 200 hectares, the farm produced 50 tonnes of shrimp (Access Gambia, 2016<sup>13</sup>). Of the available 550 hectares only 40 hectares (10 ponds) were being used for production as at June 2012, with the hatchery producing 2.5 million post larvae (PL). The production cycle is 6 months (April - November). This means that there is an as-yet unexploited potential for significantly more of the available area to be put under cultivation. This could even serve as a model for production methods, which could potentially be adapted to the wider local context of West Africa.

The point was made that costs of production were too high for the business to be profitable. More specifically, the cost of energy was identified as a major constraint for commercial aquaculture development in The Gambia. Indeed, the industry is particularly energy intensive, given the energy requirements of the processing establishment (cold-chain infrastructure) and the ponds (pumping water from the estuary). While the price of fuel for power generation has increased by 900 percent over the last 10 years or so (from as low as D 5 per litre in the early 2000s, up to D 45/50 in more recent years), the export price for shrimps has increased by only 60 percent over the same period. Uncertainties associated with: production yield, escalating prices of production inputs and market price variability, or failure to meet stringent standards for safety and quality make commercial shrimp farming in The Gambia extremely risky. The slightest mistake can put a shrimp farm out of business, with significant non-recoverable costs, as the venture involves capital-intensive

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<sup>12</sup> Aquaculture Sector Review (Strategy and Action Plan 2016-2020).

<sup>13</sup> <http://www.accessgambia.com/information/aquaculture.html>

projects with big sunk costs (land lease/acquisition, pond construction, hatchery and processing factory, and water pumps). If commercial aquaculture in The Gambia is to become viable, the issue of escalating energy costs needs to be addressed. Also, hazard mitigating measures (price hedging, strict enforcement of hygiene and quality standards, careful environmental impact assessment, etc.) would need to be implemented.

Other Fish products and aquaculture potential include:

### **1. Oyster Culture**

The Department of Fisheries conducted studies in the 1980s on the West African mangrove oyster (*Crassostrea gasar/tulipa*) which indicates great commercial potential. The competitive advantage enjoyed by this species that thrives in the Gambian estuary is: i) the fast rate of growth (relative to other commercial species harvested elsewhere); and ii) a relatively unpolluted environment (oysters thrive in the marine and brackish waters of the river and its estuarine areas, which, due to the virtual absence of polluting activities upstream, are relatively much cleaner than many estuarine areas elsewhere). However, market outlets/niches need to be adequately identified. The commercial expansion and/or upgrading of the industry will involve a shift in current harvesting from the wild towards oyster aquaculture, for a number of reasons: conservation purposes, as the oyster stock is already fully exploited/over-exploited; environmental reasons, to avoid more extensive damage to the fragile mangroves ecosystem; and commercial reasons, as oysters harvested from the wild tend to be smaller and less homogeneous than oysters potentially cultured in trays and on racks. The development of oyster aquaculture is likely to generate significant employment, particularly for poor women from marginalized communities. Two strategies merit further exploration with a view to identifying possible niche products for horizontal/vertical value addition:

Limited quantities of oysters are currently exported, mainly for family use in the diaspora in the UK and the United States. This trade targets Gambians and others from the diaspora who have an occasional preference for traditional foods. There appears to be significant potential for expanded demand in this sector, especially after The Gambia has satisfied the sanitary requirements stipulated for oysters and other bivalves.

## 2. Rural Fish Pond Culture

The Fisheries Department - in collaboration with the FAO and the Taiwanese mission in The Gambia has conducted rural fish pond culture trials in the irrigated rice fields in the Sapu swamps, in the Central River Region (CRR). Efforts concentrate mainly on the culture of the Nile tilapia (*O.niloticus*). The project established twenty earthen ponds of 286 square meters average size. It is also conducting the polyculture of the tilapia and the freshwater catfish (*C. anguillaris*), and both systems have shown promising results. A total of 383 kg of fish was harvested from 15 ponds, and fish harvests were sold on the spot at the pond site. Customers scrambled to buy this relatively cheap fish; and in fact to ensure that all customers got some fish, no customer was sold more than 2 kg. The total amount of cash brought in was D 14, 491, excluding fish consumed by farmers during communal work on the farm. A Fish Farmers' Association has been formed, which includes both men and women. The implementation of the project has generated significant interest and requests for expansion, particularly by the beneficiary farmers, especially in reference to the cultivation of the fresh water catfish (*C. anguillaris*). In view of this development, the women rice farmers should be encouraged to put more of their plots under fish cultivation to increase the total yield of their land.

## 1.2 The Socioeconomic Potential of Fisheries and Aquaculture

### 1.2.1 The Economic Potential

The economic potential of any resource translates into the resource and exploitation promise that the sector has for the economy – that is, the resource volume and quality and its ability to contribute to economic growth from such as its contribution to domestic consumption (Fish), employment and personal income and by extension its catalytic effect on production and growth, trade, exchange stability and nutrition. The question therefore is what is the contribution effect of fishing to the Gambian economy in terms of production, employment, public revenue, poverty reduction and overall economic growth? By extension, if the fisheries sector were to go bad and that no one now fishes or does fish farming and fish is no more consumed and/or harvested, sold and exported, what would be the effect on The Gambian public



revenue, the number of people that will be out of work because they depended on fishing and the poverty that will befall these people and their households?

Given the fact that 79% of people employed in the agriculture and fisheries sectors (39.6% of the total employed population) earn less than \$1.25 per person/day, the fact that 80% of fish processing activities are undertaken by women, one could confidently infer that the effective management of the fisheries and aquaculture sector would significantly increase domestic production, employment, food and nutrition security and overall national development.

Furthermore, effective management of the fisheries and aquaculture sector, including the implementation of strategies in 3.4 will enhance the achievement of the following Universal Sustainable Development Goals:

1. Goal 1: End poverty in all its forms everywhere;
2. Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture;
3. Goal 5: Achieve gender equality and empower all women and girls;
4. Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
5. Goal 10: Reduce inequality within and among countries;
6. Goal 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development; and
7. Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

Table 1.3 below records industrial and artisanal catches of fish between 1997 and 2010.

Table 1.3: Industrial and Artisanal Fish Production (MT), 1997 - 2010

<b>Year</b>	<b>Industrial</b>	<b>Artisanal</b>	<b>Total</b>
1997	7,988	30,243	38,243
1998	7,012	26,533	33,545
1999	10,249	29,743	39,993

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2000	9,237	26,867	36,104
2001	11,198	32,016	43,214
2002	12,160	32,336	44,496
2003	11,005	34,365	45,370
2004	8,375	29,317	37,692
2005	4,600	30,169	34,769
2006	2,830	36,898	39,729
2007	4,000	43,007	47,000
2008	2,973	42,841	45,814
2009	3,179	45,881	49,060
2010	4001	45,910	49,911
2011	5,571	43,673	49,244
2012	3,756	36,066	39,822
2013	6,651	46,126	52,777
2014	4,770	51,500	56,270
2015	*	53,719	53,719

Source: Data provided by the Department of Fisheries, GOTG

It should be noted that these figures do not capture the largest proportion of industrial catch caught in Gambian waters, which is not landed in The Gambia but in foreign ports. Exports totaled 932 metric tonnes in 2002 and 3,563 tonnes in 2010, which mostly reflects increases in production by the artisanal sub-sector. This has mainly been due to the fact that the fisheries sector - especially the industrial subsector - has lacked inflows and sufficient investments to allow for its optimal operation. The value of fish exports from The Gambia is believed to be severely underestimated, as most fish caught in Gambian waters is landed in foreign countries, and hence not accounted for in Gambian trade statistics. The EU is the main export destination for fishery products. Trade requirements for this market are stringent, and production systems and products must comply with equivalent regulations on hygiene, food safety, consumer protection and official control requirements. It should be noted that exports to the EU were suspended for four months (October 2010 to February 2011), following detected deficiencies in the system of official control of fishery products, but have since resumed: four out of five establishments approved to export to the EU are fully operational and continue to exist.

It has already been established that the fisheries sector contributes approximately 2% to GDP and in Table 1.4, enumerating the export volumes and values of Gambian

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fish exports from 1997 to 2010, it shows an unstable trend. Whilst both the volume and value of fish exports generally grew peaking at 3,563 MT and GMD100,041,068, given the explanation that most of the Gambian fish catch for export is landed and processed in foreign ports, renders the figures in Table 1.4 just a tip of the fish export potential<sup>14</sup>. This alone shows that if both the production potentials of fisheries and aquaculture are adequately exploited and territorial protection such that all fish caught in The Gambia is landed, processed and exported from The Gambia, fishing might increase overall agricultural contribution to economic growth by more than twice the current value. Given also that most participants in the artisanal sector of fishing are women and the youth, it will lead to significant alleviation of female and youth poverty and unemployment<sup>15</sup>. The enforcement of landing and processing of fish in The Gambia prior to export will generate significant value chain manufacturing and industrialization, public revenue off take, employment, exports and support to the balance of payments and stability of inflation and overall economic dynamism.

Table 1.4: Exports of Fish and Fishery Products, 1997 - 2010

<b>Year</b>	<b>Quantity (MT)</b>	<b>Value (GMD)</b>
1997	2,063	44,427,355
1998	1,666	33,293,225
1999	1,677	36,563,649
2000	901	32,779,477
2001	949	35,726,199
2002	932	21,334,062
2003	445	11,629,895
2004	405	7,694,241
2005	751	9,956,837
2006	625	2,287,733
2007	1,480	67,432,811
2008	1,363	47,847,297
2009	2,087	64,919,036
2010	3,563	100,041,068
2011	2,888	108,985,190

<sup>14</sup> 15% of exchange earnings.

<sup>15</sup> Youth poverty and unemployment were....and 38% (UNDP, 2014) respectively while female headed household poverty was 38% (HIS, 2010) and unemployment stood at 38.3%.

2012	2,213	117,929,312
2013	921	45,256,928
2014	1,649	82,773,208
2015	959	30,428,083

Source: Department of Fisheries, GOTG. US\$ 1=GMD30

The Gambia Government continues to give high priority to the development of the fisheries sector as it is a source of revenue and foreign exchange earnings for the country, but also a source of hope for increasing employment opportunities particularly for women who are those mainly involved in fish processing and marketing.

It is difficult to accurately gauge the sector's contribution to GDP, given the informal and unrecorded nature of artisanal fishing and artisanal processing activities in The Gambia and significant catches being landed and processed outside of The Gambia. According to official figures from the Fisheries Department, the sector contributed about 3.4 percent of GDP in 2010. Other less conservative estimates from the same Department situate the fisheries GDP share at about 8 percent or even more. However, a much more conservative figure of 1.8 percent (2010) is reported by The Gambia Bureau of Statistics (GBOS).

Though small in absolute terms, fish exports are significant for the economy. In 2007, fish and fish products accounted for about 15 percent of merchandise export earnings (excluding re-exports) (Department of Fisheries). The bulk (about 80 percent) of the exports is sent to the EU (fresh and frozen fish).

The fisheries sector's contribution to government revenues is relatively small: fishing licenses and registration fees account for as low as 0.1 percent of total government revenue, according to Gambia's 2012 budget estimates. Although the contribution of the sector is small, great importance is attached to its development because of its huge potential to make a significant contribution to national socio-economic development. In particular, the sector is the third largest food production sector, after agriculture and livestock; and plays a significant role from a nutritional standpoint, as fish is the main source of animal protein in the diets of most Gambians. Also, as discussed, the artisanal subsector provides direct and indirect employment to between 25,000 and 30,000 people; and about 2,000 people are presently employed in the industrial sub-sector.

Notwithstanding these obstacles, the commercial potential for the sector remains significant. In particular, commercial shrimp farmers in The Gambia would have some strategic advantage over their competitors, including from Asia. There are two main sources of comparative advantage. First, given the lack of significant industrial activity within the estuarine areas, and upstream along the River Gambia, shrimps could thrive in relatively clean waters with no use of antibiotics. Second, shrimps grow faster and bigger than elsewhere, given the unique climatic conditions and location; which enhances the quality of the product in terms of texture and shape. Specifically, there is significant potential for a product differentiation strategy (antibiotic-free shrimp with unique characteristics in terms of texture and size) with a focus on high-value niche markets (e.g. gourmet restaurants in Europe). Market access barriers (compliance with EU seafood import requirements) are significant, but can be met - West African Aquaculture has been re-listed and can resume exports to Europe. This provides a great opportunity to break into the upscale market. Other market entry barriers, such as access to distribution channels by new entrants and the abuse of market power by incumbent firms would also need to be addressed. This can be done by creating business links through chambers of commerce and trade facilitation initiatives, in collaboration with The Gambia Investment and Export Promotion Agency (GIEPA), The Gambia Chamber of Commerce, etc. Commercial shrimp farming appears to have significant potential for employment generation and poverty alleviation in rural communities, particularly for women. At harvest, local women form the bulk of the workforce in processing and packaging for export, with important spill-over effects for the local village economy. For example, shrimp processors at West African Aquaculture (86 percent of the industry workforce) were reported to be all women, while the daily management staff and shrimp harvesters (14 percent of the workforce) were men. It should be stressed that the female shrimp processors were employed during harvest period on a temporary basis; men (the daily management staff and shrimp harvesters) were employed on a permanent basis. Workers earned salaries between D 75 (processors) and D 100 (harvesters) per day (relatively good salaries for local standards). The workforce was entirely drawn from the local village, with significant impact on the local community.

However, these socio-economic impacts need to be carefully weighed against environmental impacts and related social costs. Industrial shrimp farming projects tend to involve large-scale destruction of coastal environments, especially ecologically important mangrove forests that support a high diversity of marine and terrestrial life. Other vitally important wetland habitats and economic activities - particularly

women's vegetable gardens and other subsistence farming areas, may also be adversely affected due to salt water leakage and seepage and consequent dryness. The development of commercial aquaculture should therefore be carefully planned, and due attention given to possible negative spill-over effects and trade-offs. Strict adherence to environmental laws and regulations – especially the development of participatory Environment and Social Management Plans (ESMPs) - will be crucial if the Gambian process is to avoid the pitfalls and environmental catastrophes of other countries where the industry became the victim of its own success. Clearly, in view of the above, foreign capital and expertise are needed to stimulate commercial shrimp farming in The Gambia. There are a few potential commercial shrimp aquaculture sites free from conflicting uses in the country, but their viability (including environmental) must be reviewed before any investment is made towards their development (The Fisheries Sector in The Gambia: Trade, Value Addition and Social Inclusiveness with a Special Focus on Women, UN 2014).

### **1.2.2 The Poverty Reduction and Gender Equality Potential**

The gender equality gap in The Gambia still remains relatively wide and cuts across the social, economic and political dimensions of human development. A clear example of this is the fact that women occupy just 10% (5 out of a total of 55) seats in the National Assembly, which arguably should be the most powerful arm of government. A similar picture can be seen at other key decision-making institutions/platforms in The Gambia including the Cabinet. On the economic front, women still lag behind compared to their male counterparts in many areas, including access to credit, which in turn is as a result of significantly lower level of ownership of land and properties by women, usually required as collateral for credit facilities. While female-headed households have a lower poverty rate than their male counterparts (Integrated Household Survey, 2010), the level of poverty among women seems to be much higher than that of men.

Nevertheless, fishing and aquaculture hold the single most promising potential for gendered poverty reduction. With the territorial protection assured (catching, landing and processing for exports of Gambian fish products), and given that over 80% of employment in fish processing either artisanal and/or industrial and in aquaculture are women, the easiest way to harnessing the great latent energy of women is in the fishing sector. With the level of female involvement in household economics, it will

only be a matter of time when the overall economic effect on growth and income and livelihood improvements in all of the population is seen.

This prospect holds promise for income and consumption stability and by extension nutrition and social stability, which sums up all of public resources management and governance.

### **1.3 Context of the Fisheries and Aquaculture Strategic Plan 2016 – 2021**

As revealed from the literature review and summarised in subsection 1.1.1 (Evolution of The Gambia's Fisheries and Aquaculture Policy Framework) The Gambia's fisheries and aquaculture sector has a long history of developing strategic and action plans for the implementation of sectoral and national policies and strategies including Vision 2020. However, it has faced serious challenges in implementing/actualising its strategies and this has negatively impacted on the realization of sectoral and national development goals and objectives.

While this strategic plan results from the review of the Draft Fisheries and Aquaculture Sector Strategy 2016 - 2020 by making it more comprehensive and coherent, it is geared towards addressing current and main challenges facing the sector. It is thus hoped that the full implementation of this strategy will go a long way in contributing to the realization of the sectoral and national development goals.

#### **1.3.1 Management and Operational Structure of the Fisheries and Aquaculture Sector**

The Ministry of Environment, Climate Change, Water, Wildlife, Forestry and Fisheries is charged with the responsibility of policy evolution for the fisheries and aquaculture sector. Policy implementation through the development of appropriate strategies/plans and day-to-day management lies with the Department of Fisheries. To enable the effective evolution and implementation of relevant legislation/regulation, policies and plans, the Fisheries Advisory Committee comprising of key sector stakeholders (Ministry of Environment, Climate Change, Water, Wildlife, Forestry and Fisheries; Department of Fisheries, MOTIE, MoLRG; MOHSW; Gambia Navy, GMA, NEA, one representative each from the industrial, artisanal and aquaculture sectors) was established.

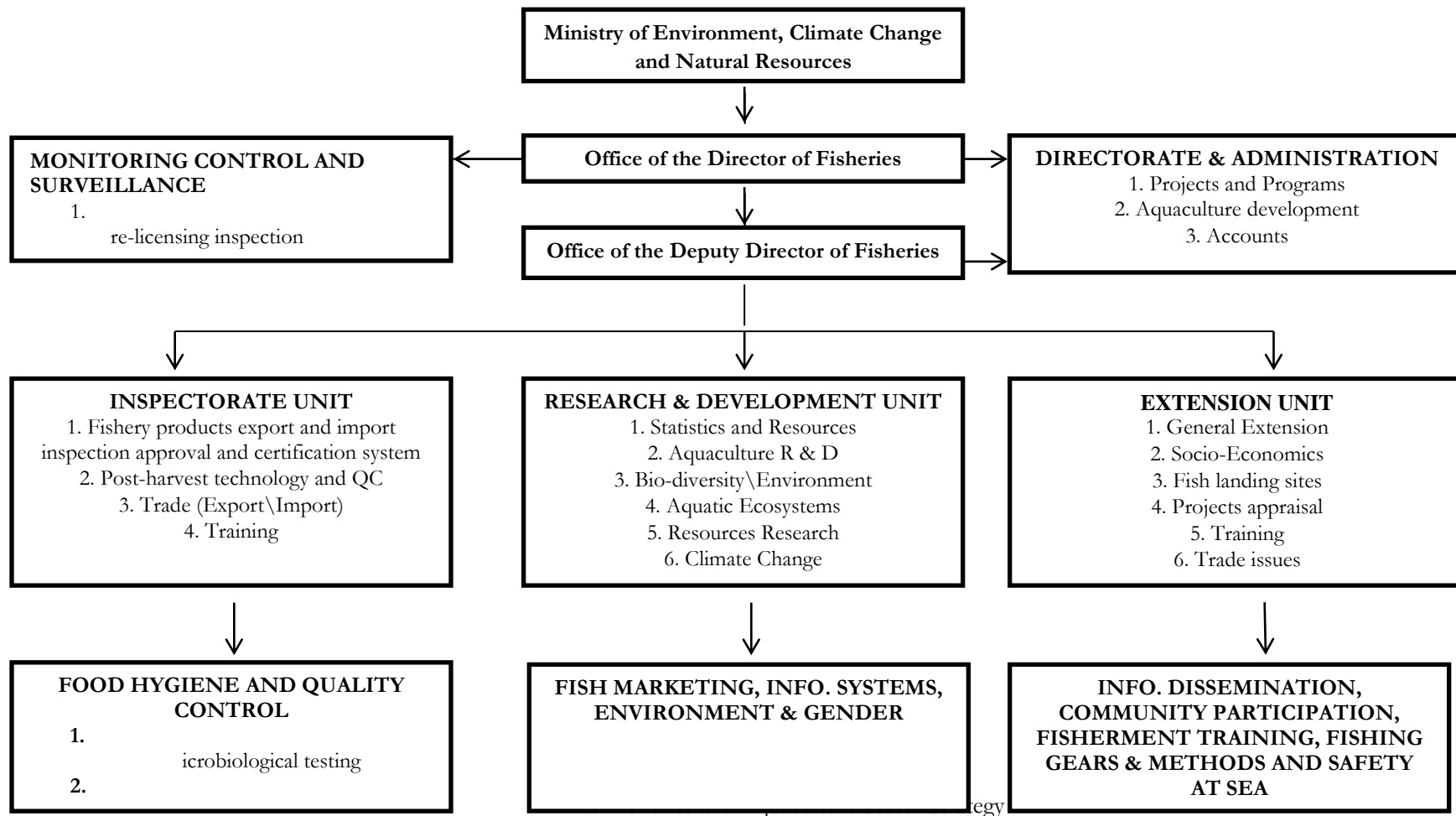
Cognisant of the need for collaboration and partnership with stakeholders for improved effectiveness, the Ministry and Department of Fisheries in 2013 entered into co-management agreements with NASCOM and TRY Oyster Women's Association for the management of sole fishing out to 9 nautical miles from the Atlantic shoreline and oyster and cockle fishing in Tanbi Wetlands National Park respectively.

While the Monitoring, Control and Surveillance (MCS) of fisheries sub-sector lies with the Gambia Navy, Gambia Maritime Administration and NASCOM; the enforcement of the fisheries and aquaculture act, regulations and policies lies with the Department of Fisheries.



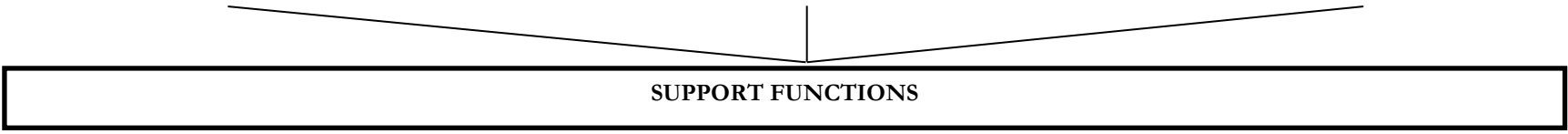
### 3.2 Current Functional Organisational Structure of the Fisheries and Aquaculture Sector

Figure 1: Current Functional Organisational Structure of the Fisheries and Aquaculture Sector



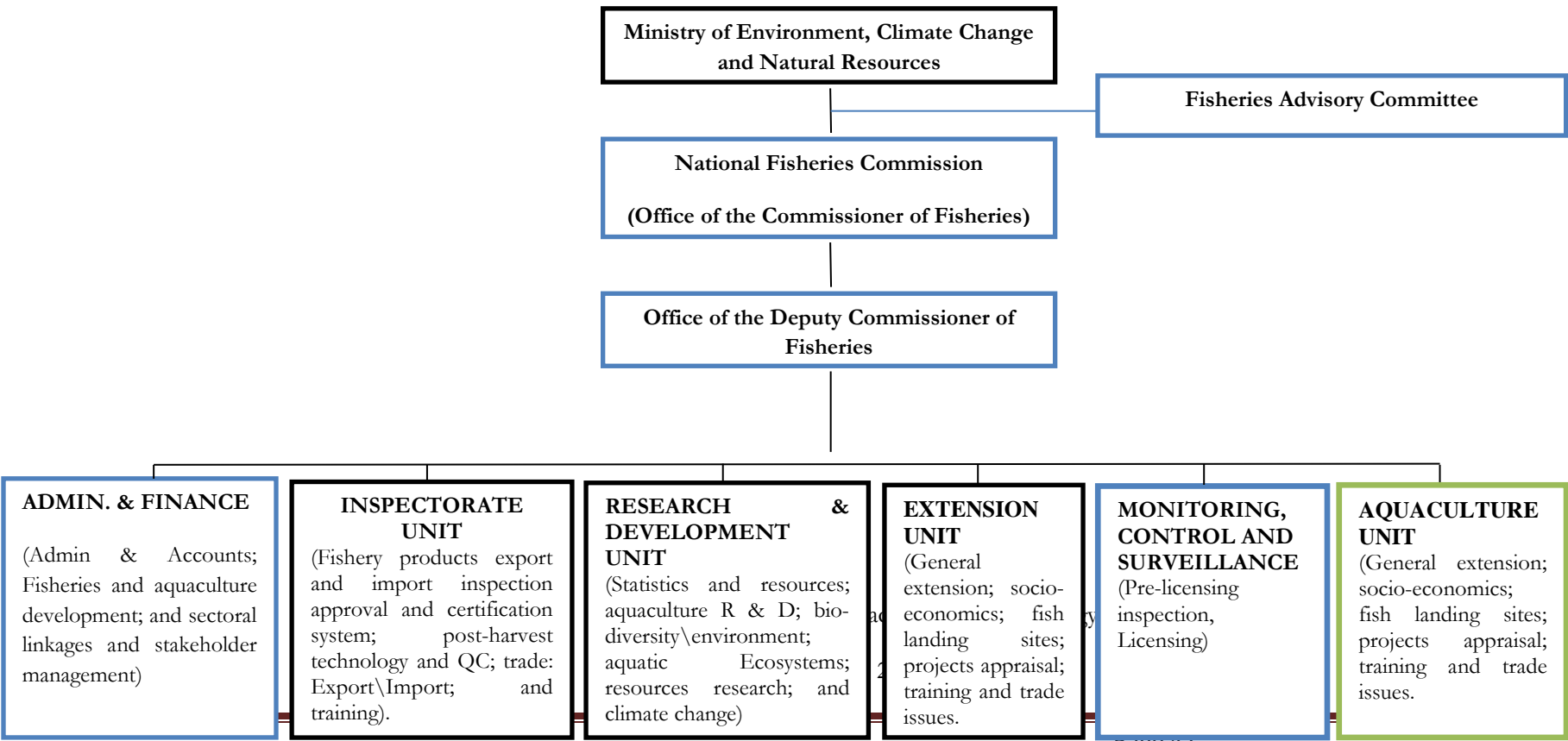
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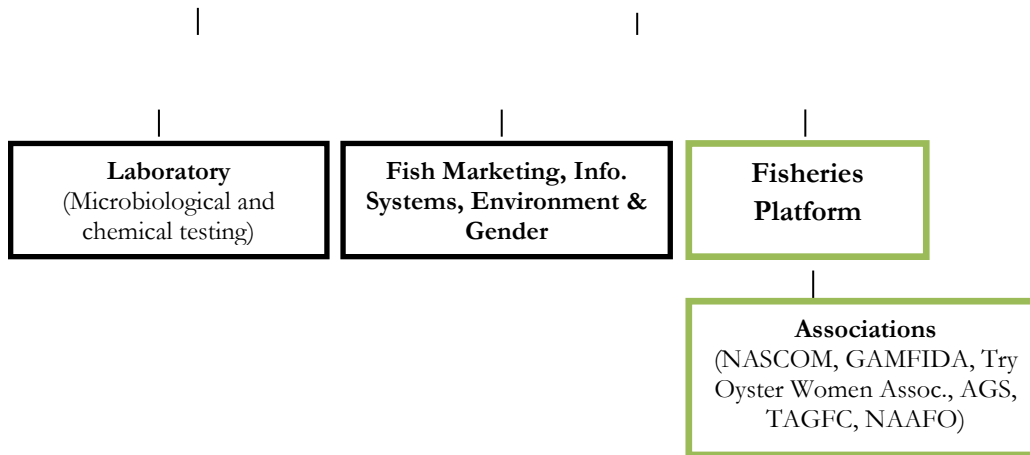




**1.3.3 Proposed Functional Structure of the Sector**

Figure 2: Proposed Functional Structure of the Fisheries and Aquaculture Sector (See Table 3.4: Strategy Framework for bases)





Given the impact of strategy on structure and the need for the transformation of the Fisheries and Aquaculture sector, its organisational structure was reviewed to reflect the new strategy to enable improved internal coherence and correspondence.

Besides the transformation of the Department of Fisheries into a National Fisheries Commission, the then Directorate & Administration which was a support function to the Offices of the Director and Deputy Director is now a standalone unit and renamed Administration and Finance. This is also the case for Monitoring, Control & Surveillance function. Given its unique nature and importance, the aquaculture function, which was subsumed under the Research & Development Unit has been upgraded to a unit.

Given the existence of the Fisheries Advisory Committee, its critical role in policy evolution and absence from the current organisational structure, it has been introduced in the proposed organisational structure to serve as a support function for the Ministry of Environment, Climate Change and Natural Resources.

Although exists under the old dispensation, the Fisheries Platform, which is an umbrella body of key stakeholder associations was introduced as a sub function under the Extension Unit to enable improved extension and outreach services with the proposed Fisheries Commission.

## 1.4 The Production and Business Value Chain in the Fisheries and Aquaculture Sector

### 1.4.1 Artisanal Sub-sector

The business model and value chain of the artisanal sub-sector is more complex than the industrial sub-sector due to the fact that it serves more markets (urban, rural, local, regional and domestic). It also includes industrial players as it provides a good deal of their needed raw materials. The business model is heteroclitic with different interveners. Bulk sale and retail sales are available; the driving factor is variable and depends mainly on clientele availability for fear of quality depreciation.

The artisanal fisheries value chain is dominated by women and fish products are mainly small pelagic species and marine catfish locally called Kong. While most of the fresh fish products are sold to the women by local fishermen and fishmongers ('Bana Bana') and in turn by the women to other retailers and direct consumers, a significant proportion is either salted and sun dried; smoked; or smoked and sun dried for sale in the local, regional and even the international market especially the EU<sup>16</sup>. Given the high perishability of most fish products coupled with the relatively small local market size and inadequate storage facilities, the aforementioned processing methods help

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<sup>16</sup> Fisheries Sector Review (Strategy and Action Plan 2016-2020)  
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preserve the quality of the fish products and thus reduce spoilage and losses to the fish retailers.

### 1.4.2 Industrial Sub-sector

The industrial business model is essentially export driven with regional and international markets being the main focus. Products bought from the artisanal fisher folk are supplied to local processing establishments or to specialized individual exporters particularly women who rely on certified establishments to export<sup>17</sup>. The export/import ratio is highly positive since more export is done in terms of fish and fish products transactions.

The major issue that confronts the industrial business model is the low number of locally based processing establishments even though favorable conditions were tailored to mainstream private sector investments in this area. In this direction, the new jetty in Banjul is presently put in use to curb abroad landings and processing as a loss to the socio-economy of the country. In an attempt to boost the industrial fisheries sub-sector, the government has decided to levy only 10% of the catch<sup>18</sup>.

In order to strengthen and expand the industrial market, there is need to improve quality standards to international level especially to EU standards. The private sector and the government are both responsible for the attainment of this benchmark. For the private sector to contribute effectively to the realization of the required quality standards, it is essential that the government create more enabling conditions especially for material acquisition. In addition, other incentives such as tax waivers for SMEs start-ups to enable them reach the growth and maturity stages.

Although the EU is the main export destination for fishery products from The Gambia, there exist opportunities to widen the fish products market export market to other countries such as China, United States and the Asian market in general. The routine local processing should not be the only available technique if new and wider market opportunities are to be met. Insufficient raw materials are one that may enhance sales locally and regionally if the standard requirements are guaranteed.

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<sup>17</sup> Fisheries Sector Review (Strategy and Action Plan 2016-2020)

<sup>18</sup> Fisheries Sector Review (Strategy and Action Plan 2016-2020)

Banning of export had happened to the local factories in the past for some months for noncompliance with the routine norms; this undesired situation should serve as a lesson to the private sector and the government.

With regard to the processing, many steps are involved in the transformation of the products before the export aspect properly. From weighing, washing, peeling, calibrating, packaging, freezing, unmoulding and storing, the steps are followed until the final stage of packaging and storing or loading into containers. The final control will take place on the quality of the frozen product and the container as well before closure and sealing to avoid tampering with the products.

Exports totaled 932 tons in 2002 and 3,563 tons in 2010, which mostly reflects increases in production by the artisanal sub-sector. This has mainly been due to the fact that the fisheries sector - especially the industrial subsector - has lacked inflows and investments to allow for its optimal operation.

The value of fish exports from The Gambia is believed to be severely underestimated, as most fish caught in Gambian waters is landed in foreign countries, and hence not accounted for in Gambian trade statistics (Table 1.4). The latest value obtained in 2015 is 458,129kg.

Overall, the nominal output of the industrial fisheries sector has, by and large, remained low over the years. As a cause of this situation, it can underline the unaccountable escaping quota to abroad horizons where the product is accounted for. In the last decade, the industrial production output were far less than the artisanal production (see Table 1.3) despite all technical sophistication that is virtually available in this sub-sector. The jetty in Banjul and the dock yard rehabilitation are concrete means that may and should normally contribute to reverse the trends.

The capacity of the industrial fisheries has large opportunity to increase but for that some major obstacles have to be overcome: the continuous availability of energy, the improvement of the labor force in terms of skills and the revision of taxes to name a few. Besides, it should bore in mind that most local fishery establishments hardly function currently at maximal capacity level; the reason for this deficiency being their

heavy reliance for raw material acquisition on a yet to be developed local artisanal fisheries.

## 1.5 Stakeholder and Regional Competitiveness of the Sector

### 1.5.1 The National/Domestic Private Sector Dimension and Structural Arrangements

In The Gambia, fishing and aquaculture exploitation is undertaken by the private sector and international donor project support. The Government of The Gambia has made significant contributions to the sector in a variety of ways – providing and policing the policy framework by which the sector is managed and sanity of operation is made possible for all stakeholders, territorial security by the Marine sector of the armed forces, contribution to project financing by government to donor project implementation in both fishing and aquaculture, etc.

However, at the exploitation end, most participants in fishing are mainly artisanal fishing complemented by some level of industrial fisheries to take advantage of export possibilities to such as the European markets. Both the artisanal and industrial sectors suffer from many challenges as captured in the SWOT tables in Subsections 2.1.1 and 2.1.2. Aquaculture hailing from similar possibilities as fishing is also mainly undertaken by the private sector even though the main players are international donor project support in villages and rural communities. Private sector participation in aquaculture is not significant due amongst other things to challenges such as access to technology and knowhow, financing, etc.

In order to ensure sustainable management and exploitation of fisheries resources, the Fisheries Act, 2007 sections 9 to 17 has detailed out the guiding principles and mechanisms for their conservation, management and development.

#### **Guiding Principles:**

- a) Ensuring the long-term conservation and sustainable utilization of the aquatic living resources to meet the needs and aspirations of present and future generations;

- b) Avoiding, minimizing and mitigating the adverse effects of fishing and aquaculture on the aquatic environment;
- c) Applying precautionary approaches to the conservation, management and development of fisheries and aquaculture;
- d) Conserving the biodiversity of the aquatic living resources, their ecosystems and habitats,
- e) Conserving the aquatic ecosystems as a whole including the species targeted and non-targeted for exploitation and their associated or dependent species;
- f) Minimizing pollution, waste, discards, by-catch loss or abandoned gear and impacts on associated or dependent species, through measures, including, to the extent practicable; the development and use of selective fishing gear and techniques;
- g) Applying management practices based on sound management principles and the best scientific information available, to be gained through national and international research programmes;
- h) Collecting and sharing in a timely manner and in accordance with fisheries management agreements and international law, complete and accurate data concerning fisheries and aquaculture as well as information from national and international research programmes;
- i) Preventing or eliminating over-fishing and ensuring that levels of fishing effort do not exceed those commensurate with sustainable utilization of fisheries resources;
- j) Taking into account the interests of artisanal and subsistence fishing and minimizing, to the extent practicable, fishing conflicts among users;
- k) Implementing and enforcing conservation and management measures through effective monitoring, control and surveillance;
- l) Promoting broad and accountable participation in the conservation, management and sustainable development of fisheries and aquaculture;
- m) Establishing priorities for the utilization of fisheries resources which will provide for the greatest overall benefits for the Gambia; and



- n) Ensuring that any conservation and management measure allow for the implementation of relevant international agreements to which the Gambia is party or has consented to be bound.

### **Mechanisms for effective conservation, management and development of fisheries and aquaculture resources:**

1. Determination of total allowable catch and level of fishing;
2. Determination of participatory rights such as the type of vessel and fishing gears to be used;
3. Fisheries management and development plans to serve as a guide and roadmap for the realisation of fisheries policy;
4. Establishment of management committees for the implementation and review of management plans;
5. Designation of special management areas for community-based fisheries management and application of certain conservation measures;
6. Establishment of community fishing centres for the management of special management areas;
7. Institution conservation and management measures to address any issue that is in contravention of the Fisheries Act, 2007, policies and regulations; and
8. Protection of endangered species.

#### **1.5.2 The West Africa Regional Dimension**

The West African countries apart from Nigeria are a composite of small parcels of land most of which sizes and demarcations deny them from exploiting size related advantages. This situation is evident in the extent to which the fisheries and aquaculture subsectors in West Africa have been affected in their management and methods of exploitation. Most exploitation is by artisanal fisheries and aquaculture is not very strong neither by governments or private sectors of the countries that constitute the region.

It has been argued (FAO Fisheries and Aquaculture Circular No. 1093 FIPS/C1093) that the value added by the fisheries sector as a whole in 2011 was estimated at more than US\$24 billion, 1.26 percent of the GDP of all African countries. Detailed figures by subsector highlight the relevance of marine artisanal fisheries and related

processing, and also of inland fisheries, which contribute one third of the total catches in African countries. Aquaculture is still developing in Africa and is mostly concentrated in a few countries but it already produces an estimated value of almost US\$3 billion per year.

It is further reported that most African fish is illegally caught and processed outside of Africa by non-African fishing operators and at that considering that 25 percent of all marine catches around Africa are still by non-African countries, if also these catches were caught by African States, in theory they could generate an additional value of US\$3.3 billion, which is eight times higher than the current US\$0.4 billion African countries earn from fisheries agreements (FAO Fisheries and Aquaculture Circular No. 1093 FIPS/C1093 (En) ISSN 2070-6065 THE VALUE OF AFRICAN FISHERIES).

In West Africa, the artisanal sector is said to dominate employment in the fishing industry in West Africa. Typically artisanal fishermen use traditional wooden boats, sometimes motorized, with a variety of gear types, including nets, lines, and seines. Industrial fishing is conducted in the offshore waters of maritime counties and it often relies on non-African trawlers and fleets and has less direct economic and employment benefit. Aquaculture is rudimentary in most of the region, although it has recently received higher levels of governmental and private support. Inland fisheries exist in many counties and frequently provide subsistence incomes.

In the region, women are responsible for artisanal processing and assuring transport of fish to urban centers and inland markets. Traditional processing methods include smoking, drying, salting, and curing. Industrial processing—including canning, filleting, and peeling—exists in some countries. In many countries, inaccessibility of cold storage facilities inhibits the growth of a value-added industry. Some countries receive little benefit from exports, as fish is harvested and processed aboard industrial ships and exported directly without landing in the country of origin (*West African Fisheries Profiles April 2008*)

Fishery management in West Africa is complicated due to the number of governments and ministries involved. The jurisdictional landscape differs by country, and coordinating management goals and policies is challenging. In many countries, limited surveillance and enforcement capacity leads to illegal fishing and overfishing,

which imperils regional management efforts. Certain countries' management capacities are also constrained by their inability to limit entry of national and international fleets into fisheries and to control the type of fishing gear used. Research capacity in much of the region is so limited as to be unable to conduct stock assessments or report on trends.

Industrial challenges in West Africa include lack of access to credit and financing, weak cold storage infrastructure, poor transportation infrastructure, inefficient and outdated equipment, lack of knowledge about export standards, and weak industrial organization. Further, the region's aquaculture industry has not fully engaged with the private sector.

Sustainability of fisheries resources varies across the region. Some areas have severely stressed and overfished their stocks, while other areas are not using resources to potential. Further, there are many migratory fish and seafood stocks about which sustainable yields are unknown. In all countries, fish is considered important to domestic food security as fish consumption in the region is well above global averages. The fishing industry is important to the socio-economic system of the region. While fishing typically does not represent a large portion of the region's GDP, the artisanal fisheries sector is a major source of employment and the base of traditional maritime economies (FAO Fisheries and Aquaculture Circular No. 1093 FIPS/C1093).

In a bid to address the aforementioned challenges and enhance the effectiveness of national fisheries and aquaculture management institutions including the Department of Fisheries of The Gambia, regional and sub-regional fisheries bodies including the Sub-regional Fisheries Commission (SRFC) were established. While The Gambia is also a member of other continental and international fisheries and aquaculture management organisations such as Fishery Committee for the Eastern Central Atlantic (CECAF), Ministerial Conference on Fisheries Cooperation among African States

Bordering the Atlantic Ocean (COMHAFAT), it has partnered with international organisations including European Fisheries Control Agency (EFCA) and signed/adopted international instruments/agreements such as Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication and Port State Measures Agreement for the effective management of its fisheries resources.



## 2.0 Strategic Environment of the Fisheries and Aquaculture Sector

### 2.1 SWOT Analysis

A SWOT is an undertaking in assessment of the current dynamisms of an organisation and project - their future courses and likelihood to affect the organisation and on the basis of which investors predetermine what causes of action (strategy) to take and grow the organisation to a desired future outfit (Vision).

Every organisation is a system in which assets are pooled and put into motion to produce goods and services, which are sold or delivered to an external environment for value and the proceeds reinvested into continuous reinventing of the organisation. In this case, the organisation as an operational outfit with legal authority, own assets such as cash, products, human capital, machinery, trademarks and etc. In addition the organisation may also owe monies from such as banks and suppliers and obliged to create value for its owners in the form of either dividends or share value appreciation. The assets that the organisation owns and liabilities it owes constitute the internal dynamisms that make up its internal environment, which it is able to affect directly by policy decisions and actions it takes.

On the other hand, other dynamisms such as the decisions that are taken by the government of the organisation's registration jurisdiction, customers, competitors and other stakeholders constitute the dynamisms that affect the organisation's operational efficiency and survival and the organisation cannot do much about it but operate in such a manner that it optimises on the opportunities that come from these dynamisms and at the same time avoid as in a mine field those dynamisms that will negatively affect it. This is the external environment of the organisation.

#### 2.1.1 Internal Environment (Strengths and Weaknesses)

Table 2.1: Internal Environment (Strengths and Weaknesses) of the Fisheries and Aquaculture Sector

Fisheries Sector			
Ref.	Strengths	Ref.	Weaknesses

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1	On-going fisheries regulatory reforms regarding landing requirements of industrial vessels.	1	Incomprehensive and incoherent legal and policy framework. Policy and strategy inadequacy to denote fisheries resource as an economic resource and establish systems for its full exploitation.
2	Wealth of diverse marine, brackish and freshwater resources including the water makeup (fresh, brackish and marine) is suitable for production of many kinds of fish species.	2	Absence of a dedicated and deep water fishing port and absence of a well-equipped fishing jetty
3	Rich resource base for high volume low value pelagics augurs well for domestic consumption and export	3	Inadequate modern production and marketing infrastructure and technologies including poor branding, quality control and packaging.
4	Existence of regular sales channels to the EU market	4	Inadequate research and data management capacity for effective policy development and implementation including innovation and value addition.
		5	Domination of the fishing sector by Non-Gambians including ownership of fishing vessels and processing plants.
		6	Inadequate repair and maintenance services for fishing crafts and outboard engines.
5	Relative abundant enabling natural resources such as lands, rivers, streams, reservoirs and lakes.	7	Weak monitoring and enforcement capacity including territorial water policing.
		8	Insufficiently explored and low purchasing power of domestic market.
		9	Inadequate empowerment of women who are the main players in the artisanal fishing industry.

6	Relatively unpolluted coastal and estuary waters for developing all aquaculture technologies for domestic and export markets.	10	Landing of most Gambian fish and processing outside of the country.
		11	Lack of an autonomous fisheries commission
<b>Aquaculture Sub-sector</b>			
<b>Ref.</b>	<b>Strengths</b>	<b>Ref.</b>	<b>Weaknesses</b>
1	Wealth of diverse marine, brackish and freshwater resources including the water makeup (fresh, brackish and marine) is suitable for production of many kinds of fish species.	1	Incomprehensive and incoherent legal and policy framework. Policy and strategy inadequacy to denote fisheries resource as an economic resource and establish systems for its full exploitation.
2	Relative abundant enabling natural resources such as lands, rivers, streams, reservoirs and lakes.	2	Inadequate storage, processing, transportation and marketing infrastructure. Poor branding and marketing
3	Good geographic location for exportation to neighbouring countries and the EU.	3	Inadequate modern production and marketing technologies including quality control and packaging.
4	Existence of a reasonable level of experience in the management of aquaculture projects, innovation/technologies.		Inadequate research and data management capacity for effective policy development and implementation.
		5	Limited innovation in production and value addition.
		6	Weak monitoring and enforcement capacity.
		7	Inadequate financial and human resource capacity.
		8	Insufficiently explored domestic market.
		9	Low purchasing power of the local market.

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## 2.1.2 External Environment (Opportunities and Threats)

Table 2.2: External Environment (Opportunities and Threats) of the Fisheries and Aquaculture Sector

Fisheries Sector			
Ref.	Opportunities	Ref.	Threats
1	Strong political will for greater involvement and support to the industry.	1	High vulnerability of the fisheries sector to climate change and natural disasters.
2	Strong presence of community-based organizations (CBOs) and their willingness to co-manage fisheries resources.	2	Increased pressure on marine resources due to over exploitation and population growth factors.
3	Existence of regular sales channels to the EU market.	3	Weak organizational and administrative capacities of trade groups (e.g. NAAFO, TAGFC, etc.) and CBOs.
4	Low labour costs.	4	High cost of inputs such as fuel, energy and scarcity of fishing materials in the country.
5	Promising tourism and hospitality sector will positively impact the fisheries sub-sector	5	Growing Illegal, unregulated and unreported (IUU) fishing from both artisanal and industrial fishing
6	Construction and operationalization of the Banjul Fisheries Jetty and rehabilitation of the dock yard facility.	6	Poor access and high cost of capital.
		7	Damages to lucrative fish species by predator species.
		8	Stringent EU and other export markets quality standards and high costs of compliance with sanitary and phytosanitary (SPS) requirements.



		9	Growing threat of illegal fishing and piracy.
		10	High tax rates leading to a crippling tax burden
		11	Low entrepreneurship and the ability by Gambians to conceptualise business opportunities in the sector and undertake investments in them. Negative public image particularly the youth about fishing
<b>Aquaculture Sub-sector</b>			
<b>Ref.</b>	<b>Opportunities</b>	<b>Ref.</b>	<b>Threats</b>
1	Strong political will from the government for greater involvement and support to the industry.	1	High vulnerability of the aquaculture sector to climate change and natural disasters.
2	Strong presence of community-based organizations (CBOs) and their willingness to co-manage aquaculture resources.	2	Poor access and high cost of capital and energy
3	Existence of regular sales channels to the EU market.	3	Stringent EU and other export markets quality standards and high costs of compliance with sanitary and phytosanitary (SPS) requirements.
4	Low labour costs.	4	High tax rates leading to a crippling tax burden
5	Promising tourism and hospitality sector will positively impact the aquaculture sub-sector.	5	Low entrepreneurship and the ability by Gambians to conceptualise business opportunities in the sector and undertake investments in them. Negative public image particularly the youth about fishing

### 3.0 Strategy Framework of the Fisheries and Aquaculture Sector

#### 3.1 Strategic Direction

Given the espoused fishing and aquaculture internal and external environments of weak policy, weak legal and strategic platforms, high energy cost in an energy-intensive activity and the inability to control the territorial integrity of the Gambian marine space, leading to significant national economic losses of fish stocks and their attendant benefits, set against the opportunities of very high fish stocks and of invaluable market quality, major existing appropriate land and ecological space for quality aquaculture in an ever growing export market, it has become strategically imperative to revisit fisheries and aquaculture as natural resources of significant developmental potentials. This will include among other things reviewing their roles in this endeavor and the eradication especially of gendered poverty in The Gambia, and how this may be achieved and enhance sustainability.

It must be recalled that whilst The Gambia in the recent past has been determined to have significant hydrocarbon potentials, exploratory drilling is yet to be undertaken to test the economic viability of these potentials. As a result The Gambia must intensify its creativity to make good and optimally take advantage of its already confirmed existing natural resources, one of the best of which is fish.

It is on the basis of this and its potency to sustainably accelerate growth, employment and stability, nutrition and food security that this strategic plan intends to redefine the fisheries and aquaculture resource and reposition it as a main pillar for attaining economic growth and development in The Gambia. In this respect, the intention is to ensure from achieving the fisheries sector policy objectives the growth in net contribution to GDP of this sector to at least 5% by 2021, 15% of exchange earnings and monetary stability and 25% to employment.

This sector shall now be seen in national medium term planning as a critical pillar and prioritized as such and attract appropriate attention in the allocation of public resources and re-engineered in such a manner that it would transform by 2021 into one that is “Recognised as one of three most critical contributors to national economic growth, employment creation and exchange earnings”.

### **3.2 Strategic Pillars**

1. Institutional Restructuring, Rearrangements & Capacity Strengthening;
2. Legal and Policy Reforms;
3. Key Stakeholder Capacity Building and Sensitisation;
4. Inter-sectoral linkages and optimisation of overall value chain; and
5. Collaboration and Partnership.

### **3.3 Strategic Priorities/Areas of Special Emphasis**

1. Institutional Restructuring, Rearrangements & Capacity Strengthening;
2. Key Stakeholder Capacity Building and Sensitisation; and
3. Inter-sectoral linkages and optimisation of overall value chain.

### 3.4 The Strategy – (Pillars, Goals, Objectives & Strategic Activities)

Table 3.4a: Fisheries Strategies

Strategic Pillar	Goal	Objective	Strategic Activity
Pillar 1a: Institutional Restructuring, Rearrangements & Capacity Strengthening.	Goal 1.1a: Increase the efficiency and effectiveness of the Department of Fisheries	1.1.1a: By June 2017, Undertake a staff audit and capacity needs assessment of the Department of Fisheries.	<ol style="list-style-type: none"> <li>1. Develop TOR for the staff audit and capacity needs assessment.</li> <li>2. Set up a committee to undertake the audit and assessment and generate a report.</li> <li>3. Implement recommendations of the report.</li> </ol>
		1.1.2a: By January 2019, transform the DoF into the National Fisheries Commission <sup>19</sup> .	<ol style="list-style-type: none"> <li>1. Undertake a study tour of similar institutions in West Africa.</li> <li>2. Determine the resource requirements of the Commission.</li> <li>3. Develop TOR for its departments and units and JDs for the proposed positions.</li> </ol>

<sup>19</sup> While it shall provide advice to the MOECCNR on policy evolution and review, its main function shall be policy and strategy implementation and review.

			<ol style="list-style-type: none"> <li>4. Hire legal expertise to draft the National Fisheries Commission Bill.</li> <li>5. Develop a cabinet paper through Ministry of Environment, Climate and Natural Resources.</li> <li>6. Lobby key stakeholders such as the OP and National Assembly for the passing of the bill.</li> <li>7. Recruit and procure additional staff and equipment/furniture respectively if necessary.</li> </ol>
		1.1.3a: By June 2018, fully operationalize a research and data management function/unit and system for the fisheries sector.	<ol style="list-style-type: none"> <li>1. Based on results from the staff audit and capacity needs assessment (see Table 3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the DoF, determine the requisite capacity needs that require addressing including recruitment of new staff and/or training of existing ones (extension workers) and training fishermen, staff of fisheries, establishments and other key stakeholders such as, fish mongers, processors and exporters.</li> </ol>

			<ol style="list-style-type: none"> <li>2. Upgrade the DoF's website into a comprehensive public depository for all types of data on fisheries in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.</li> <li>3. Additionally, explore the possibilities of exploiting suitable technologies or developing new applications for data collection and management on the fisheries database.</li> </ol>
		<p>1.1.4a: By December 2018, increase the territorial water policing and monitoring and enforcement capacity of the Department of Fisheries and key partners (Gambian Navy, NASCOM, GMA) by two folds.</p>	<ol style="list-style-type: none"> <li>1. In partnership with key stakeholders especially the Gambia Navy, Gambia Maritime Administration, NASCOM and fishing communities to determine the resource requirements for an improved territorial water policing and monitoring and enforcement capacity.</li> <li>2. Mobilise the needed resources either through the public budget mechanism and/or donors/key</li> </ol>

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			partners.
		1.1.5a: By January 2018, introduce and operationalize a phased fisheries and aquaculture programme at the University of The Gambia, Gambia College and GTTI from certificate to diploma levels and in the long term, degree level.	<ol style="list-style-type: none"> <li>1. Approach the University of The Gambia and GTTI for collaboration through an MOU on the provision of these programmes.</li> <li>2. Jointly develop the programme curricula relevant to the needs of the fishing industry including a system of certification of the various courses.</li> <li>3. Commence the programme by January 2018.</li> </ol>
Goal 1.2a: Increase investments and export potential of fishery products.	1.2.1a: By December 2018, enter into partnership with MOHSW (food safety laboratory being funded by GoTG and Indian Government), Food Safety and Quality Authority, Gambia Standards Bureau,		<ol style="list-style-type: none"> <li>1. Meet these institutions on ways of collaboration to enable the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.</li> <li>2. Generate meeting reports and resolutions/agreements.</li> </ol>

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		<p>National Nutrition Agency and MOTIE for the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.</p>	<p>3. Develop a work plan for the effective implementation of the agreement/s.</p>
		<p>1.2.2a: By December 2017, introduce investment incentives for private investors in the areas of fish processing, quality control, packaging, repair and maintenance services for fishing crafts and outboard engines.</p>	<ol style="list-style-type: none"> <li>1. Undertake a study on key issues affecting private sector investors in the fisheries and aquaculture sector.</li> <li>2. Implement recommendations of the study through advocacy/lobbying key partners for increased buy-in where such recommendations appear unfavourable.</li> <li>3. The recommendations from the study should be implemented alongside the already recommended establishment of a fisheries business incubation centre through PPP and</li> </ol>



			government direct investment in fisheries and aquaculture businesses by holding shares through GIEPA, MOTIE and NAWEC.
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 2a: Legal and Policy Reforms	Goal 2.1a: Ensure comprehensive and coherent legal, policy and regulatory frameworks of the Fisheries sector.	2.1.1a: By June 2017, review, update (including the on-going reforms regarding landing requirements of industrial vessels) and harmonise the legal, policy and regulatory frameworks of the Fisheries sector.	<ol style="list-style-type: none"> <li>1. Develop TOR for the review.</li> <li>2. Hire legal and policy experts to conduct the review and appropriate bills and policies.</li> <li>3. Undertake national/sector validations of the draft bills/regulations and policies and finalise.</li> <li>4. Undertake the process of passing the bills and policy implementation.</li> </ol>
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 3a: Key Stakeholder <sup>20</sup> Capacity Building and Sensitisation	Goal 3.1b: Improve the capacity of key sector stakeholders	3.1.1a: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the Fisheries sub-sector.	<ol style="list-style-type: none"> <li>1. Develop TOR for the assignment.</li> <li>2. Set up a committee to conduct the assignment.</li> <li>3. Undertake the assignment, generate the assignment report.</li> <li>4. Implement the assignment</li> </ol>

<sup>20</sup> List key stakeholders

	<p>including National Sole Fishery Co-management Committee (NASCOM), Try Oyster Women’s Association, Gambia Navy and The Association of Gambian Fishing Companies, GAMFIDA, Fisheries Observers.</p>		<p>recommendations.</p>
<p>Goal 3.2a: Increase public awareness on the fisheries regulations and policies</p>	<p>3.2a: public on the fisheries and</p>	<p>3.2.1a: By December 2018, develop and commence the implementation of a public sensitisation programme.</p>	<p>1. In addition to sectoral policies and regulations, identify the key issues including the socioeconomic benefits of the sector that need inclusion in the programme. The programme shall also include a communications strategy (e.g.</p>

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	socioeconomic benefits of the fisheries sector.	3.1.2b: By December 2021, increase the participation of indigenous Gambians in the artisanal and industrial fishing industries by 50% and 25% respectively.	media, place, time, etc.). 2. Implement the programme. 1. Conduct an assessment of the key issues negatively impacting the participation of indigenous Gambians in the artisanal and industrial fishing industries. 2. Based on the conclusions and recommendations of the assessment, develop and implement a programme of intervention <sup>21</sup> for addressing these problems.
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 4a: Inter-sectoral linkages and optimisation of overall value chain advantages/potentials	4.1a: Increase government and donor budgetary support to the Fisheries sector.	4.1.1a: By January 2018, would have increased DoF's budgetary support by 25%.	1. Undertake a data collection and analysis of the current contribution and potential of Fisheries to GDP, employment creation, foreign exchange earnings and poverty reduction including gendered poverty. 2. Meet and lobby key stakeholders

<sup>21</sup> Could cover key issues such as start-up credit, tax waivers, entrepreneurship and management training.

			such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.
		4.1.2a: By December 2020, would have significantly increased the requisite national support infrastructure (quality control, transportation, research, storage, processing, etc.).	<ol style="list-style-type: none"> <li>1. Identify key national and international stakeholders responsible and/or sponsoring the requisite national support infrastructure for the sector.</li> <li>2. Lobby and advocate for increased focus on the sector and support from them.</li> </ol>
		4.1.3a: By December 2020, fully decentralize the fisheries institutional management structures/framework to ensure conformity with the Local Government Decentralization Act in collaboration with relevant institutions, CBOs and NGOs	<ol style="list-style-type: none"> <li>1. Explore the feasibility of fully decentralising the fisheries and aquaculture management structures.</li> <li>2. If feasible, pilot in the West Coast Region and gradually roll out to other regions based on their economic potential.</li> </ol>

	Goal 4.2a: Improve linkages and alignment with key sectors such manufacturing and tourism for increased employment creation, foreign exchange earnings and poverty reduction especially among women.	4.2.1a: By December 2017, institute a platform for regular discussions and resolution of issues of common interest and concern to the fisheries and aquaculture value chain.	<ol style="list-style-type: none"> <li>1. Conduct a mapping exercise of all key stakeholders of important sectors to the fisheries and aquaculture.</li> <li>2. Engage them and develop a TOR for the proposed platform.</li> <li>3. Ensure regular conduct of meetings, generation of meetings reports and resolutions and their implementation.</li> </ol>
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 5a: Collaboration and Partnership	Goal 5.1a: Improve collaboration, coordination and partnership with key national,	5.1.1a: By June 2017, enter into strategic partnerships with key national, regional and international strategic constituents of the fisheries and aquaculture sector and establish a strong system of	<ol style="list-style-type: none"> <li>1. Conduct a mapping exercise of key national, regional and international stakeholders including their areas of intervention and interest.</li> <li>2. Engage them individually and jointly where possible to enable reach agreements on improving the</li> </ol>

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	regional and international stakeholders.	cooperation with them.	socioeconomic benefits of the fisheries and aquaculture sector. 3. Implement and review agreements regularly. 4. Continuously monitor the macroeconomic and industry environment for emerging opportunities for new partnerships.
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Table 3.4b: Aquaculture Sub-sector Strategies

Strategic Pillar	Goal	Objective	Strategic Activity
Pillar 1b: Institutional Restructuring, Rearrangements & Capacity Strengthening.	Goal 1.1b: Increase the efficiency and effectiveness of the Aquaculture Unit.	1.1.1b: By December 2017, upgrade and fully operationalize the Aquaculture Unit.	<ol style="list-style-type: none"> <li>1. Determine the resource requirements for the proposed Aquaculture Department.</li> <li>2. Develop TOR for the various units and JDs for each of the proposed staff positions.</li> <li>3. Furnish and equip the Department.</li> <li>4. Recruit/train staff and operationalize.</li> </ol>
		1.1.2b: December 2017, generate a comprehensive	<ol style="list-style-type: none"> <li>1. Conduct an evaluation of current and similar projects in The Gambia</li> </ol>

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		<p>aquaculture investment programme at the CBOs level (species: shrimps, oyster, etc. and techniques and technologies such as rice-cum-fish culture, cage, tank, etc.) in the various appropriate districts of the country.</p>	<p>and other parts of the world. This should be done in consultation with key stakeholders and projects beneficiaries.</p> <ol style="list-style-type: none"> <li>2. Develop project and funding proposals for support from the national budget and donors.</li> <li>3. Mobilise the needed resources.</li> <li>4. Implement the programme.</li> </ol>
		<p>1.1.3b: By June 2018, fully operationalize a research and data management function/unit and system for the fisheries sector.</p>	<ol style="list-style-type: none"> <li>1. Based on results from the staff audit and capacity needs assessment (see Table 3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the Aquaculture, determine the requisite capacity needs that require addressing including recruitment of new staff and/or training of existing ones (extension workers) and training of fishermen and staff of aquaculture Unit, establishments and other key stakeholders such as, fish mongers, processors and exporters.</li> <li>2. Upgrade the DoF's website into a comprehensive public depository</li> </ol>

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			<p>for all types of data on aquaculture in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.</p> <p>3. Additionally, explore the possibilities of exploiting suitable technologies or developing new applications for data collection and management on the aquaculture database.</p>
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 3b: Key Stakeholder <sup>22</sup> Capacity Building and Sensitisation	Goal 3.1b: Improve the capacity of key sector stakeholders in the aquaculture sub-sector	3.1.1b: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the aquaculture sub-sector.	<ol style="list-style-type: none"> <li>1. Develop TOR for the assignment.</li> <li>2. Set up a committee to conduct the assignment.</li> <li>3. Undertake the assignment, generate the assignment report.</li> <li>4. Implement the assignment recommendations.</li> </ol>
<b>Strategic Pillar</b>	<b>Goal</b>	<b>Objective</b>	<b>Strategic Activities</b>
Pillar 4b: Inter-sectoral linkages	4.1b: Increase government and	4.1.1b: By January 2018, would have increased DoF's	<ol style="list-style-type: none"> <li>1. Undertake a data collection and analysis of the current contribution</li> </ol>

<sup>22</sup> List key stakeholders



and optimisation of overall value chain advantages/potentials	donor budgetary support to the aquaculture sub-sector.	budgetary support by 25%.	and potential of Fisheries to GDP, employment creation, foreign exchange earnings and poverty reduction including gendered poverty.  2. Meet and lobby key stakeholders such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.
	4.2b: Improve livelihoods and reduce poverty among the youth and women.	4.2.1b: By December 2021, create 15,000 full-time jobs in aquaculture sub-sector.	1. Establish one fish/aquaculture hatchery in each region.  2. Strengthen peripheral industries such as pond, fibre glass tank and cage construction.  3. Assist grow-out farmers to build fish ponds, tanks, cages, etc.
	4.3b: Optimise the utilisation of	4.3.1b: By December 2017, generate an aquaculture potential area map of The	1. Conduct a mapping exercise of marine, river rine, flood plains and upland environment and generate

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	natural resources	Gambia.	the mapping report.
	4.4b: Maximise the utilisation of agricultural by-products in aquaculture	4.4.1b: By December 2018, generate a comprehensive list of potential aquaculture feed ingredients.	<ol style="list-style-type: none"> <li>1. Conduct a survey of agriculture by-products.</li> <li>2. Undertake proximate analysis of feed ingredients and prepare feed formulae for different types of fish.</li> <li>3. Conduct feed trials to identify good feed formula for specific fish species.</li> <li>4. Engage and provide feed mills with the new formulae.</li> </ol>

## **4.0 Strategy Coordination, Financing, Implementation and Monitoring Framework**

### **4.1 Strategy Coordination**

The coordination of the implementation of the strategic plan 2017-2021 will be done through a coordination committee and a technical committee.

#### **4.1.1 Coordination Committee**

The Department of Fisheries will use the existing Fisheries Advisory Committee for the coordination and review of the implementation status of the strategic and action plans through reports from the technical committee and strategic plan and project site visits where necessary. It will also be responsible for ensuring that mid-term and final reviews of the strategic plan are conducted.

#### **4.1.2 Technical Committee**

The membership of this committee will be headed by the Deputy Director and will include all Department of Fisheries staff at the level of Manager and co-option of equivalent staff in key stakeholder institutions to ensure the effective implementation of the strategic plan. As oppose to the coordination committee, it will meet monthly and generate reports for both record purposes at the Department of Fisheries and for submission to the Coordination Committee (Fisheries Advisory Committee) for review.

### **4.2 Strategy Financing**

This strategy will be financed through various financing mechanisms including the national budget, donor funding, technical assistance and revenue from fees, fines and proceeds of sale of articles resulting from the contravention of fisheries rules and regulations.



#### 4.2.1 Strategy Budget

Table 4.2.1a: Consolidated Fisheries Sub- Sector Strategic Budget (2017-2021)

No	Strategic Pillar	Plan Period					
		2017	2018	2019	2020	2021	Total
		Cost in GMD					
1	Institutional Restructuring, Rearrangements & Capacity Strengthening;	1,404,000.00	5,500,000.00	1,422,750.00	922,750.00	922,750.00	<b>10,172,250.00</b>
2	Legal and Policy Reforms;	575,000.00	-	-	-	-	<b>575,000.00</b>
3	Key Stakeholder Capacity Building and Sensitisation;	745,000.00	600,000.00	-	-	500,000.00	<b>1,845,000.00</b>
4	Inter-sectoral linkages and optimisation of overall value chain; and	600,000.00	250,000.00	250,000.00	250,000.00	250,000.00	<b>1,600,000.00</b>
5	Collaboration and Partnership.	375,000.00	75,000.00	75,000.00	75,000.00	300,000.00	<b>900,000.00</b>
	<b>TOTAL</b>	<b>3,699,000.00</b>	<b>6,425,000.00</b>	<b>1,747,750.00</b>	<b>1,247,750.00</b>	<b>1,972,750.00</b>	<b>15,092,250.00</b>

Table 4.2.1b: Consolidated Aquaculture Sub-Sector Strategic Budget (2017-2021)

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No.	Strategic Pillar	Plan Period					
		2017	2018	2019	2020	2021	Total
		Cost in GMD					
1	Institutional Restructuring, Rearrangements & Capacity Strengthening	1,500,000.00	1,500,000.00	1,500,000.00	1,500,000.00	1,500,000.00	<b>7,820,000.00</b>
2	Legal and Policy Reforms	-	-	-	-	-	-
3	Key Stakeholder Capacity Building and Sensitisation	400,000.00	200,000.00	200,000.00	200,000.00	200,000.00	<b>1,200,000.00</b>
4	Inter-sectoral linkages and optimisation of overall value chain	5,700,000.00	8,250,000.00	8,310,000.00	7,810,000.00	7,810,000.00	<b>37,730,000.00</b>
5	Collaboration and Partnership	-	-	-	-	-	-
	<b>TOTAL</b>	<b>7,600,000.00</b>	<b>9,950,000.00</b>	<b>10,010,000.00</b>	<b>9,510,000.00</b>	<b>9,510,000.00</b>	<b>46,750,000.00</b>

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Table 4.2.1c: Consolidated Fisheries & Aquaculture Sector Strategic Budget (2017-2021)

No	Strategic Pillar	Plan Period					Total
		2017	2018	2019	2020	2021	
		Cost in GMD					
1	Institutional Restructuring, Rearrangements & Capacity Strengthening	2,904,000.00	7,000,000.00	2,922,750.00	2,422,750.00	2,422,750.00	<b>17,992,250.00</b>
2	Legal and Policy Reforms	575,000.00	-	-	-	-	<b>575,000.00</b>
3	Key Stakeholder Capacity Building and Sensitisation	1,145,000.00	800,000.00	200,000.00	200,000.00	700,000.00	<b>3,045,000.00</b>
4	Inter-sectoral linkages and optimisation of overall value chain	6,300,000.00	8,500,000.00	8,560,000.00	8,060,000.00	8,060,000.00	<b>39,330,000.00</b>
5	Collaboration and Partnership	375,000.00	75,000.00	75,000.00	75,000.00	300,000.00	<b>900,000.00</b>
	<b>GRAND TOTAL</b>	<b>11,299,000.00</b>	<b>16,375,000.00</b>	<b>11,757,750.00</b>	<b>10,757,750.00</b>	<b>11,482,750.00</b>	<b>61,842,250.00</b>

#### 4.2.2 Resource Mobilisation

While the Department of Fisheries shall continue to use its existing resource mobilisation mechanisms (national budget initiative and other income sources of the Fisheries Development Fund such as fees and fines), it will increase its focus on collaboration and strategic partnerships with key national and international stakeholders including donors, by taking a proactive approach. This shall include the identification of relevant partners and donors and engaging them for possible partnerships and through bankable project/funding proposal development.



## 4.3 Strategy Implementation

### 4.3.1 Action Plan

Table 4.3a: Fisheries Sector Action Plan

Objective	Responsible Department/Unit	Supporting Departments	Partners	Due Date
1.1.1a: By June 2017, Undertake a staff audit and capacity needs assessment of the Department of Fisheries.	Admin. & Finance	Research and Development	MOECCNR, PMO	June 2017
1.1.2a: By January 2019, transform the DoF into the National Fisheries Commission.	Directorate & Administration (Projects & Programs), Research and Development	Research and Development	MOECCNR, OP, NA, GBOS	January 2019
1.1.3a: By June 2018, fully operationalize a research and data management function and system for the fisheries sector.	Research & Development	Admin. & Finance	GBOS, NARI	June 2018
1.1.4a: By December 2018, increase the territorial water policing and monitoring and enforcement capacity of the Department of Fisheries and key partners (Gambian Navy, NASCOM, GMA) by two folds.	Monitoring, Control and Surveillance	Admin. & Finance	GN, GMA, NASCOM	December 2018
1.1.5a: By January 2018, introduce and operationalize a phased	Admin. & Finance	Aquaculture Development (Projects &	MOECCNR, MOHERST, NAQAA, UTG,	January 2018

fisheries and aquaculture programme at the University of The Gambia, Gambia College and GTTI from certificate to diploma levels and in the long term, degree level.		Programs), Research and Development	GTTI	
1.2.1a: By December 2018, enter into partnership with MOHSW (food safety laboratory being funded by GoTG and Indian Government), Food Safety and Quality Authority, Gambia Standards Bureau and National Nutrition Agency for the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.	Inspectorate	Admin. & Finance, Research & Development,	MOHSW, Food Safety and Quality Authority, Gambia Standards Bureau, NaNA	December 2018
1.2.2a: By December 2017, introduce investment incentives for private investors in the areas of fish processing, quality control, packaging, repair and maintenance services for fishing crafts and outboard engines.	Admin. & Finance	Inspectorate	MOFEA, MOTIE, GIEPA, MOHSW	December 2017
2.1.1: By June 2017, review, update (including the on-going reforms regarding landing requirements of industrial	Admin. & Finance	Monitoring, Control and Surveillance	MOJ, NA, GMA	June 2017

vessels) and harmonise the legal, policy and regulatory frameworks of the Fisheries sector.				
3.1.1a: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the Fisheries sub-sector.	Extension	Admin. & Finance	NASCOM, Try Oyster Women's Association	December 2017
3.2.1a: Develop and commence the implementation of a public sensitisation programme.	Extension	Admin. & Finance	Print and Electronic media houses	June 2017
3.2.2: By December 2021, increase the participation of indigenous Gambians in the artisanal and industrial fishing industries by 50% and 25% respectively.	Extension	MCS	NASCOM, Try Oyster Women's Association, Fisheries Observers and AGS	December 2021
4.1.1a: By January 2018, would have increased DoF's budgetary support by 25%.	Admin. & Finance	Research & Development	MOFEA, NA	January 2018
4.1.2a: By December 2020, would have significantly increased the requisite national support infrastructure (quality control, transportation, research, storage, processing, etc.).	Inspectorate, Extension, Research & Development	Research & Development, MCS, Lab	MOHSW, Food Safety and Quality Authority, Gambia Standards Bureau, NaNA, GBOS, MO	December 2020
4.1.3a: By December 2020, fully decentralize the fisheries institutional management	Admin. & Finance	Extension	MOECCNR, MORGL	December 2020

structures/framework to ensure conformity with the Local Government Decentralization Act in collaboration with relevant institutions, CBOs and NGOs				
4.2.1a: Institute a platform for regular discussions and resolution of issues of common interest and concern to the fisheries and aquaculture value chain.	Admin. & Finance	Extension	All members of the Fisheries Advisory Committee, Food Safety and Quality Authority, Gambia Standards Bureau and National Nutrition Agency	June 2017
5.1.1a: By June 2017, enter into strategic partnerships with key national, regional and international strategic constituents of the fisheries and aquaculture sector and establish a strong system of cooperation with them.	Admin. & Finance	Extension	MOFA, MOTIE, GEIPA, GCCI, MOFEA	June 2017

Table 4.3a: Aquaculture Sub-sector Action Plan

Objective	Responsible Department/Unit	Supporting Departments	Partners	Due Date
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1.1.1b: By December 2017, upgrade and fully operationalize the Aquaculture Unit.	Aquaculture development	Research and Development, Admin. & Finance	MOECCNR, PMO	December 2017
1.1.2b: December 2017, generate a comprehensive aquaculture investment programme at the CBOs level (species: shrimps, oyster, etc. and techniques and technologies such as rice-cum-fish culture, cage, tank, etc.) in the various appropriate districts of the country.	Aquaculture development	Admin. & Finance Research and Development	MOECCNR, MORGL	December 2017
1.1.3b: By June 2018, fully operationalize a research and data management function/unit and system for the Aquaculture Sub-sector.	Aquaculture development	Research and Development, Admin. & Finance	GBOS	June 2018
3.1.1b: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOs, etc.) of the aquaculture sub-sector.	Extension	Admin. & Finance	Aquaculture Development	December 2017
4.1.1b: By January 2018, would have increased DoF's budgetary support by 25%.	Directorate & Administration	Research & Development	MOFEA, NA	January 2018
4.2.1b: By December 2021, create 15,000 full-time jobs in aquaculture sub-sector.	Aquaculture Development	Research & Development	NARI, Lab	December 2021
4.3.1b: By December 2017, generate an aquaculture potential area map of The	Aquaculture Development	Research & Development, Extension	GBOS, Department of Physical	December 2017

Gambia.			Planning and Housing, Lands and Surveys	
4.4.1b: By December 2018, generate a comprehensive list of potential aquaculture feed ingredients.	Aquaculture Development	Research & Development	NARI	December 2018

## 4.4 Strategy Monitoring/Evaluation

### 4.4.1 Logical Framework

This provides systematic and logical snapshot of the entire strategic plan in a clear and concise manner. It details for each goal, its objectives and strategic activities and indicators by which each strategic activity success may be measured and the means by which those performance indicators are verified.

Table 4.4a: Fisheries Sector Logical Framework

<b>Strategic Pillar 1:</b> Institutional Restructuring, Rearrangements & Capacity Strengthening			
<b>Goal 1:</b> Increase the efficiency and effectiveness of the Department of Fisheries			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
1.1.1a: By June 2017, Undertake a staff audit and capacity needs assessment of the Department of Fisheries.	<ol style="list-style-type: none"> <li>Develop TOR for the staff audit and capacity needs assessment.</li> <li>Set up a committee to undertake the audit and assessment and generate a report.</li> <li>Implement recommendations of the report.</li> </ol>	<ul style="list-style-type: none"> <li>✓ TOR developed</li> <li>✓ Staff audit and capacity needs assessment conducted and report generated</li> <li>✓ Number of staff trained and type of capacity building provided</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copies of TOR,</li> <li>✓ Committee meeting minutes,</li> <li>✓ Staff audit and capacity needs assessment reports DoF monthly, quarterly and annual reports.</li> </ul>
1.1.2a: By	<ol style="list-style-type: none"> <li>Conduct a study tour of similar</li> </ol>	<ul style="list-style-type: none"> <li>✓ Resource requirement</li> </ul>	<ul style="list-style-type: none"> <li>✓ Resource</li> </ul>

<p>January 2019, transform the DoF into the National Fisheries Commission<sup>23</sup>.</p>	<p>institutions in West Africa.</p> <ol style="list-style-type: none"> <li>2. Determine the resource requirements of the Commission.</li> <li>3. Develop TOR for its departments and units and JDs for the proposed positions.</li> <li>4. Hire legal expertise to draft the National Fisheries Commission Bill.</li> <li>5. Develop a cabinet paper through Ministry of Environment, Climate and Natural Resources.</li> <li>6. Lobby key stakeholders such as the OP and National Assembly for the passing of the bill.</li> <li>7. Recruit and procure additional staff and equipment/furniture respectively if necessary.</li> </ol>	<p>analysis conducted</p> <ul style="list-style-type: none"> <li>✓ Advocacy meetings with key stakeholders conducted</li> <li>✓ National Fisheries Commission established and fully equipped and furnished.</li> <li>✓ Increased effectiveness of the sector</li> </ul>	<p>requirement analysis report</p> <ul style="list-style-type: none"> <li>✓ Copy of TOR, JDs, legal consultancy agreement for the drafting of the bill, advocacy meeting reports DoF payroll, employment letters and furniture and equipment invoices and receipts.</li> <li>✓ Annual reports of the Commission</li> </ul>
<p>1.1.3a: By June 2018, fully operationalize a</p>	<ol style="list-style-type: none"> <li>1. Based on results from the staff audit and capacity needs assessment (see Table</li> </ol>	<ul style="list-style-type: none"> <li>✓ Capacity needs requirements of the Research and</li> </ul>	<ul style="list-style-type: none"> <li>✓ Capacity needs assessment report</li> <li>✓ Web address of</li> </ul>

<sup>23</sup> While it shall provide advice to the MOECCNR on policy evolution and review, its main function shall be policy and strategy implementation and review.



<p>research and data management function/unit and system for the fisheries sector.</p>	<p>3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the DoF, determine the requisite capacity needs that require addressing including recruitment of new staff and/or training of existing ones (extension workers) and training fishermen, staff of fisheries, establishments and other key stakeholders such as, fish mongers, processors and exporters.</p> <p>2. Upgrade the DoF's website into a comprehensive public depository for all types of data on fisheries in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.</p> <p>3. Additionally, explore the</p>	<p>Development function assessed</p> <ul style="list-style-type: none"> <li>✓ Website upgraded and updated</li> <li>✓ Type and number of new supporting technological opportunities explored and introduced</li> </ul>	<p>upgraded and updated DoF website.</p>
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	possibilities of exploiting suitable technologies or developing new applications for data collection and management on the fisheries database.		
1.1.4a: By December 2018, increase the territorial water policing and monitoring and enforcement capacity of the Department of Fisheries and key partners (Gambian Navy, NASCOM, GMA) by two folds.	<ul style="list-style-type: none"> <li>✓ In partnership with key stakeholders especially the Gambia Navy, Gambia Maritime Administration and NASCOM, fishing communities, determine the resource requirements for an improved territorial water policing and monitoring and enforcement capacity.</li> <li>✓ Mobilise the needed resources either through the public budget mechanism and/or donors/key partners.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Resource requirements of the Enforcement (Monitoring, Control and Surveillance) function determined</li> <li>✓ Resources mobilized</li> <li>✓ Improve effectiveness of key stakeholders in territorial water policing, monitoring and enforcement</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of the resource requirement analysis report</li> <li>✓ Copy of the National Budget and donor funding documentation</li> <li>✓ Key stakeholder annual reports.</li> </ul>
1.1.5a: By January 2018, introduce and operationalize a phased fisheries	<ul style="list-style-type: none"> <li>✓ Approach the University of The Gambia and GTTI for collaboration through an MOU on the provision of these</li> </ul>	<ul style="list-style-type: none"> <li>✓ Fisheries and aquaculture programme curricula and certification</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of meeting minutes, programme curricula and certification</li> </ul>

and aquaculture programme at the University of The Gambia, Gambia College and GTTI from certificate to diploma levels and in the long term, degree level.	<ul style="list-style-type: none"> <li>✓ programmes.</li> <li>✓ Jointly develop the programme curricula relevant to the needs of the fishing industry including a system of certification of the various courses.</li> <li>✓ Commence the programme by January 2018.</li> </ul>	<ul style="list-style-type: none"> <li>developed</li> <li>✓ Programme delivery commenced.</li> <li>✓ Number of students trained and certificated at the various levels.</li> </ul>	<ul style="list-style-type: none"> <li>documentation</li> <li>✓ UTG, GTTI and Gambia College programme brochures and payroll.</li> <li>✓ UTG, GTTI and Gambia College annual reports</li> </ul>
<b>Goal 1.2:</b>			
Increase investments and export potential of fishery products.			
<b>Objective</b>	<b>Strategic Activities</b>	<b>✓ Measurable Indicators</b>	<b>✓ Means of Verification</b>
1.2.1a: By December 2018, enter into partnership with MOHSW (food safety laboratory being funded by GoTG and Indian Government),	<ol style="list-style-type: none"> <li>1. Use the Fisheries Advisory Committee platform to meet these institutions on ways of collaborating to enable the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.</li> <li>2. Generate meeting reports and resolutions/agreements.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Development of partnership agreements and implementation work plans</li> <li>✓ Percentage increase in the exportation of processed fisheries and aquaculture products</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of meeting reports, agreements and work plans</li> <li>✓ National export data</li> </ul>

<p>Food Safety and Quality Authority, Gambia Standards Bureau and National Nutrition Agency and MOTIE for the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.</p>	<p>3. Develop a work plan for the effective implementation of the agreement/s.</p>		
<p>1.2.2a: By December 2017, introduce investment incentives for private investors in the areas of fish processing,</p>	<p>1. Undertake a study on key issues affecting private sector investors in the fisheries and aquaculture sector. 2. Implement recommendations of the study through</p>	<p>✓ Investment incentive study conducted ✓ Types and number of incentives introduced</p>	<p>✓ TOR for the study ✓ Study report ✓ Incentive programme implementation reports</p>

quality control, packaging, repair and maintenance services for fishing crafts and outboard engines.	<p>advocacy/lobbying key partners for increased buy-in where such recommendations appear unfavourable.</p> <p>3. The recommendations from the study should be implemented alongside the already recommended establishment of a fisheries business incubation centre through PPP and government direct investment in fisheries and aquaculture businesses by holding shares through GIEPA or MOTIE.</p>		
<b>Strategic Pillar 2:</b> Legal and Policy Reforms			
Goal 2.1a: Ensure comprehensive and coherent legal, policy and regulatory frameworks of the Fisheries sector.			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
2.1.1a: By June 2017, review,	<ol style="list-style-type: none"> <li>1. Develop TOR for the review.</li> <li>2. Hire legal and policy experts to</li> </ol>	<ul style="list-style-type: none"> <li>✓ TOR developed</li> <li>✓ Legal expert hired</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copies of TOR, consultancy</li> </ul>

<p>update (including the on-going reforms regarding landing requirements of industrial vessels) and harmonise the legal, policy and regulatory frameworks of the Fisheries sector.</p>	<p>conduct the review and appropriate bills and policies.</p> <p>3. Undertake national/sector validations of the draft bills/regulations and policies and finalise.</p> <p>4. Undertake the process of passing the bills and policy implementation.</p>	<p>✓ Number of new bills and policies developed, validated and passed</p>	<p>agreement, draft bills and policies and acts and final policies</p>
<p><b>Strategic Pillar 3:</b> Capacity Building and Sensitisation of Key Stakeholders<sup>24</sup></p>			
<p>Goal 3.1a: Improve the capacity of key sector stakeholders including National Sole Fishery Co-management Committee (NASCOM), Try Oyster Women’s Association, Gambia Navy and The Association of Gambian Fishing Companies, GAMFIDA, Fisheries Observers.</p>			
<p><b>Objective</b></p>	<p><b>Strategic Activities</b></p>	<p><b>Measurable Indicators</b></p>	<p><b>Means of Verification</b></p>

<sup>24</sup> List key stakeholders

3.1.1a: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the Fisheries sub-sector.	<ol style="list-style-type: none"> <li>1. Develop TOR for the assignment.</li> <li>2. Set up a committee to conduct the assignment.</li> <li>3. Undertake the assignment, generate the assignment report.</li> <li>4. Implement the assignment recommendations.</li> </ol>	<ul style="list-style-type: none"> <li>✓ TOR developed</li> <li>✓ Stakeholder capacity needs assessment conducted</li> <li>✓ Number of CBOs capacitated and type of capacity building provided</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of TOR, capacity assessment report and DoF reports</li> <li>✓ DoF annual reports</li> <li>✓ Capacity building reports</li> </ul>
<p>Goal 3.2a: Increase public awareness on the fisheries regulations and policies and socioeconomic benefits of the fisheries sector..</p>			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
3.2.1a: Develop and commence the implementation of a public sensitisation programme.	<ol style="list-style-type: none"> <li>1. In addition to sectoral policies and regulations, identify the key issues including the socioeconomic benefits of the sector that need inclusion in the programme. The programme shall also include a communications strategy (e.g. media, place, time, etc.).</li> <li>2. Implement the programme.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Public sensitization programme developed and implemented</li> <li>✓ Percentage increase in the level of awareness of sectoral policies among the general public</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of the sensitization programme</li> <li>✓ Programme implementation reports</li> </ul>
3.2.2a: By	1. Conduct an assessment of the	✓ Assessment	✓ Copy of the

December 2021, increase the participation of indigenous Gambians in the artisanal and industrial fishing industries by 50% and 25% respectively.	key issues negatively impacting the participation of indigenous Gambians in the artisanal and industrial fishing industries. 2. Based on the conclusions and recommendations of the assessment, develop and implement a programme of intervention <sup>25</sup> for addressing these problems.	conducted and report generated ✓ Percentage increase in the participation of Gambians in the artisanal and industrial fishing sub-sectors	assessment report and programme of intervention. ✓ DoF quarterly and annual reports
<b>Strategic Pillar 4</b>			
Inter-sectoral linkages and optimisation of overall value chain advantages/potentials			
4.1a: Increase government and donor budgetary support to the Fisheries sector.			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
4.1.1a: By January 2018, would have increased DoF's budgetary support by 25%.	1. Undertake a data collection and analysis of the current contribution and potential of Fisheries to GDP, employment creation, foreign exchange earnings and poverty reduction including gendered poverty.	✓ Up-to-date data on the GDP, employment and foreign exchange earning potentials of fisheries and aquaculture available	✓ GDP, employment and foreign exchange earnings potential report ✓ Lobby meeting minutes. ✓ National budget and

<sup>25</sup> Could cover key issues such as start-up credit, tax waivers, entrepreneurship and management training.



	2. Meet and lobby key stakeholders such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.	✓ Percentage increase in budgetary allocation and disbursement to the sector.	disbursement reports
4.1.2a: By December 2020, would have significantly increased the requisite national support infrastructure (quality control, transportation, research, storage, processing, etc.).	<ol style="list-style-type: none"> <li>1. Identify key national and international stakeholders responsible and/or sponsoring the requisite national support infrastructure for the sector.</li> <li>2. Lobby and advocate for increased focus on the sector and support from them.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Key stakeholders identified and lobbied</li> <li>✓ Percentage increase in the various categories of national support infrastructure to the fisheries sector.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Key stakeholder mapping report.</li> <li>✓ Lobby meetings reports.</li> <li>✓ DoF Annual reports</li> <li>✓ National reports (budget speech, etc.)</li> </ul>
4.1.3a: By December 2020, fully decentralize the fisheries institutional management structures/frame	<ol style="list-style-type: none"> <li>1. Explore the feasibility of fully decentralising the fisheries and aquaculture management structures.</li> <li>2. If feasible, pilot in the West Coast Region and gradually roll out to other regions based on their economic potential.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Feasibility study on the decentralization of fisheries and aquaculture management infrastructure conducted and</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of the feasibility study</li> </ul>

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work to ensure conformity with the Local Government Decentralization Act in collaboration with relevant institutions, CBOs and NGOs		recommendations implemented ✓ Number and type of new structures established across the country.	
<p>Goal 4.2a: Improve linkages and alignment with key sectors such manufacturing and tourism for increased employment creation, foreign exchange earnings and poverty reduction especially among women.</p>			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
4.2.1a: Institute a platform for regular discussions and resolution of issues of common interest	<ol style="list-style-type: none"> <li>1. Conduct a mapping exercise of all key stakeholders of important sectors to the fisheries and aquaculture.</li> <li>2. Engage them and develop a TOR for the proposed platform.</li> <li>3. Ensure regular conduct of</li> </ol>	<ul style="list-style-type: none"> <li>✓ Mapping exercise of key stakeholders in the fisheries and aquaculture value chain conducted</li> <li>✓ Level of improvement in addressing issues of common issues of</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of the mapping exercise report</li> <li>✓ Meeting reports of the platform</li> <li>✓ DoF quarterly and annual reports</li> </ul>

and concern to the fisheries and aquaculture value chain.	meetings, generation of meetings reports and resolutions and their implementation.	concern among stakeholders of the aquaculture value chain.	
<b>Strategic Pillar 5:</b>			
Collaboration and Partnership			
Goal 5.1a:			
Improve collaboration, coordination and partnership with key national, regional and international stakeholders.			
5.1.1a: By June 2017, enter into strategic partnerships with key national, regional and international strategic constituents of the fisheries and aquaculture sector and establish a strong system of cooperation with	<ol style="list-style-type: none"> <li>1. Conduct a mapping exercise of key national, regional and international stakeholders including their areas of intervention and interest.</li> <li>2. Engage them individually and jointly where possible to enable reach agreements on improving the socioeconomic benefits of the fisheries and aquaculture sector.</li> <li>3. Implement and review agreements regularly.</li> <li>4. Continuously monitor the macroeconomic and industry</li> </ol>	<ul style="list-style-type: none"> <li>✓ Mapping exercise conducted</li> <li>✓ Number of partnership agreements reached and implemented</li> </ul>	<ul style="list-style-type: none"> <li>✓ Mapping exercise report</li> <li>✓ Copy of agreements</li> <li>✓ Agreements implementation reports (DoF monthly, quarterly and annual reports).</li> </ul>

them.	environment for emerging opportunities for new partnerships.		
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Table 3.4b: Aquaculture Sub-sector Logical Framework

<b>Strategic Pillar 1:</b> Institutional Restructuring, Rearrangements & Capacity Strengthening			
<b>Goal 1:</b> Goal 1.1b: Increase the efficiency and effectiveness of the Aquaculture Unit			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
1.1.1b: By December 2017, upgrade the Aquaculture Unit to a fully functional unit.	<ol style="list-style-type: none"> <li>1. Determine the resource requirements for the proposed Aquaculture Unit.</li> <li>2. Develop TOR for the various units and JDs for each of the proposed staff positions.</li> <li>3. Furnish and equip the Department.</li> <li>4. Recruit/train staff and operationalize.</li> </ol>	<ul style="list-style-type: none"> <li>✓ Resource requirement analysis conducted</li> <li>✓ TOR and JDs developed</li> <li>✓ Department fully furnished and equipped</li> <li>✓ Number of staff trained/recruited and type of training provided</li> </ul>	<ul style="list-style-type: none"> <li>✓ Resource requirement analysis report</li> <li>✓ Copy of TOR</li> <li>✓ Furniture and equipment invoices and receipts</li> <li>✓ DoF payroll and training report/s</li> </ul>
1.1.2b: December 2017, generate a	<ol style="list-style-type: none"> <li>1. Conduct an evaluation of current and similar projects in The Gambia and other parts of</li> </ol>	<ul style="list-style-type: none"> <li>✓ A comprehensive review of aquaculture programmes in The</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copies of evaluation report, project proposals</li> </ul>

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<p>comprehensive aquaculture investment programme at the CBOs level (species: shrimps, oyster, etc. and techniques and technologies such as rice-cum-fish culture, cage, tank, etc.) in the various appropriate districts of the country.</p>	<p>the world. This should be done in consultation with key stakeholders and projects beneficiaries.</p> <ol style="list-style-type: none"> <li>2. Develop project and funding proposals for support from the national budget and donors.</li> <li>3. Mobilise the needed resources.</li> <li>4. Implement the programme.</li> </ol>	<p>Gambia and other parts of the world conducted</p> <ul style="list-style-type: none"> <li>✓ Donor funding mobilised</li> <li>✓ Increase in the aquaculture production capacity of CBOs</li> </ul>	<p>and implementation reports including DoF monthly, quarterly and annual reports)</p>
<p>1.1.3b: By June 2018, fully operationalize a research and data management function/unit and system for the Aquaculture</p>	<ol style="list-style-type: none"> <li>1. Based on results from the staff audit and capacity needs assessment (see Table 3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the Aquaculture, determine the requisite capacity needs that require addressing including</li> </ol>	<ul style="list-style-type: none"> <li>✓ Capacity needs requirements of the Research and Development function assessed</li> <li>✓ Website upgraded and updated</li> <li>✓ Type and number of</li> </ul>	<ul style="list-style-type: none"> <li>✓ Capacity needs assessment report</li> <li>✓ Web address of upgraded and updated DoF website</li> </ul>

Sub-sector.	<p>recruitment of new staff and/or training of existing ones (extension workers) and training of fishermen and staff of aquaculture Unit, establishments and other key stakeholders such as, fish mongers, processors and exporters.</p> <p>2. Upgrade the DoF's website into a comprehensive public depository for all types of data on aquaculture in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.</p> <p>3. Additionally, explore the possibilities of exploiting suitable technologies or developing new applications for data collection and management on the aquaculture database.</p>	<p>new supporting technological opportunities explored and introduced</p>	
<b>Strategic Pillar 3:</b>			

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Capacity Building and Sensitisation of Key Stakeholders <sup>26</sup>			
Goal 3.1b: Improve the capacity of key sector stakeholders in the aquaculture sub-sector			
3.1.1b: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the aquaculture sub-sector.	<ol style="list-style-type: none"> <li>1. Develop TOR for the assignment.</li> <li>2. Set up a committee to conduct the assignment.</li> <li>3. Undertake the assignment, generate the assignment report.</li> <li>4. Implement the assignment recommendations.</li> </ol>	<ul style="list-style-type: none"> <li>✓ TOR developed</li> <li>✓ Stakeholder capacity needs assessment conducted</li> <li>✓ Number of stakeholders capacitated</li> </ul>	<ul style="list-style-type: none"> <li>✓ Copy of TOR, capacity assessment report and DoF reports</li> <li>✓ Capacity building reports</li> </ul>
Strategic Pillar 4 Inter-sectoral linkages and optimisation of overall value chain advantages/potentials			
4.1b: Increase government and donor budgetary support to the aquaculture sub-sector.			
Objective	Strategic Activities	Measurable Indicators	Means of Verification
4.1.1b: By January 2018, would have increased DoF's	1. Undertake a data collection and analysis of the current contribution and potential of Fisheries to GDP, employment	<ul style="list-style-type: none"> <li>✓ Analysis of the GDP, employment and foreign exchange earning potentials of</li> </ul>	<ul style="list-style-type: none"> <li>✓ GDP, employment and foreign exchange earnings potential report</li> </ul>

<sup>26</sup> List key stakeholders

budgetary support by 25%.	creation, foreign exchange earnings and poverty reduction including gendered poverty. 2. Meet and lobby key stakeholders such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.	fisheries and aquaculture sector conducted ✓ Percentage increase in budgetary allocations to the sector.	✓ Lobby meeting minutes ✓ National budget reports and disbursements to the sector
4.2b: Improve livelihoods and reduce poverty among the youth and women			
<b>Objective</b>	<b>Strategic Activities</b>	<b>Measurable Indicators</b>	<b>Means of Verification</b>
4.2.1b: By December 2021, create 15,000 full-time jobs in aquaculture sub-sector.	1. Establish one fish/aquaculture hatchery in each region. 2. Strengthen peripheral industries such as pond, fibre glass tank and cage construction. 3. Assist grow-out farmers to build fish ponds, tanks, cages, etc.	✓ Number of fish hatcheries established ✓ Number of businesses in the peripheral industries strengthened ✓ Number of grow-out farmers supported and number of new fish ponds, tanks, cages, etc. constructed	✓ Monthly, quarterly and annual reports of DOF ✓ Field and monitoring visits of the Aquaculture Unit ✓ Project site visits
4.3b: Optimise the utilisation of natural resources			



4.3.1b: By December 2017, generate an aquaculture potential area map of The Gambia.	1. Conduct a mapping exercise of marine, riverine, flood plains and upland environment and generate the mapping report.	✓ Aquaculture potential area map developed	✓ Copy of the mapping exercise report
4.4b: Maximise the utilisation of agricultural by-products in aquaculture			
4.4.1b: By December 2018, generate a comprehensive list of potential aquaculture feed ingredients.	1. Conduct a survey of agriculture by-products. 2. Undertake proximate analysis of feed ingredients and prepare feed formulae for different types of fish. 3. Conduct feed trials to identify good feed formula for specific fish species. 4. Engage and provide feed mills with the new formulae.	✓ Survey of agriculture by-products and analysis and testing of new feed formulae undertaken	✓ Survey report ✓ Report of feed trials ✓ Copy of new aquaculture feed formulae.

#### 4.4.2 Risk Matrix

**Table 4.4a: Fisheries Sector Risk Matrix**

Objective	Important Risks and Assumptions	Level of Risk	Mitigating Measures
1.1.1a: By June 2017, Undertake a staff audit and capacity needs assessment of the Department of Fisheries.	<ul style="list-style-type: none"> <li>✓ Inadequate resources to fully implement the recommendations of the staff audit and capacity needs assessment.</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Engage and lobby key stakeholders especially MOFEA, OP and NA for increased budgetary allocations to the DoF.</li> </ul>
1.1.2a: By January 2019, transform the DoF into the National Fisheries Commission	<ul style="list-style-type: none"> <li>✓ Inadequate resources</li> <li>✓ Weak support from key stakeholders including NA</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Conduct a detailed analysis and justification of the transformation including the impact on GDP, employment and foreign exchange earnings.</li> <li>✓ Use the above during advocacy and negotiation meetings with public and other sponsors.</li> </ul>
1.1.3a: By June 2018, fully operationalize a research and data management function and system for the fisheries sector.	<ul style="list-style-type: none"> <li>✓ Inadequate human resources in fisheries and aquaculture research</li> </ul>	High	<ul style="list-style-type: none"> <li>✓ In addition to the proposed training programme at the UTG and GTTI, provide tailor made research and data management training to current and new staff of the Research and Development</li> </ul>

			Unit.
1.1.4a: By December 2018, increase the territorial water policing and monitoring and enforcement capacity of the Department of Fisheries and key partners (Gambian Navy, NASCOM, GMA) by two folds.	<ul style="list-style-type: none"> <li>✓ Inadequate resources</li> <li>✓ Weak attitudes towards enforcement</li> </ul>	High	<ul style="list-style-type: none"> <li>✓ Lobby for increased budgetary support</li> <li>✓ Engage donors through sound project proposals</li> <li>✓ Improve the incentives for the Monitoring, Control and Surveillance Unit and key stakeholders (Gambian Navy, NASCOM, GMA)</li> </ul>
1.1.5a: By January 2018, introduce and operationalize a phased fisheries and aquaculture programme at the University of The Gambia, Gambia College and GTTI from certificate to diploma levels and in the long term, degree level.	<ul style="list-style-type: none"> <li>✓ Inadequate support from MOHERST, NAQAA, UTG and GTTI</li> <li>✓ Inadequate resources especially qualified and experienced lecturers</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Continuously engage and lobby the aforementioned institutions.</li> <li>✓ Establish linkages with international universities and research institutions.</li> </ul>
1.2.1a: By December 2018, enter into partnership with MOHSW (food safety laboratory being funded by GoTG and Indian Government), Food Safety and Quality Authority, Gambia Standards Bureau and National Nutrition Agency and MOTIE for the achievement and	<ul style="list-style-type: none"> <li>✓ Inadequate commitment and support from key stakeholders</li> <li>✓ Inadequate resources</li> </ul>	Low	<ul style="list-style-type: none"> <li>✓ Continuously engage key stakeholders for effective and improved quality standards.</li> </ul>

maintenance of international quality and safety standards for fisheries and aquaculture products.			
1.2.2: By December 2017, introduce investment incentives for private investors in the areas of fish processing, quality control, packaging, repair and maintenance services for fishing crafts and outboard engines.	<ul style="list-style-type: none"> <li>✓ Inadequate support from key public institutions such as MOTIE, MOFEA, GRA and NA</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Lobby and present the business case and long term impact of the incentives on GDP and overall national socioeconomic development of The Gambia.</li> </ul>
2.1.1: By June 2017, review, update (including the on-going reforms regarding landing requirements of industrial vessels) and harmonise the legal, policy and regulatory frameworks of the Fisheries sector.	<ul style="list-style-type: none"> <li>✓ While this may lead to internal comprehensiveness and consistency, external (consistency with other national/sectoral legal, policies and regulatory frameworks may be compromised.</li> <li>✓ Inadequate support from such as the Cabinet and NA.</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Ensure a detailed review of other key national/sectoral legal, policy and regulatory frameworks are reviewed.</li> </ul>
3.1.1a: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the Fisheries sub-sector.	<ul style="list-style-type: none"> <li>✓ Risk of not aligning stakeholders' capacity needs of CBOs with the sectors priorities.</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Ensure that the assessment is participative but well moderated to prevent a drift from sectoral priorities.</li> </ul>
3.2.1a: Develop and	<ul style="list-style-type: none"> <li>✓ Incomprehensive</li> </ul>	Low	<ul style="list-style-type: none"> <li>✓ Engage competent</li> </ul>

commence the implementation of a public sensitisation programme.	sensitisation programme ✓ Inadequate funding		resource persons to help develop the programme. ✓ Engage the media houses especially GRTS for discounts on airing the programme.
3.1.2: By December 2021, increase the participation of indigenous Gambians in the artisanal and industrial fishing industries by 50% and 25% respectively.	✓ Entrepreneurial skills and attitudes towards the fishing profession may negatively impact the desired outcomes.	High	✓ Intensify public sensitisation including the use of successful case studies on the benefits of the fishing and fish farming. ✓ Develop and implement a comprehensive entrepreneurship programme for indigenous Gambians especially the youth.
4.1.1a: By January 2018, would have increased DoF's budgetary support by 25%.	✓ Inadequate support from MOFEA and NA	High	✓ Develop and present a business and socioeconomic impact case to the aforementioned stakeholders for increased buy-in.
4.1.2a: By December 2020, would have significantly increased the requisite national support infrastructure (quality control,	✓ Inadequate resources	Medium	✓ Increase coordination and collaboration with key sectors and stakeholders.

transportation, research, storage, processing, etc.).			
4.1.3a: By December 2020, fully decentralize the fisheries institutional management structures/framework to ensure conformity with the Local Government Decentralization Act in collaboration with relevant institutions, CBOs and NGOs	✓ Inadequate resources/capacity	High	✓ Engage government and donors to enable mobilise the needed resources.
4.2.1a: Institute a platform for regular discussions and resolution of issues of common interest and concern to the fisheries and aquaculture value chain.	✓ Lack of interest and commitment from the participating institutions.	Medium	✓ Continuous engage and follow-ups
5.1.1a: By June 2017, enter into strategic partnerships with key national, regional and international strategic constituents of the fisheries and aquaculture sector and establish a strong system of cooperation with them.	✓ Lack of interest and commitment from key stakeholders	Medium	✓ Build interest and increase commitment from key stakeholders by presenting evidence-based arguments and lead by example.

**Table 4.4b: Aquaculture Sub-sector Risk Matrix**

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<b>Objective</b>	<b>Important Risks and Assumptions</b>	<b>Level of Risk</b>	<b>Mitigating Measures</b>
1.1.1b: By December 2017, upgrade the Aquaculture Unit to a fully functional Unit.	<ul style="list-style-type: none"> <li>✓ Inadequate resources to fully implement the recommendations of the staff audit and capacity needs assessment.</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Engage and lobby key stakeholders such especially MOFEA, OP and NA for increased budgetary allocations to the DoF.</li> </ul>
1.1.2b: December 2017, generate a comprehensive aquaculture investment programme at the CBOs level (species: shrimps, oyster, etc. and techniques and technologies such as rice-cum-fish culture, cage, tank, etc.) in the various appropriate districts of the country.	<ul style="list-style-type: none"> <li>✓ Inadequate funding</li> <li>✓ Weak collaboration and cooperation from the CBOs.</li> </ul>	Low	<ul style="list-style-type: none"> <li>✓ Ensure that the projects are community driven.</li> <li>✓ Institute proper control and reporting mechanisms.</li> </ul>
1.1.3b: By June 2018, fully operationalize a research and data management function/unit and system for the Aquaculture Sub-sector.	<ul style="list-style-type: none"> <li>✓ Inadequate human resources in fisheries and aquaculture research</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ In addition to the proposed training programme at the UTG and GTTI, provide tailor made research and data management training to current and new staff of the Research and Development Unit.</li> </ul>
3.1.1b: By December 2017, conduct a capacity needs assessment for key	<ul style="list-style-type: none"> <li>✓ Risk of not aligning stakeholders' capacity needs of</li> </ul>	Medium	<ul style="list-style-type: none"> <li>✓ Ensure that the assessment is participative but well</li> </ul>

stakeholders (trade groups, CBOS, etc.) of the aquaculture sub-sector.	CBOs with the sectors priorities.		moderated to prevent a drift from sectoral priorities.
4.1.1b: By January 2018, would have increased DoF's budgetary support by 25%.	✓ Inadequate support from MOFEA and NA	High	✓ Develop and present a business and socioeconomic impact case to the aforementioned stakeholders for increased buy-in.
4.2.1b: By December 2021, create 15,000 full-time jobs in aquaculture sub-sector.	✓ Inadequate financial including budgetary and donor support	High	<ul style="list-style-type: none"> <li>✓ Intensify efforts for increased budgetary support</li> <li>✓ Improve resource mobilisation capacity</li> </ul>
4.3.1b: By December 2017, generate an aquaculture potential area map of The Gambia.	<ul style="list-style-type: none"> <li>✓ Inadequate resources</li> <li>✓ Poorly conducted mapping</li> </ul>	Low	<ul style="list-style-type: none"> <li>✓ Ensure that competent staff committee is constituted or a competent consultant is hired.</li> </ul>
4.4.1b: By December 2018, generate a comprehensive list of potential aquaculture feed ingredients.	✓ Inadequate resources	Medium	



## 5.0 Cross Cutting Issues

### 5.1 National Capacity Constraints

National capacity constraints facing the fisheries and aquaculture sector include inadequate support infrastructure such as roads, storage and processing facilities, quality control laboratories of international standards, affordable and accessible investment credit and energy; existing packaging industry to support fish processing and the absence of institutions of higher learning and programmes for the provision of the requisite skills to the fisheries and aquaculture sector. Although efforts have been made in the areas of storage and processing facilities and laboratories, these are still grossly inadequate in terms of geographical coverage and standards.

While increased budgetary support from central government and improved collaboration and partnership with other national key stakeholders such as MOHSW, Gambia Standards Bureau, Food Safety and Quality Authority and National Nutrition Agency can help improve the current state of storage, processing and quality control facilities, other key national and fisheries sector support infrastructure such as roads for improved market access and investment incentives to retain and attract investors especially indigenous Gambians are not within the purview of the sector.

Thus at the national level, the reprioritisation of public investment in infrastructure to accommodate that which is necessary to support a thriving fisheries sector and the revitalisation of the private sector interest in such activities as packaging investments, supportive of investments processing in fisheries are issues that must be of utmost importance in national development planning and investment.

### 5.2 The Environmental and climate Change Challenges

Given the significant contribution of the fisheries and aquaculture sector to GDP and employment, the effects of climate change could increase the salinization of the Gambia's estuary zone/coastline thus affecting the mangrove population and other breeding grounds for fish species migration of freshwater habitats. It could also lead to drought which will again not only affect the mangrove population and low-lying areas but will decrease freshwater flow to wetlands. Furthermore, climate change due

to increased temperature and reduced rainfall will seriously affect the fisheries and aquaculture sector by affecting both the quantities and quality of fish habitats and species<sup>27</sup>. Thus climate change resilience measures such as the sea and river defence systems along the coastline of The Gambia by the NEA through the UNDP/GEF Coastal Resilience Project should be intensified.

Although positive steps have been taken towards reducing environmental degradation including sea and river pollution such as the banning of plastics in 2015 by The Gambia, more needs to be done to address other environmental pollution activities such as dumping of toxic industrial waste by both national companies especially those in the manufacturing sub-sector and international ships in Gambian territorial waters.

### 5.3 Gender

According to the Gambia Housing and Population Census Provisional Report, 2013, women constitute 50.5% of The Gambian population. While women are the dominant players in fish processing and small scale fish marketing in the artisanal fisheries sub-sector and this provides them an important source of income and livelihood, their male counterparts dominate fish harvesting at the artisanal level and processing and exportation of processed fish products at the industrial level (UNDP, 2014<sup>28</sup>).

It is therefore evident that the fisheries sector is a strategic sector for increased economic development especially increased employment and poverty reduction, particularly among women. However, gender sensitive and specific policy and strategy interventions need to be considered for optimal empowerment of sector players especially the women.

## 7.0 References

1. Fisheries & Aquaculture Sector Strategy 2016-2020 (Zero Draft);
2. Gambia Fisheries Strategic Action Plan 2012-2015;

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<sup>27</sup> Malanding S. Jaiteh and Baboucarr Sarr (2010). Climate change and development in The Gambia: Challenges to ecosystem goods and services.

<sup>28</sup> The fisheries sector in The Gambia: trade, value addition and social inclusiveness, with a focus on women.

3. Strategic Framework for Sustainable Development of Aquaculture in The Gambia, 2008;
4. Fisheries Sector Review: Strategy and Action Plan 2016-2020;
5. Aquaculture Sector Review: Strategy and Action Plan 2016-2020
6. The Fisheries Sector in The Gambia: Trade, Value Addition and Social Inclusiveness with a Special Focus on Women, 2014
7. Fisheries Policy, 2007;
8. Fisheries Act, 2007;
9. Organisational Chart of the Fisheries Department
10. Programme for Accelerated Growth and Employment, 2012-2015.
11. Vision 2020, The Gambia Incorporated; and
12. Climate Change and Development in The Gambia: Challenges to Ecosystem Goods and Services, 2010;
13. The Gambia National Human Development Report, 2014;
14. Integrated Household Survey, 2010

## 8.0 Annexes

### 8.1 Two-year Action Plan

Table 8.1.1: Fisheries and Aquaculture Sector Two-year (2017-2018) Action Plan

	Strategic Activities	Expected Outcomes/Measurable Indicators	Means of Verification/Success Criteria	Responsible Department	Partners	Budget (GMD)	
						2017	2018
7, f	1. Develop TOR for the staff audit and capacity needs assessment.	-TOR developed	-Copies of TOR, Committee meeting minutes, staff audit and capacity needs assessment reports and DoF monthly, quarterly and annual reports.	Admin. & Finance	MOECCNR, PMO	30,000.00	
	2. Set up a committee to undertake the audit and assessment and generate a report.	-Staff audit and capacity needs assessment conducted and report generated				120,000.00	
	3. Implement recommendations of the report.	-Recommendations implemented					2,000,000.00

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1. Undertake a study tour of similar institutions in West Africa.	-Resource requirement analysis conducted	-Resource requirement analysis report	Directorate & Administration (Projects & Programs), Research and Development	MOECCNR, OP, NA, GBOS	690,000.00		
2. Determine the resource requirements of the Commission.	-Advocacy meetings with key stakeholders conducted	-Copy of TOR, JDs, legal consultancy agreement for the drafting of the bill, advocacy meeting reports DoF payroll, employment letters and furniture and equipment invoices and receipts.					40,000.00
3. Develop TOR for its departments and units and JDs for the proposed positions.	-National Fisheries Commission established and fully equipped and furnished.	-Annual reports of the Commission					200,000.00
4. Hire legal expertise to draft the National Fisheries Commission Bill.	-Increased effectiveness of the sector						550,000.00
5. Develop a cabinet paper through Ministry of Environment,							-

	Climate and Natural Resources.						
	6. Lobby key stakeholders such as the OP and National Assembly for the passing of the bill.						50,000.00
	7. Recruit and procure additional staff and equipment/furniture respectively if necessary.						500,000.00
3, a	1. Based on results from the staff audit and capacity needs assessment (see Table 3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the DoF, determine the requisite capacity needs that require addressing including	Capacity needs requirements of the Research and Development function assessed	Capacity needs assessment report	Research & Development	GBOS, NARI		

<p>recruitment of new staff and/or training of existing ones (extension workers) and training fishermen, staff of fisheries, establishments and other key stakeholders such as, fish mongers, processors and exporters.</p>						
<p>2. Upgrade the DoF's website into a comprehensive public depository for all types of data on fisheries in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.</p>	<p>Website upgraded and updated</p>	<p>Web address of upgraded and updated DoF website.</p>			<p>270,000.00</p>	

	3. Additionally, explore the possibilities of exploiting suitable technologies or developing new applications for data collection and management on the fisheries database.	Type and number of new supporting technological opportunities explored and introduced				30,000.00	5,000.00
er	1. In partnership with key stakeholders especially the Gambia Navy, Gambia Maritime Administration, NASCOM and fishing communities to determine the resource requirements for an improved territorial water policing and monitoring and enforcement capacity.	Resource requirements of the Enforcement (Monitoring, Control and Surveillance) function determined	Copy of the resource requirement analysis report	Monitoring, Control and Surveillance	GN, GMA, NASCOM		892,750.00
ty of	2. Mobilise the needed resources either through the public	-Resources mobilized	-Copy of the National Budget and donor funding				200,000.00

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budget mechanism and/or donors/key partners.		documentation				
	-Improve effectiveness of key stakeholders in territorial water policing, monitoring and enforcement	-Key stakeholder annual reports				
1. Approach the University of The Gambia and GTTI for collaboration through an MOU on the provision of these programmes.	-Fisheries and aquaculture programme curricula and certification developed	-Copy of meeting minutes, programme curricula and certification documentation	Admin. & Finance	MOECCNR, MOHERST, NAQAA, UTG, GTTI	25,000.00	25,000.00
2. Jointly develop the programme curricula relevant to the needs of the fishing industry including a system of certification of the various courses.	-Programme delivery commenced.	-UTG, GTTI and Gambia College programme brochures and payroll.				500,000.00
3. Commence the programme by January 2018.	-Number of students trained and certificated at the various levels.	-UTG, GTTI and Gambia College annual reports				

	1. Meet these institutions on ways of collaborating to enable the achievement and maintenance of international quality and safety standards for fisheries and aquaculture products.	-Development of partnership agreements and implementation work plans	-Copy of meeting reports, agreements and work plans	Inspectorate	MOHSW, Food Safety and Quality Authority, Gambia Standards Bureau, NaNA	14,000.00	
	2. Generate meeting reports and resolutions/agreements.	-Percentage increase in the exportation of processed fisheries and aquaculture products	-National export data				
	3. Develop a work plan for the effective implementation of the agreement/s.						25,000.00
	1. Undertake a study on key issues affecting private sector investors in the fisheries and aquaculture sector.	-Investment incentive study conducted	-TOR for the study	Admin. & Finance	MOFEA, MOTIE, GIEPA, MOHSW	225,000.00	

	2. Implement recommendations of the study through advocacy/lobbying key partners for increased buy-in where such recommendations appear unfavourable.	-Types and number of incentives introduced	-Study report				512,000.00
	3. The recommendations from the study should be implemented alongside the already recommended establishment of a fisheries business incubation centre through PPP and government direct investment in fisheries and aquaculture businesses by holding shares through GIEPA or MOTIE.		-Incentive programme implementation reports				
7,	1. Develop TOR for the review.	-TOR developed	-Copies of TOR, consultancy	Admin. & Finance	MOJ, NA, GMA	25,000.00	

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	2. Hire legal and policy experts to conduct the review and appropriate bills and policies.	-Legal expert hired	agreement, draft bills and policies and acts and final policies			200,000.00	
	3. Undertake national/sector validations of the draft bills/regulations and policies and finalise.	-Number of new bills and policies developed, validated and passed				350,000.00	
	4. Undertake the process of passing the bills and policy implementation.						
er	1. Develop TOR for the assignment.	-TOR developed	-Copy of TOR, capacity assessment report and DoF reports	Extension	NASCOM, Try Oyster Women's Association	25,000.00	
0)	2. Set up a committee to conduct the assignment.	-Stakeholder capacity needs assessment conducted	-DoF annual reports				
-	3. Undertake the assignment, generate the assignment report.	-Number of CBOs capacitated and type of capacity building provided	-Capacity building reports			120,000.00	
	4. Implement the assignment						

	recommendations.						
er a	1. In addition to sectoral policies and regulations, identify the key issues including the socioeconomic benefits of the sector that need inclusion in the programme. The programme shall also include a communications strategy (e.g. media, place, time, etc.).	-Public sensitization programme developed and implemented	-Copy of the sensitization programme	Extension	Print and Electronic media houses	600,000.00	
	2. Implement the programme.	-Percentage increase in the level of awareness of sectoral policies among the general public	-Programme implementation reports				
er ns	1. Conduct an assessment of the key issues negatively impacting the participation of	-Assessment conducted and report generated	-Copy of the assessment report and programme of intervention.	Extension	Admin. & Finance		600,000.00

ly.	indigenous Gambians in the artisanal and industrial fishing industries.						
	2. Based on the conclusions and recommendations of the assessment, develop and implement a programme of intervention for addressing these problems.	-Percentage increase in the participation of Gambians in the artisanal and industrial fishing sub-sectors	-DoF quarterly and annual reports		MSC		
oy	1. Undertake a data collection and analysis of the current contribution and potential of Fisheries to GDP, employment creation, foreign exchange earnings and poverty reduction including gendered poverty.	-Up-to-date data on the GDP, employment and foreign exchange earning potentials of fisheries and aquaculture available	-GDP, employment and foreign exchange earnings potential report	Admin. & Finance	MOFEA, NA	100,000.00	
	2. Meet and lobby key	-Percentage increase in	-Lobby meeting				100,000.00

	stakeholders such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.	budgetary allocation and disbursement to the sector.	minutes. -National budget and disbursement reports				
er ed al re	1. Identify key national and international stakeholders responsible and/or sponsoring the requisite national support infrastructure for the sector. 2. Lobby and advocate for increased focus on the sector and support from them.	-Key stakeholders identified and lobbied  -Percentage increase in the various categories of national support infrastructure to the fisheries sector.	-Key stakeholder mapping report -Lobby meetings reports. -DoF Annual reports -National reports (budget speech, etc.)	Inspectorate, Extension, Research & Development	Research & Development, MCS, Lab	100,000.00	100,000.00
er al ork	1. Explore the feasibility of fully decentralising the fisheries and aquaculture management structures.	-Feasibility study on the decentralization of fisheries and aquaculture management infrastructure conducted and recommendations	-Copy of the feasibility study	Admin. & Finance	Extension	200,000.00	

		implemented					
	2. If feasible, pilot in the West Coast Region and gradually roll out to other regions based on their economic potential.	-Number and type of new structures established across the country.					
	1. Conduct a mapping exercise of all key stakeholders of important sectors to the fisheries and aquaculture.	-Mapping exercise of key stakeholders in the fisheries and aquaculture value chain conducted	-Copy of the mapping exercise report	Admin. & Finance	All members of the Fisheries Advisory Committee, Food Safety and Quality Authority, Gambia Standards Bureau and National Nutrition Agency	100,000.00	
	2. Engage them and develop a TOR for the proposed platform.	-Level of improvement in addressing issues of concern among stakeholders of the aquaculture value chain.	-Meeting reports of the platform			50,000.00	
	3. Ensure regular conduct of meetings, generation of meetings reports and resolutions and their implementation.		-DoF quarterly and annual reports			50,000.00	50,000.00



7, ey nd ic  ng	1. Conduct a mapping exercise of key national, regional and international stakeholders including their areas of intervention and interest.	-Mapping exercise conducted	-Mapping exercise report	Admin. & Finance	MOFA, MOTIE, GEIPA, GCCI, MOFEA	250,000.00	
2. Engage them individually and jointly where possible to enable reach agreements on improving the socioeconomic benefits of the fisheries and aquaculture sector.	-Number of partnership agreements reached and implemented	-Copy of agreements	75,000.00			25,000.00	
3. Implement and review agreements regularly.		Agreements implementation reports (DoF					
4. Continuously monitor the macroeconomic and industry environment for emerging		monthly, quarterly and annual reports).	50,000.00			50,000.00	

	opportunities for new partnerships.						
es						3,699,000.00	6,424,750.00

### Aquaculture Sub-sector

Objective	Strategic Activities	Expected Outcomes/Measurable Indicators	Mean of Verification/Success Criteria	Responsible Department	Partners	Budget (GMD)		Remarks
						2017	2018	
1.1.1b: By December 2017, upgrade the Aquaculture Unit to a fully functional unit.	1. Determine the resource requirements for the proposed Aquaculture Unit.	-Resource requirement analysis conducted	-Resource requirement analysis report	Aquaculture Development	MOECC NR, PMO	200,000.00		
	2. Develop TOR for the various units and JDs for each of the proposed staff positions.	-TOR and JDs developed	-Copy of TOR					
	3. Furnish and equip the Department.	-Department fully furnished and equipped	-Furniture and equipment invoices and					1,000,000.00

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			receipts						
	4. Recruit/train staff and operationalize.	-Number of staff trained/recruited and type of training provided	-DoF payroll and training report/s				250,000.00		
1.1.2b: December 2017, generate a comprehensive aquaculture investment programme at the CBOs level (species: shrimps, oyster, etc. and techniques and technologies such as rice-cum-fish culture, cage,	1. Conduct an evaluation of current and similar projects in The Gambia and other parts of the world. This should be done in consultation with key stakeholders and projects beneficiaries.	-A comprehensive review of aquaculture programmes in The Gambia and other parts of the world conducted	-Copies of evaluation report, project proposals and implementation reports including DoF monthly, quarterly and annual reports)	Aquaculture development	MOECC NR, MORGL	500,000.00			
	2. Develop project and funding proposals for support from the national budget and donors.	-Donor funding mobilized					300,000.00	250,000.00	
	3. Mobilise the needed resources.	-Increase in the aquaculture production					500,000.00		

tank, etc.) in the various appropriate districts of the country.	4. Implement the programme.	capacity of CBOs						
1.1.3b: By June 2018, fully operationalize a research and data management function/unit and system for the Aquaculture Sub-sector .	1. Based on results from the staff audit and capacity needs assessment (see Table 3.4c: Objective 1.1.1) of and specific assessment of the research and data management function of the Aquaculture, determine the requisite capacity needs that require addressing including recruitment of new staff and/or training of existing ones (extension	-Capacity needs requirements of the Research and Development function assessed	-Capacity needs assessment report Web address of upgraded and updated DoF website	Aquaculture development	Research and Development, Admin. & Finance			

	workers) and training of fishermen and staff of aquaculture Unit, establishments and other key stakeholders such as, fish mongers, processors and exporters.							
	2. Upgrade the DoF's website into a comprehensive public depository for all types of data on aquaculture in The Gambia and for all users including fisheries scientists, researchers, managers and policy makers, seafood consumers, buyers, retailers and distributors.	-Website upgraded and updated				270,000.00		

	3. Additionally, explore the possibilities of exploiting suitable technologies or developing new applications for data collection and management on the aquaculture database.	-Type and number of new supporting technological opportunities explored and introduced				30,000.00	5,000.00	
3.1.1b: By December 2017, conduct a capacity needs assessment for key stakeholders (trade groups, CBOS, etc.) of the	1. Develop TOR for the assignment.	-TOR developed	-Copy of TOR, capacity assessment report and DoF reports	Extension	Aquaculture Development	<b>25,000.00</b>		
	2. Set up a committee to conduct the assignment.	-Stakeholder capacity needs assessment conducted	-Capacity building reports					
	3. Undertake the assignment, generate the assignment report.	-Number of stakeholders capacitated				<b>175,000.00</b>		

aquaculture sub-sector.	4. Implement the assignment recommendations.					200,000.00	200,000.00	Will be informed by the assignment report and the budget should be appropriately disaggregated for the 2018-2021 period
4.1.1b: By January 2018, would have increased DoF's budgetary support by 25%.	1. Undertake a data collection and analysis of the current contribution and potential of Fisheries to GDP, employment creation, foreign exchange earnings and poverty reduction including	-Analysis of the GDP, employment and foreign exchange earning potentials of fisheries and aquaculture sector conducted	-GDP, employment and foreign exchange earnings potential report	Directorate & Administration	MOFEA, NA	200,000.00	50,000.00	

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	gendered poverty.							
	2. Meet and lobby key stakeholders such as the OP, MOFEA and National Assembly for an increase in the budgetary allocation to the sector.	-Percentage increase in budgetary allocations to the sector.	-Lobby meeting minutes -National budget reports and disbursements to the sector				50,000.00	
4.2.1b: By December 2021, create 15,000 full-time jobs in aquaculture sub-sector.	1. Establish one fish/aquaculture hatchery in each region.	-Number of fish hatcheries established	-Monthly, quarterly and annual reports of DOF	Admin. & Finance	Extension		2,700,000.00	
	2. Strengthen peripheral industries such as pond, fiber glass tank and cage construction.	-Number of businesses in the peripheral industries strengthened	-Field and monitoring visits of the Aquaculture Unit			4,000,000.00	4,000,000.00	
	3. Assist grow-out farmers to build fish ponds, tanks,	-Number of grow-out farmers supported and number of new fish	-Project site visits			1,000,000.00	1,000,000.00	

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	cages, etc.	ponds, tanks, cages, etc. constructed						
4.3.1b: By December 2017, generate an aquaculture potential area map of The Gambia.	1. Conduct a mapping exercise of marine, river rine, flood plains and upland environment and generate the mapping report	-Aquaculture potential area map developed	-Copy of the mapping exercise report	Aquaculture Development	GBOS, Department of Physical Planning and Housing, Lands and Surveys	300,000.00		
4.4.1b: By December 2018, generate a comprehensive list of potential aquaculture feed ingredients.	1. Conduct a survey of agriculture by-products.	-Survey of agriculture by-products and analysis and testing of new feed formulae undertaken	-Survey report	Aquaculture Development	NARI	200,000.00		
	2. Undertake proximate analysis of feed ingredients and prepare feed formulae for different types of fish.		-Report of feed trials				450,000.00	
	3. Conduct feed trials to identify good feed formula		-Copy of new aquaculture feed formulae					

	for specific fish species.							
	4. Engage and provide feed mills with the new formulae.							
<b>Sub-total - Aquaculture Sub-sector</b>						<b>7,900,000.00</b>	<b>9,955,000.00</b>	
<b>GRAND TOTAL</b>						<b>11,599,000.00</b>	<b>16,375,000.00</b>	