

THE REPUBLIC



OF THE GAMBIA

**AGRICULTURE AND NATURAL RESOURCES (ANR)
POLICY (2009 – 2015)**

JULY 2009

Table of Contents

List of Acronyms	iii
Forward	iv
Executive Summary	vi
A. CONTEXT	1
1.1. Geo-Social Situation	1
1.2. The Economy	1
1.3. Poverty and Poverty Reduction in The Gambia	2
1.4. The Macro-economic Development Framework	3
1.5. Rationale for an ANR Sector Policy	3
B. OVERVIEW OF THE AGRICULTURE AND NATURAL RESOURCES SECTOR	4
2.1. Importance (Role and contribution) of the ANR Sector in the Gambian Economy	4
2.2. General Performance of the ANR Sector and Trends	5
2.2.1 Crops	5
2.2.2. General Production Trends of Cereals	6
2.2.2.1. Coarse Grains	6
2.2.2.2. Early Millet	7
2.2.2.3. Late Millet	7
2.2.2.4. Maize	7
2.2.2.5. Sorghum	8
2.2.2.6. Upland Rice	8
2.2.2.7. Swamp Rice	8
2.2.2.8. Irrigated Rice	8
2.2.3. Groundnuts (General)	9
2.2.4. Other Crops	10
2.2.4.1. Sesame	10
2.2.4.2. Cowpeas	10
2.2.4.3. Cotton	10
2.2.5. The Horticulture Sector	10
2.2.6. Roots and Tubers Production	11
2.2.7. Fisheries	11
2.2.8. Livestock	12
2.2.9. Forestry	13
2.2.10. Parks and Wildlife	143
2.2.11 Environment	14
2.2.12. Water Resources	14
2.3. Potential of the ANR Sector for Poverty Reduction in The Gambia	15
2.4. General Constraints of the ANR Sector	17
2.5. Past Policy Approaches for the ANR Sector, results and lessons learnt	19
C. A NEW VISION FOR THE ANR SECTOR	22
3.1 The Key Strategic Objectives for the ANR Sector by 2015	23
3.2 Areas of Focus of the Policy	23
D. SUB SECTOR POLICIES AND STRATEGIES	25
4.1 Institutions (Public and Private Sectors)	25
4.1.1 Policy Objectives for the Roles of Stakeholders in the sector	26
4.1.2 Institutional Support Services (Technical Departments)	26
4.1.3. Farmers and Community Based Organizations (FBOs and CBOs)	27
4.1.4. Cooperatives	28
4.1.5 Civil Society Organizations (CSOs)	30
4.2 Crops	31
4.2.1. Staple Food Crops	31
4.2.2. Horticulture	34

4.3	Livestock	36
4.4	Fisheries	39
4.5	Forestry	41
4.6	Parks and Wildlife	43
4.7	Lands and Soils	45
4.8	Water Resources	47
4.9	Irrigation	48
4.10	Mechanization	49
4.10.1	Animal Draught Power	51
4.11	Infrastructure	52
4.11.1	Storage	52
4.11.2	Market Structures	53
E.	SUPPORT SERVICES TO THE ANR SECTOR	53
5.1.	Agricultural Research	53
5.2.	Agricultural Extension	55
5.3.	Agricultural and Rural Financial Services	56
5.4.	Agribusiness, Agro-Industry, Agro-Processing, Markets	57
5.4.1.	Agribusiness and Markets	58
5.4.2.	Agro-industries and Agro-processing	59
F.	CROSS CUTTING ISSUES (GENDER, ENVIRONMENT, CLIMATE CHANGE, PESTS AND DISEASES, BIOTECHNOLOGY, BIO-SECURITY)	61
6.1	Gender	61
6.2.	Environment	63
6.3.	Climate Change	64
6.4.	Pests and Diseases	65
6.5.	Biotechnology and Bio-security	67
G.	FOOD AND NUTRITION SECURITY	68
7.1.	Food Safety and Quality Control	69
H.	COORDINATING SUPPORT FROM, AND ESTABLISHING LINKAGES WITH OTHER SECTORS IN THE ECONOMY TO ENHANCE ANR SECTOR DEVELOPMENT	70
8.1.	Trade and Industry	71
8.2.	Tourism and Entertainment	72
8.3.	Health	72
8.4.	Transport and Communication Including Information Technology	73
8.5.	Energy	73
8.6.	Education	74
I.	STRATEGY FOR IMPLEMENTATION OF THE ANR POLICY	74
9.1.	Framework for Managing the implementation of the ANR policy	74
9.2.	General Roles of key Stakeholders in the sector	75
9.3.	The Specific Roles of Government	75
9.4.	Other Government Institutions	76
9.5.	Roles of the Private Sector	76
9.6.	Roles of CSOs (including NGOs and NGOs) will include the following:	76
9.7.	Roles of Development Partners	77
9.8	Planning, Monitoring and Evaluation in support of the ANR Sector Policy	77
9.10	Monitoring and Evaluation Mechanisms of the Sector	78
J.	FINANCING AGRICULTURAL DEVELOPMENT	79
K.	RISKS TO SUCCESSFUL IMPLEMENTATION OF THE ANR SECTOR POLICY	79

List of Acronyms

FAO	Food and Agriculture Organization
DRI	Development Research Institute
ECOWAP	ECOWAS Common Agriculture Policy
CBOs	Community Based Organizations
FBOs	Farmers Based Organizations
NGOs	Non-Governmental Organizations
M&E	Monitoring and Evaluation
DRPM	Department of Parks & Wild Live Management
EWS	Early Warning Systems
VISACA	Village Savings and Credit Association
IEC	Information Education and Communication
NEA	National Environment Agency
NaNA	National Nutrition Agency
HACCP	Hazard Analysis Critical Control Point
SMEs	Small and Medium Enterprises
US AGOA	
IFC	International Finance Centre
CGIAR	Consultative Group on International Agricultural Research
WARDA	West African Rice Development Association
IITA	International Institute of Tropical Agriculture
CORAF	Conference of African and French Leaders of Agricultural Research Institutes
FARA	Forum for Agricultural Research in Africa
NEPAD	New Partnership for Africa's Development

FOREWORD

The Gambia is a small country with a narrow economic base, relying heavily on its agriculture and related natural resources to provide livelihoods for over 60 percent of the Gambian peoples.

Since the country's Independence in the sixties to date, several attempts have been made to position the ANR sector to enable it make appropriate contributions to the country's priorities for social and economic development. A wide range of policy objectives have been established and implemented albeit with less than the desired results.

As the country moves from one economic development paradigm to another dictated by events within and outside the country, the lessons learned from a combination of the past policy objectives and programmes have provided valuable experience on how best to address the problems that limit the sector from achieving optimum results.

Since 1994, the Gambia has been defining and implementing Poverty Alleviation and Reduction strategies aimed at operationalising the Country's Vision 2020, and more particularly addressing the human dimension of continued economic growth and Millennium Development Goals of the country.

In each of these policy processes, the Agriculture and Natural Resources (ANR) Sector has featured prominently, essentially since poverty in the Gambia has been seen as a rural phenomenon, and mainly agrarian, because of the greater percentage of the population living in the rural areas where poverty has been very high.

Notwithstanding the recognition of the ANR Sector in the country's national development strategy, it is clear that the desired contributions from the Sector are yet to be fully realized. The indications for this shortcoming point to a number of factors chief of which have been inadequate direction, focusing, planning and programming of the sector, and the attendant mobilization of resources to develop and invest in capacities that will produce appropriate results.

It is clear that the absence of a Policy Framework for the ANR sector contributed in a significant way to limiting the positioning of the ANR sector appropriately to enable it play effective roles and make measurable significant contributions to national priority objectives such as poverty reduction, sustainable self reliant food security, management of natural resources and increased foreign exchange earnings.

Mindful of the tremendous potential the ANR sector possesses and its high importance to achieving the overarching long term objectives of the Country's Vision 2020, continued economic growth and Millennium Development Goals, the government has taken the bold step to put in place policy structures that have been absent in the ANR sector, and that will position it appreciably to enable it address the challenges that limit its performance and outputs in national development.

With lead technical support from the Food and Agriculture Organization of the UN, (FAO), other support from the wide range of stakeholders in the sector, from grassroots groups to Civil Society Organizations, Technical Agencies and Institutions to Development Partners, Government put in place a process of consultative engagement to define the nature and scope of the Framework that will establish the Policy for the ANR sector in the medium term, consistent with the country's economic development agenda of poverty reduction. The

experience has been painstaking but rewarding, diverse but focused, multidisciplinary but holistic and expedient to latch on to the current PRS II and other on-going development processes.

With the establishment of this policy framework, we are confident that a new era is evolving for the ANR Sector in the Gambia, and new horizons emerging that will lift the sector to much higher heights in its contributions to national development and beyond. I commend this policy to all stakeholders with the full knowledge that it will be an invaluable guide to providing direction, methodology and scope of actions in exploiting the potential of the sector for our national productive endeavors.

Executive Summary

EXECUTIVE SUMMARY

1. Background

The Gambia is a small country with a population of **1.4 million in 200** with about **40% of the people live in the urban areas**. The **population growth rate is at 1.9% per annum** a **population density of 128 persons per square km**. **49% of the people live in the rural areas and about 60% of the population is under 25 years of age**.

2. The Economy

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 the following sectors:**

- 1. Services, 59 %,**
- 2. Agriculture 28-30 %,**
- 3. Tourism 12 %,**
- 4. Manufacturing and Construction 12 % of the country's GDP.**
- 5. Real GDP growth at factor cost was 7.2% in 2008,**
- 6. Domestic Debt was 32.2 % of GDP in 2008.**

3. Poverty situation

Poverty levels which are presently estimated at **58%** have been fluctuating from **60% in 1992, 63% in 1998 and 61% in 2003** in the country. Poverty has been identified as a rural phenomenon but recent information indicates that it is an increasing urban phenomenon. About **91 percent of the ultra poor** and **72 percent of the poor** live off agriculture as their main source of livelihood.

4. The Macro-economic Development Framework

The country formulated a long term plan; **Vision 2020** aimed at transforming the Gambia into a middle-income country, and has been implementing its **Medium Term Strategic Plans** largely **The Poverty Reduction Strategies (PRS)** to operationalise Vision 2020 and achieve the country's **UN Millennium Development Goals (MDGs)**. The Country is on its second PRSP II which contains 5 principal objectives one of which directly focuses on the Agriculture and Natural Resources (ANR) sector:

“Enhancing the capacity and output of productive sectors: Agriculture, Fisheries, Industry, Trade and Tourism, with emphasis on productive capacities of the poor and vulnerable populations”

5. Rationale for an ANR Sector Policy

Since the macro-economic problems which the PRS II aims to address are largely rural and agrarian in nature, the ANR sector possesses strengths that have positioned it to be central to the country's economic growth in the achievement of the Vision 2020 objectives and the aspirations of the MDGs **“....to halve the proportion of the poor and those who suffer from hunger by 2015 and 2020 respectively.”** A clear policy framework is therefore necessary to provide a logical basis for the planning, support to, and management of the ANR sector to contribute meaningfully to national priorities.

6. OVERVIEW OF THE AGRICULTURE AND NATURAL RESOURCES SECTOR

I. Role and contribution

The ANR sector presently produces about 50 percent of national food supplies using about 54 percent of the country's total arable land resources i.e. >300,000 ha.. It contributes about 30 percent to the country's GDP and employs over 70 percent of the active labour force. The ANR sector also generates

foreign exchange earnings and provides two-thirds of total household incomes. It has enormous potential for eco-tourism and agro-industrial development.

Article I. II. General Performance of the ANR Sector and Trends

The performance of the ANR Sector in the past decades has been constrained, mainly by:-

1. **Adverse climatic conditions from 1968 to present (the draught of the Sahel -1980s);**
2. **The Structural Adjustment Programs of the 1980s without sequencing;**
3. **The Low Private Investment in value added agro industrial enterprises,**
4. **The Declining international agricultural commodity prices and unfair trade;**
5. **The Soaring Food Prices and high cost of agricultural inputs such as fertilizers etc;**
6. **Weak agricultural research and poor extension delivery services;**
7. **Inadequate domestic policies, especially to create an enabling environment for small producers to be effectively linked to markets, and private sector to invest measurably in the sector.**

A. Crops

The Crops sub-sector generates approximately **40% of the foreign exchange earnings** and accounts for about **33 percent of the Gambia's GDP**. **Seventy percent of the labor force** is engaged in crop production which provides about **75% of total household incomes**.

1. **Total Rice production in 2008 was 24,895 metric tons milled rice**, leaving a massive deficit of **150,605 metric tons or 117 percent of national requirements**.
2. **The total cultivated area under Cereals (coarse grains and rice) increased, by 50 percent from 156,620 ha in 2001 to 238,381 ha in 2008**, with about 56% planted under early millet. A total national requirement for coarse grains is **87,000 metric tons**, and production of the crops in 2008 was **196,142 metric tons**, or **225 % above the national requirements**.
3. **Production of Early Millet was 108,404 metric tons in 2008**, while that of Late Millet reached an all time high of **17,220 metric tons in the same year**.
4. **Production of Maize reached 44,894 metric tons in 2008**, using mainly low outputs technologies and inefficient post-harvest processing technologies.
5. Since 2000, production of **Sorghum** has averaged **25,000 metric tons** reaching an all time high of **25,624 metric tons in 2008**. Major constraints in production are inadequacy of suitable varieties and fertilizers.
6. **Production of Upland Rice increased from 2,700 metric tons in early 1990s to a high of 22,800 tons in 2008**. Performance is expected to increase further with the introduction of the New Rice for Africa (NERICA), whose yields average 2.5 metric tons per hectare in farmers' fields.
7. **Production of Swamp Rice** has not been consistent, fluctuating between **12,500 metric tons in the 1990s** to an average of **10,500 metric tons in 2008**.

Key constraints in production relate to:

- I. **Timely operations,**
 - II. **Access to swamp land,**
 - III. **Saline intrusion and use of low inputs.**
8. **Production of Irrigated Rice** is by pump and tidal irrigation, the latter being less costly. The cultivated area under the system has expanded to about 2,500 ha in early 2008. Yields from irrigated rice production have been encouraging, with up to 6 metric tons/ha registered in both pump and tidal irrigated farmers plots.
 9. **Groundnut** is a major function of the performance of the crops sub-sector and contributes about 66 percent of total earnings from agricultural exports. It is the largest cash crop in the

country. A number of actions are being implemented to address the two most critical constraints affecting output of the crop, namely: the availability of quality seeds and associated inputs and marketing of the produce. Production of the **New Variety (73/33)** has not been consistent between 2000 and 2008, with yields stagnating around 1000 kg/ha. Production of the **Old Variety/28/206** has mirrored that of the 73/33 variety, by not being consistent during the period of 2000 to 2008. Yields also stagnated around 1000 kg/ha with the lowest yield of 680 kg/ha recorded in 2007. This has been closely associated with the dry spell of 2007. **In 2008 total groundnut production increased from 72,000 MT to 102,000MT. In 2009 > 22,000 MT have been processed for export.** In 2008 GOTG and the EU contributed substantially in the promotion of groundnuts production.

10. Total cultivated area of **Sesame** ranges from **3,000 to 4,000 ha** annually with yields averaging between 300 to 400 kg/ha. The major constraints to higher yields are drought, low soil fertility, pests and diseases.
11. Despite its apparent low output, the demand for **Cowpeas crop** is above local production, and deficits are met with imports from the sub region. No empirical Study has been carried out on the crop's performance.
12. **Cotton** is presently grown on about 3,000 ha, and its cultivation is apparently declining. Poor loan recovery in the past supporting production of the crop weakened the continuation of such support resulting in decline in technical services to producers, and subsequently poor production levels and interest in the crop.

B. the Horticulture sub Sector is a key growth area of the economy, contributing about 4% to GDP. Over 65% of agricultural labour force is engaged in this sector with a large women participation (88%) in individual or communal gardens. A few commercial enterprises such as Radville and Kharafi Farms, and Gambia Horticultural Enterprise (GHE) etc, operate in the country.

There two major donor assisted projects (IDB and ADB) in the promotion of this sub sector. A Horticultural Service has been established in 2009 to promote the production of vegetables including mushrooms, fruits and flowers.

A national SEED POLICY proposed by the National Agricultural Research Institute (NARI) has been adopted by Cabinet in 2008.

C. Fisheries

Artisanal fisheries activities have increased markedly in the last two decades, with total production just over **43 000 tons in 2007**. Fish exports from the country are about 2 percent of total artisanal production. Almost all industrial production is exported directly from fishing grounds and not reflected in the country's export figures. **Exports increased from 405 tons in 2004 to 1480 tons in 2007**, due mainly to fish exported by women entrepreneurs.

D. The Livestock sub-sector contributes about 5% to GDP. Production is predominantly traditional, and some of its products, particularly commercial poultry are not price-competitive with cheaper imports, primarily because of the relatively high costs of imported feeds and drugs. The sub sector has been handicapped by lack of qualified personnel i.e. **Veterinary Doctors and Animal Production Specialist.**

A Livestock Marketing Agency Act 2008 has been enacted by **Parliament in 2008** to promote the development of the livestock sub sector.

E. Forestry contributes about **1% to GDP**, and appears to be moving rapidly to position itself to make significant contributions to the country's Poverty Reduction Strategy in areas of its comparative advantage.

A national Forestry Policy is being formulated.

F. the Parks and Wild Life sub sector is a major source of biological diversity of species, genes and ecosystems of the Gambia. A **policy framework** and a **Biodiversity Strategy** have been prepared for private sector investment and community participation in Wildlife resource management.

G. Environment: The Gambia has established policy frameworks to guide protection and management of the **Environment**. It also has one of the best environmental policy implementation strategies in the sub-region particularly the **Gambia Environment Action Plan (GEAP)**.

H. Water: Until recently, provision of **Water Supplies** to the ANR sector focused mainly on irrigation, for rice production, (surface and tidal). **Greater attention is now being paid to manage Water Resources for other potential users such as horticulture, livestock, aquaculture, forestry and agro industry.**

Article II. 7. POTENTIALS OF THE ANR SECTOR FOR POVERTY REDUCTION IN THE GAMBIA

ANR Sector does have enormous potential to make significant contributions in achieving the critical objectives of the Poverty Reduction Strategy II.

1. There is ample available land for expansion of agricultural production. Only about 54 per cent of the total arable areas in the country are under cultivation. Potentials exist for expanding cultivation of food and cash crops from current levels:-

- coarse grains by at least 100 percent to over 2,000 kg/ha,
- Rice by at least 100 percent from current levels of 1 ton/ha, and
- Groundnuts by at least 100 percent over 1,200 kg/ha.

2. The Horticulture sub sector holds enormous promise for increased incomes, and employment, from greater production of competitive commodities to meet requirements of high value markets in the country (**Tourist and Entertainment industry, agro-processing, agro-industries**). There is a large demand for off-season fresh fruits and vegetables in European Markets and the under-exploited sub regional markets.

3. There is significant potential for commercialisation of livestock enterprises to satisfy national demands for meat and dairy products, especially the tourist and entertainment industry. There is Low off Take of ruminants, and the practice of fattening small ruminants is now country wide. Tremendous potential also exists for draught farm power in the country.

4. The Gambian waters have abundant and diverse fish resources. The biomass level for Pelagic fish was estimated at 284,000 metric tons in 2005, and for Demersal fish at 22,000 metric tons. Current fish production is about 1480 tons, 80% of it from Artisanal fisheries, and Studies indicate that fish resources of the River Gambia are still under-exploited and improvements in fishing technology and techniques will increase fish catch landings in inland artisanal fisheries.

5. The Forestry sub sector could arrest and reverse degradation of lands along river banks and mangrove areas and protect others at risk of degradation from erosion, and in the process expand land availability for increased rice production from tidal irrigation, and short cycle cash crops from uplands.

Forestry could also increase the efficiency of the value chains of livestock, especially increasing off-take and processing of cattle in the rangelands of the country.

6. Agro-processing holds tremendous potential to enhance the process of poverty reduction in the country. Processing of groundnuts could stimulate increased production and expanded marketing of the crop: efficient mechanized processing of rice and findo could increase considerably the availability of and access to such food crops from local production as well as the intake of safe, nutritious and diversified foods.

7. Agro-Industries and Markets possess potential to transform the ANR sector from a traditional subsistence sector to a commercial and modern one by creating opportunities to produce selected high value commodities such as cereals, horticulture, vegetable oil crops, livestock, fish and forest products.

8. Recent changes in the extension services of the Ministry of Agriculture in which 6 Regional Directorates and 9 Technical Services have been established will greatly increase the extension delivery system in the country.

Article III. 8. GENERAL CONSTRAINTS OF THE ANR SECTOR

- 1. Production is overtly reliant on one season rain fed agriculture from June to September.** Rains are increasingly uncertain and unpredictable in time and volume. The absence of adequate water control measures and irrigation structures that will assure continuous production have hampered progress.
- 2. The Extension services are presently monovalent, with an extension/farmer ratio of 1: to over 3,500,** and not cost effective in their delivery performances. They are not equipped with essential working tools such as mobility, planned messages, skills and knowledge to transfer appropriate technologies or provide much needed advice and information to producers, in investment and management of their enterprises.
- 3. Soils in the Gambia are generally poor in organic matter and chemical fertility,** requiring high inputs of manure and fertilizers to increase yields and quality.
- 4. Relatively high incidence of pests (weeds, insects) and diseases** in horticultural crops, staple food crops and livestock, significantly reduce production and quality of the commodities, and minimize profit.
- 5. The production costs of livestock, particularly poultry are relative high compared with imports,** resulting from use of low outputs technologies and inefficient inputs supplies systems. Cattle production is constrained by scarcity of feed and water during the long dry season, aggravated by rampant bush fires which consume most of standing hay, crop residues and by-products to feed cattle. Livestock marketing in the Gambia is predominantly non Gambian, with relatively very low Gambian participation. **A Livestock Marketing Agency Act 2008** has been enacted by **Parliament in 2008** to promote the development of the livestock sub sector.
- 6. The major constraints to fisheries include:-**
 - i.** absence of a Fisheries Port and lack of sufficient industrial on-shore facilities (fish factories) to encourage landing of high value fish catches from Gambian waters;
 - ii.** inadequate fish handling and storage facilities;
 - iii.** poor distribution and marketing systems and structures;
 - iv.** few local personnel with appropriate managerial and technical competence to operate fish business ventures.
- 7. Agribusiness, Agro-industries, Agro-processing** sub sectors are characterized by numerous smallholder (household) entities using low output technologies and labour intensive systems leading to leakages, low quality and low income. Market opportunities are not easily known or accessed by small producers.
- 8. Infrastructures such as warehouses to support farm to market activities such as bulk storage and handling that enhance higher margins are very limited or absent.** Relatively high transport costs from production to market areas discourage producers from ensuring supplies. Inadequate air cargo space during peak season and high costs of airfreight are major constraints limiting export of horticultural produce.

9. **Financial services a particularly credit is not easily accessible to small and medium scale producers, or at best, are** perceived to be expensive. Inappropriate use of available credit by the small producers themselves limits sustainability of the services to them.
10. The private sector operatives that are aware of opportunities in the ANR sector are few and not properly strong or prepared to take the risk and make the necessary investment.
11. Institutions for policy advice, investment information, research and extension are weak in quantity and quality and are limited in resources to perform their expected tasks.
12. Availability of water supplies particularly by small and medium scale holders in the sector, especially for the production of high value commodities is either expensive or not continuous. Water supply services are constrained by inadequate qualified personnel who could ensure cost-effective delivery of supplies as needed.

9. PAST POLICY APPROACHES FOR THE ANR SECTOR, RESULTS AND LESSONS LEARNT

- i. **Pre- Independence Era:** the focus was on exploiting segments of the value chains of selected export commodities, particularly Groundnuts, and Rice.
- ii. **Post-Independence 1960s:** the emphasis was on general food production popularizing pump irrigation.
- iii. **In the 1970s:** Self sufficiency in food production was pursued mainly through increased rice production from irrigation: Government promoted marketing beef, processing hides and skins and production of dairy products on a pilot scale. Cotton was introduced as a means of reducing overdependence on groundnuts.
- iv. **During the 1980s:** Macro-economic Structural Adjustment was applied without due regard to the ANR sector's requirements, with the result of reduced livestock and crop production.
- v. **In the 1990s:** Food Security emerged as a theme and a way forward for the agriculture sector, and diversification of the food and export base became a focus for Government action.
- vi. **From 2000 to 2008:** Food Security at both household and national levels did not only become the flagship policy approach for the sector but the yardstick of the sector's contribution to the macro-economic priority of Poverty Reduction and economic growth.
- vii. **For 2009-2015, there is a A New Vision for the ANR Sector:** A sharpened focus on transformation of the sector from a traditional low output, subsistence economy with centralized structures, to a modern, market led sector with efficient value chains, diversified production base and effective decentralized structures.

10. THE KEY STRATEGIC OBJECTIVES FOR THE ANR SECTOR BY 2015

- i. **Improved and sustainable measurable levels of food and nutrition security in the country in general and vulnerable populations in particular.**
- ii. **A Commercialized ANR sector ensuring measurable competitive, efficient, and sustainable food and agricultural value chains, and linkages to markets.**

- iii. **Institutions (public and private) in the sector are strengthened, and providing needed services, strong and enabling environment, and reducing vulnerability in food and nutrition security.**

- iv. **Sustainable effective management of the natural resource base of the sector**

Article IV.

Article V.

Article VI. 11. AREAS OF FOCUS OF THE ANR POLICY

1. Sensitization, Awareness creation, Consultations, Dialogues among stakeholders (small holders and private sector) mainly to extend the information outreach on the opportunities for the ANR sector.

2. Increasing Food production and meeting national sufficiency on a self reliant basis through: intensified (irrigated and mechanized) production of the staple food crops.

3. Advancing the process of commercializing and modernizing the sector, through:-

- i. **Targeting the production of selected high value market commodities;**
- ii. **Availability of Financial services;**
- ii. **Availability and access to affordable water supplies year round;**
- iv. **Popularizing Mechanized farm power use by small producers;**
- v. **Increasing private sector involvement in high value market commodities;**
- vi. **Enhancing agribusiness and advocating creation and expansion of markets**

4. Strengthening selected institutions to deliver needed services.

5. Supporting the Livestock, Fisheries and Forestry sub sectors for increased production.

6. Enhancing sustainable management of natural resources.

7. Strengthening capacities for preparedness and management of disasters

Article VII.

Article VIII. 12. SUB SECTOR POLICIES AND STRATEGIES

Institutional Support Services (Public and Private Sectors)

Technical Departments:

The Policy will focus on three key areas, ensuring:-

1. Technical Services

A. a range of technical services strengthened and or established, well equipped, disciplined, motivated and responsive to needs;

B. an established organizational environment for technical services;

C. a strengthened decentralized technical structure with increased organizational transparency and sufficient authority

2. Farmers and Community Based Organizations (FBOs and CBOs)

Ensure existing and/or emerging farmers' organizations are facilitated to be well organized, formally recognized, with appropriate capacities to manage their enterprises

a. Cooperatives

A revitalized strong and effective Cooperative Movement in the ANR Sector providing services to its constituent member societies, for regulation, advocacy, monitoring, inputs outputs marketing and building capacities of the societies

b. Civil Society Organizations (CSOs)

The major policy objective is strong, vibrant networks and alliances of farmers and producer groups effectively advocating for pro-poor macro-economic policies at all levels (local, national and international), mobilizing resources for their use and establishing linkages between their members and sources of support

3. Crops

i. Food Crops:

- a. Availability of, and access to safe and nutritious staple food crops through sustainable self reliant increased production from.
- b. Effective delivery services and essential inputs made available, timely and , affordable, accessible in every District of the country;
- c. Much greater emphasis will be on facilitating small and medium producers mainly through Cooperatives and Farmers Organizations

ii. Horticulture:

- a. By 2015 a modernized, commercialized and vibrant horticulture sub sector producing competitive products for high value markets (tourist and entertainment industry) and exports;
- b. Infrastructure, (warehouses, processing facilities, market information systems and transport) are available and being used and are increasing competitiveness, added value, income and employment

iii. Livestock:

- a. sustainable increased production and productivity of livestock, meeting at least 75% of national demands in meat and meat products and by at least 25% of milk products over present levels;

iv. Fisheries:

- a. Fish supplies would have increased by at least 30 % of present levels to meet food, fish security needs of the country particularly of the vulnerable populations;

v. Forestry:

a. A Special Initiative will be in force, ensuring wood and non-wood forest products are sufficiently available in a sustainable way to meet national requirements;

b. Advanced mechanisms in place and being applied in a participatory way, ensuring multiple use of forests and forest resources/products in a sustainable way for food and nutrition security, incomes, employment and investment;

c. At least 20% of the total land area will be under effective forest management.

vi. Parks and Wildlife:

- a. the level of protection and availability of wildlife of the Gambia and their habitat would have risen by at least 75% of present levels, and incidence of pest-farmer conflict on the production of food crops would have been reduced to below 5% of present records;

- b. Parks and wild life resources would be under organised and sustainable participatory management

vii. Lands and Soils:

- a. Throughout all production areas in the country, there will be visible and measurable reduction of land and soil degradation, from participatory application and monitoring of appropriate land use and soil management best practices, especially by small and medium producers, agro-processing and agro-industrial enterprises in the ANR sector.

viii. Water Resources:

- Farming communities in the country are having secured year-round supplies of affordable quality water for production of basic food commodities grown from their land holdings, and production of high value market agricultural commodities

ix. Irrigation:

- Irrigation schemes that are affordable to users, particularly small holders will be promoted vigorously, primarily for high value crops; existing schemes will be consolidated and expanded, and new ones established in collaboration with the National Environment Agency (NEA), providing year-round water supplies

x. Mechanization:

a. A Special Initiative ensuring widespread awareness and adoption of mechanized farming; promotion/facilitation of partnerships (**public/private sector**), resource mobilization for special packages for small producers;

b. participation of grassroots organizations in, and use of mechanization in the value chains (production, post production handling, agro-processing and agro-industries) to raise productivity increased outputs, incomes of small producers and agents in the ANR sector.

xi. Animal Draught Power:

- Draught animal power technologies are revitalized, made cost effective, affordable, and being widely used by small holders

xii. Infrastructure:

a. Storage

- Small-scale enterprises are being empowered with user managed facilities for handling and storage of agricultural produce and commodities

b. Market Structures

- Government will adopt a participatory approach (public/private partnerships) to provide enabling support, and facilitate the availability and use of market structures for agricultural purposes, particularly for small to medium enterprises

3. Agricultural Support Services

i. Research

- Research services will be directed to ensure widespread use of improved diversified and affordable varieties of quality genetic materials of food and cash crops, particularly:
 - a.** rice, millet, sesame, cowpea, maize;
 - b.** high value horticultural crops, and
 - c.** breeds of livestock and fish in technical packages that are affordable and easily accessible particularly by small to medium scale farmers

ii. Agricultural Extension

- A strong, efficient, dynamic polyvalent extension service linked to research, equipped with knowledge, technology packages and skills providing information and transferring knowledge and skills to producers; particularly of small to medium scale.

iii. Agricultural and Rural Financial Services

- Appropriate systems and mechanisms are established, providing financial services to all categories of farm enterprises with particular focus on small to medium holdings, women and youth

iv. Agribusiness and Markets

- Ensuring an enabling environment is in force, guaranteeing and enhancing a vibrant sustainable agribusiness sub sector that is widespread in the country, with active participation of women and youth, especially small producers

v. Agro-industries and Agro-processing

- a.** Stakeholder Platforms in the sub sector are established, strengthened, functioning and carrying out a number of activities primarily bringing about mind set change and full participation of indigenous small and medium scale enterprises;

- b. forging and facilitating partnerships in various cost effective processing and industrial activities in the ANR sector

13. CROSS CUTTING ISSUES

(Gender, Environment, Climate Change, Pests and Diseases, Biotechnology, Bio-security)

1. Gender:

Gender equity will be mainstreamed in all programmes and projects of the ANR sector, ensuring recognition of the roles and comparative advantages of women access to essential resources and provision of support appropriate to their needs in their various vocations in the ANR sector.

2. Environment:

There will be country wide awareness of environmental degradation, and mainstreaming of all Environmental considerations in the planning and implementation of all activities in all segments of the value chains of the food and cash commodities of the ANR Sector.

3. Climate Change:

Mechanisms will be in place in the ANR Sector ensuring agricultural activities in the country do not contribute to such changes.

4. Pests and Diseases:

By 2015, outbreaks of major pests and diseases in staple food and high value market crops would have been reduced to below thresholds (in quantity and time), surveyed on periodic basis as set by the Government, and within the guidelines by the **International Plant Protection Convention, (IPPC)**.

5. Biotechnology and Bio-security:

An institutional and legal framework would have been established on biotechnology in the country, and activities being carried out to advance best practices in the ANR sector

14. FOOD AND NUTRITION SECURITY

Constant monitoring of, and advocacy for availability of, accessibility to supplies and sufficient consumption of safe and nutritious major staple foods (rice, cereals, horticultural crops, fish and livestock especially short cycle ruminants)

Section 8.01 I. Food Safety and Quality Control:

Section 8.02 Ensuring constant awareness and understanding of the link between food and health; supporting and promoting availability of safer, healthier and more varied foods involving crops, meat and sea food through a variety of programmes and projects, especially in highly populated areas;

15. COORDINATING SUPPORT FROM OTHER SECTORS IN THE ECONOMY TO ENHANCE DEVELOPMENT OF THE ANR SECTOR

The ANR sector will advocate for and be proactive in ensuring **Inter-Ministerial Coordination**, support and collaboration holding consultations and dialogues with the private sector in the conceptualization, planning and implementation of ANR Sector related activities in the other relevant sectors of the economy, and advocate for mainstreaming ANR sector considerations into the planning processes of those sectors. They include:-

1. Trade:

For a sustainable enabling environment to create and take advantage of opportunities in trade for ANR sector commodities, with particular emphasis on small and medium producers.

2. Tourism and Entertainment:

Facilitating partnerships that will strengthen linkages among stakeholders, particularly between small producers and operators in **the Hotel, Tourism and Entertainment Industry**.

3. Health

- joint actions to: minimise malnutrition, ensuring safe and nutritional foods, management of pandemic diseases, creating markets for the ANR sector products

4. Transport, Communication and Information Technology

- prioritizing and providing improved infrastructure that will influence positively the performance of the sector – roads, markets, communications systems affordable to small producers

5. Energy

- Ensuring availability of affordable energy supplies particularly for agro-industries, transportation and rural small to medium scale production and added value activities

6. Education

- Ensuring strengthened educational institutions and systems in the ANR sector for quality human resources and effective delivery of technical support services

Article IX. 16. STRATEGY FOR IMPLEMENTATION OF THE ANR POLICY

The Ministries of Agriculture, Forestry and Environment; Fisheries and Water Resources through the ANR Working Group at the National Environment Agency will have oversight responsibility for coordinating the implementation process, and will perform this function through arrangements to be established at national level for inter-ministerial and other stakeholders' coordination through to the regions in the country.

Clear Roles have been specified for the various key stakeholders in the ANR sector, including: Government, Private Sector, Farmers Organizations, CSOs, and Development Partners

Article X.

Article XI. 17. PLANNING, MONITORING AND EVALUATION IN SUPPORT OF THE ANR SECTOR POLICY

This will be carried out at two levels:

A. At Sector Level

The ANR Working Group of NEA chaired by MOA will provide overall policy direction and guidance for planning, monitoring and evaluation of the sector and policy.

The Group will be supported by a Technical Advisory and Implementation Committee.

B. At the Decentralized level

At the Regional level, the Technical Advisory and Implementation Committee of the ANR Working Group, in collaboration with the Regional Administrative Authorities will coordinate inputs from the Regions for inclusion into the Annual Plans and programmes prepared by the **ANR Working Group**, and monitor implementation in their respective locations

18. FINANCING AGRICULTURAL DEVELOPMENT

Financing the activities under the ANR Sector Policy will be sought from a number of sources including the following:-

- 1. The Government's multi-year Poverty Reduction Strategy Budgetary Support.**
- 2. Budgetary Support from Donors.**
- 3. Technical Assistance from Development Partners e.g. UN and other Support Agencies.**
- 4. Support from, and Agreements with Multi-lateral and Bi-lateral Funding Institutions, including Loans and grants.**

5. Loans and investments from local financing institutions (Banks and Cooperatives).
6. Co-financing Arrangements and Partnerships between Government and other External Investment/Development Agencies and Private Sector Interests.
7. Beneficiary contributions and support from Civil Society Organizations

19. RISKS TO SUCCESSFUL IMPLEMENTATION OF THE ANR SECTOR POLICY

- Inadequate national resource mobilization, and release of funds to the ANR sector Ministries for planning and implementation, by the Ministry of Finance and Economic Affairs; delay in setting special macro-economic environment particularly for financial services, mechanization and added value to increase small holder productivity.
- Inadequate strengthening of the Ministries to provide effective services in planning, agricultural statistics, extension and research services.
- Delay in mobilizing and strengthening grassroots institutions to prepare them for market oriented commercialized farming, and establishing public\private partnerships.
- Soaring Global Food prices and unstable commodity markets having implications.

Unusual weather patterns

A. CONTEXT

1.1. Geo-Social Situation

The Gambia is one of the smallest West African Countries on the Atlantic coastline, surrounded by the Republic of Senegal on the northern, eastern and southern sides, and bounded on the west by the Atlantic Ocean. It has a total land area of about 11,000 square kilometres extending approximately 400 km eastwards with widths varying from about 80 kilometres at the Atlantic coast to about 24 to 28 km in the east. The Gambia's population was estimated at 1.4 million in 2004 and growing at an annual rate of 1.9% [World Bank Country Data and Statistics, August 2005]. It is one of the most densely populated countries in Africa with a population density of 128 persons per square kilometre. About 40% of the population is concentrated in the urban areas around Banjul, the country's capital. The rural population which is predominantly agrarian was 91% in 1963 has continuously been decreasing, averaging around 49 percent presently (2003 Population and Housing Census). The data indicates that the active farming population as a proportion of the national population has been shrinking. From the Population and Housing Census, 2003 it is evident that more females have been involved in agricultural activities (nearly 80%) than males (around 60%). About 60% of the population is under 25 years of age.

1.2. The Economy

The Gambia's economy grew between 6 to 7% per annum for the first ten years after independence and at a rate of 4% per annum between 1985/86 to-date. The main features of The Gambian economy have been its small size, narrow base and the influence of the re-export trade destined for the neighbouring countries (including Senegal) in the sub-region. With very limited range of exploitable mineral resources, the economy is primarily dominated by services (particularly in tourism) and agriculture, both of which account respectively for 59 and about 30 percent of the Gross Domestic Product (GDP). The Government is very much aware of the vulnerability associated with the economy's heavy dependence on the ANR sector and its limited diversification, with approximately 70% of the population depending on agriculture for their livelihoods. Therefore, efforts are being made not only to diversify agriculture but also to encourage manufacturing and construction both of which account for 12 percent of the country's GDP.

The Tourism sector makes up about 12% to GDP and is the fastest growing sector of the economy, contributing significantly to foreign exchange earnings and providing employment opportunities for an increasing number of people, as well as having potential for strong linkages with the ANR sector. Despite the contributions made by the above mentioned sectors to the economy, poverty is well evident in The Gambia.

Real GDP growth fluctuated sometimes erratically over the last decade and a half, influenced largely by low performances of the agriculture, services and industry sectors. It rose dramatically from 0.7 percent in 2002 to 2.4 percent in 2003, and dropped to -0.7 percent in 2004, then rebounded strongly in 2005 to 2 percent and subsequently increased sharply to 6.6 percent in 2006 before falling slightly to 6.1 percent in 2007. The industrial and service sectors largely fuelled these spectacular GDP growth rates.

Domestic debt has been on the increase since 2003 when it rose from US\$135.7 Million in 2004 to US\$ 239 Million in 2007 largely as a consequence of the sterilization of capital inflows. The ratio of the domestic debt to GDP was 29.2 percent in 2007, up from 19.0 percent in 2003. Although it compared favourably with external debt, which was

35.9 percent of GDP in 2007, the domestic debt build-up is more significant because of its onerous servicing accompaniment. Unlike external debt, which is largely concessionary, domestic debt attracts sky-high interest rates the situation does not only constrain development outlay but crowds out private sector investment through high interest rates engendered by the increasing sale of treasury bills to finance it.

The Gambia has a narrow tax base heavily reliant on taxes on international trade. In 2003, tax revenue was 13.8 percent of GDP and increased sharply to 18.6 percent in 2004 before moderating to 17.2 percent in 2005. Taxes on international trade accounted for 52.9, 60.2, and 53.5 percent of domestic tax in 2003, 2004, and 2005, respectively. The country's international trade comprises largely re-exports destined for the sub-region, mainly because of its low import duties, well-functioning port and customs services, and limited administrative hurdles. Nonetheless, occasional tensions with Senegal, the harmonization of import duties in the sub-region, and improved port and customs services in Senegal have caused declines in re-exports, underscoring the need to have a more reliable source of revenue and hence growth. About 80 percent of the country's merchandise exports are comprised of re-exports.

The Dalasi depreciated nominally against the United States dollar for most of the period 2001-2007, principally as a result of the reduction in Tourism receipts and groundnut exports, the two main sources of foreign exchange earnings. As of end-2007, the Dalasi depreciated against the United States Dollar by a staggering 33.1 percent.

1.3. Poverty and Poverty Reduction in The Gambia

The Gambia has a human development index ranking of 155 out of 177 nations (UNDP Human Development Index, 2008) making it one of the poorest countries of the world. Per capita income was about US\$290 per annum (WB Country Data and Statistics, August 2005). Though the country has implemented programmes aimed at addressing poverty, with the launch in 1994 of its first Strategy for Poverty Alleviation (SPA), poverty reduction continues to be a challenge with the proportion of people living in poverty rising. Poverty studies conducted in 1998 and 2003 indicate that in addition to increase in the prevalence and severity of poverty, inequality is also increasing.

Based on per capita consumption, the head count index (i.e. the percentage of poor people) in the country is estimated at 61.2% according to the 2003/2004 Population and Housing Census. The poverty gap is calculated at 25.9% whilst the poverty severity accounts for about 14.3%. Comparing this latest information on poverty with previous data, it is observed that poverty levels have been fluctuating; 60% in 1992, 63% in 1998 and 61% in 2003, though continues to remain. In the past, poverty has been defined as rural phenomenon but recent information indicates that it is increasing in urban areas.

Income distribution is skewed, with a wide gap between rural and urban areas. Most of the rural poor are self-employed and depend on agriculture and other rural activities for their subsistence and income. About 91 percent of the ultra poor and 72 percent of the poor have agriculture as their main source of livelihood.

The causes of poverty have been reported to range from widespread food and income insecurity resulting from weather-induced crop failures; to shortage of cash – which forces farmers to sell their produce immediately after harvest, when prices are at their lowest, and to buy back grain at high prices during the hungry season (August – September). Other causes include; rising cost of living including children's schooling and medical care; lack of alternative income-generating opportunities. Poor farmers are

in a vicious circle of poverty-related low income, risk aversion, use of low inputs-outputs technologies and resulting low incomes. The rural poor are generally forced to produce for home-consumption and sell surpluses at disappointing prices.

1.4. The Macro-economic Development Framework

The Government of the Gambia is committed to ensure sustainable human development in the country. The country formulated a long term plan called Vision 2020 aimed at transforming the country into a middle-income country by that year. The vision is expected to be operationalised through the development and implementation of medium term strategic plans. However, since the mid nineteen nineties, reducing the rising levels of poverty has been a major challenge for the government and people of the Gambia.

By the end of 1999, poverty reduction took centre-stage in National Macro- development planning and Development Cooperation, and replaced the mainly donor-driven Structural Adjustment Programmes (SAPs) of the earlier decade. Preparation of a Poverty Reduction Strategy (PRS) became the main framework the Government used to address human dimensions of continued economic growth, sustainable human development and mitigating suffering and marginalization of vulnerable groups of the society. The PRS also assists the Government in its efforts to achieve the UN Millennium Development Goals (MDGs) for the country. The first of such Strategies was prepared and implemented between 2003 and 2005. The second – PRSP II was prepared and adopted, and its implementation started in 2008. The objectives of the current PRSP II are:

1. Improving the Enabling Policy Environment to promote Growth and Poverty Reduction.
2. Enhancing the capacity and output of productive sectors; Agriculture, Fisheries, Industry, Trade and Tourism, with emphasis on productive capacities of the poor and vulnerable populations.
3. Improving coverage of the unmet basic needs and social protection of the poor and vulnerable.
4. Building capacity for local people-centred development through decentralisation.
5. Mainstreaming cross-cutting issues; Gender, Youths, Population, HIV/AIDS, Nutrition and Environment into the development process

1.5. Rationale for an ANR Sector Policy

The ANR sector needs a Policy Framework to chart the nature and scope of its interventions in poverty reduction and achievement of the Millennium Development goals of the country.

The nature of the macro-economic problems the PRS II aims to address and the objectives it sets out to achieve will be influenced largely by contributions from the productive sectors of the economy. The process will also be facilitated greatly by the policies of these sectors. Poverty causes and problems in the country have been found to be largely rural and agrarian based. This places the ANR sector, the most dominant sector in rural and agrarian economy of The Gambia at the centre of the planning and implementation of poverty reduction strategies in the country.

The ANR sector has been proven to possess high potential and comparative advantage in the country's economy to achieve food security, increase incomes, generate employment and foreign exchange earnings. These strengths have positioned the sector to be central to the country's economic growth and development, and as such, it has been identified as

a prime sector for investments to reduce poverty, meet the Vision 2020 objectives and the MDG 1 “....to halve the proportion of the poor and those who suffer from hunger.”

The sector houses the largest human resource base in the economy, who are largely poor, and who use low inputs/outputs traditional low output technologies just for subsistence. There is therefore the urgent need to transform the ANR sector from its present subsistence state to a modern and market-oriented sector for it to meet the great responsibilities being placed on it at the macro-economic level.

A clear policy framework would be necessary to provide a logical basis for the planning, support to, and management of the ANR sector for the contributions it should make towards poverty reduction and economic growth. Unfortunately, the ANR sector does not possess any such governance instrument presently. With the country's second Poverty Reduction Strategy (PRS II) now at the start of its implementation, the establishment of such a framework for the sector is therefore compelling.

B. OVERVIEW OF THE AGRICULTURE AND NATURAL RESOURCES SECTOR

2.1. Importance (Role and contribution) of the ANR Sector in the Gambian Economy

The sector presently contributes measurably to food and nutrition security of the country at household levels, producing about 50 percent of the national food supplies, with the potential to produce even higher levels, considering that only about 54 percent of the country's total arable land resources is currently being utilised. It contributes significantly to the foreign exchange earnings required to secure supplementary food supplies from external sources, makes up about 30 percent of the country's GDP, employs over 70 percent of the active labour force, generates foreign exchange earnings and provides two-thirds of total household income.

The sector contributes to improving the nutritional status of the population, particularly women and children by producing commodities that provide balanced diets, which help to maintain good health. Cereals, legumes, fruits from the forestry sub sector, vegetables, meat (from domestic and game animals), milk, eggs, and fisheries products from the ANR activities all help to lower the incidence of malnutrition and reduce non affordable import substitutes. The ANR sector also provides shelter for humans and wildlife, and raw materials for the country's agro-based industries.

Sheep, goats and cattle are valuable items in religious and ceremonial rites while swine and fish are increasingly needed in the Tourism sector. The Livestock sub sector is an important source of income from the sale of animals, animal products, and raw materials of hides and skins, and provides means of transportation in rural farm areas from draught animals such as oxen, donkeys and horses. Wildlife provides game meat and income, while Ecotourism is emerging as a credible source of income and revenue.

However, with the demand on the ANR sector as a key sector to lead the achievement of the country's MDG 1 on hunger, its current performance would have to improve at an estimated 8-10 per cent growth per annum by 2015 to meet the goals set for it.

2.2. General Performance of the ANR Sector and Trends

Despite the primary role of the agriculture sector in the economy, its performance and share in most key socio-economic indicators in the past decade have not been consistent, and in some years, performance in production stagnated or even declined. This has been attributed to a combination of factors including the following; adverse climatic conditions from 1968 to the first half of the 1990s through to the early years of the present millennium (2000); application of Structural Adjustment Programmes without sequencing in the mid to late 1980s, low private investment, especially in value added, declining international agricultural commodity prices; soaring prices of food commodities and essential production inputs; inadequate domestic policies, institutional support and investment in the sector, particularly roads and equipment.

2.2.1 Crops

Generally Gambian agriculture has been characterized by subsistence production of food crops comprising cereals (early millet, late millet, maize, sorghum, rice and findo); semi-intensive cash crop production (groundnuts, cotton, sesame and horticulture). These are the two main components that occupy crop activities in the country. Farmers generally practice mixed farming, although crops account for a greater portion of the production. The Agricultural sector is characterized by little diversification, mainly subsistence rain-fed agriculture with a food self-sufficiency ratio of about 50%.

Per capita consumption of rice is 117kg. Total national requirements are estimated at 175,500 metric tons of milled rice or 270,000 metric tons of paddy. Total rice production in 2008 was 38,300 metric tons paddy or 24,895 metric tons milled, leaving a massive deficit of 150,605 metric tons milled, or 117 percent of national requirements.

Performance of the crop in 2008 showed a marked increase of 236 percent over the production in 2007, which was 11,394 metric tons of paddy.

The Crops sub-sector generates approximately 40% of the foreign exchange earnings and provides about 75% of total household income, thus the importance of the sub-sector in The Gambian economy. Increase in both production and area under production for commercialization has the potential to reduce rural poverty, enhance household food security, increase accumulation of capital assets by poor rural households (their human, financial, social, physical and natural assets), and more sustainable management of natural resources.

The crop-sub-sector employs 70 percent of the labour force, and accounts for about 33 percent of the GDP of The Gambia, the second largest sector in the economy, and a prime target for investments to raise income, improve food security increase employment and reduce poverty, in line with PRS II objective.

Despite the primary role of the crop sub-sector in the economy, its performance and share in most key socio-economic indicators have stagnated or even declined in the past decade. This has been attributed to a combination of factors:

- Poor attitude of most Gambians to farming;
- Adverse climatic conditions from 1968 to the first half of the 1990s through to the 2000;
- Declining international agricultural commodity prices, and recently soaring global food and agricultural inputs commodities;

- Inadequate domestic policies to sharpen the enabling environment for effective modernization of practices and linkages of the sector to efficient markets
- Institutional support are weak and do not provide effective delivery services
- Investment in the sector, particularly in infrastructure (value added) by the private sector is low and partnerships with the Government to produce such resources are weak and very few.

However, there has been a shift in recent years to a more conscious and evidence based actions due mainly to efforts of various interventions especially the response to the **Back to the Land Pronouncement** by H.E. the President of the Republic of the Gambia, Donor funded development projects and the Chinese Mission activities in rice production.

2.2.2. General Production Trends of Cereals

Increase in production of coarse grains during the period was more of expansion than productivity

The performance of the field crop sector during the period 1992/93 to 2008/2009 has been mixed with cultivated area, production and productivity (yield) fluctuating. Out of a total arable area in The Gambia of 558,000 ha, an average of 300,000 ha or about 54 percent of total area are cultivated annually. However, 306,610 ha or about 55 percent of total area were cultivated in 2005. This increase in overall cultivated area may have been associated with the “**Back to the Land**” Pronouncement by H.E. the President, and coincided with his Tractorization Programme in which he deployed over 100 tractors for use by farmers, under the management of the Ministry of Agriculture (MOA). There are about 500 tractors now available to farmers throughout the country, on hire purchase under public/private partnership arrangements.

Production and productivity of both food and cash crops in The Gambia have been fluctuating depending on rainfall, seed availability and quality, fertilizer use, pests, pricing policy. Productivity is averaging about 1.5 metric tons per hectare against an estimated potential yield of 3-4 metric tons per hectare for cereals excluding rice. For rice, yields estimated at about 6 metric tons per hectare have been achieved from research, but need to be sustainably reflected in small farmers’ fields. Since the Structural Adjustment Programmes in 1986 and the application of WTO Arrangements, significant changes have taken place in the crop sub sector, the most noticeable being the emergence of competitive agricultural products in the country, few from local production, the majority of others from external sources.

2.2.2.1. Coarse Grains

Coarse grains comprise early and late millet, maize and sorghum and its planted area increased by 45.2 percent from 140,760 ha in 2001 to 204,381 ha in 2008 with the bulk (56%) of the coarse grain cultivated area contributed by the hectareage under early millet production. Cereals (coarse grains and rice) cultivated area also increased by 50 percent from 156,620 ha in 2001 to 238,381 ha in 2008.

Overall, during the period 2001-2008, average food and cash crop yields were low, compared with the yields in the second half of the 1990s, with average yields of about 1000 kg/ha for groundnuts, upland, and early millet, about 1,100 kg/ha for maize, and swamp rice respectively. Total production of rice and coarse grains was 234,442 metric tons, with rice 38,300 metric tons, and coarse rains 196,142 metric tons. Per capita

consumption of coarse grains is currently at 58kg. With an estimated total population of 1.5 million, total national requirements for coarse grains is 87,000 metric tons. Production of the crops in 2008 was 196,142 metric tons, or 225 percent of the total national requirements.

2.2.2.2. Early Millet

It is a hungry season crop maturing (September) at the time when there is virtually no food reserves with farmers. As a single crop, it contributes over 50 percent of the overall cultivated area under cereal production. Its cultivated area increased progressively from 74,100 ha in 2001 to 113,640 ha in 2008 an increase of 53 percent. Owing to lack of adoption of best practices in producing the crop, its yields stagnated at around 1000 kg/ha against the potential of 2-3,000 kg/ha. Production fluctuated between 49,000 metric tons in the early nineties to an average of 43,000 metric tons in the mid nineties and increased each year thereafter up to 72,620 metric tons in year 2000; 78,500 metric tons in 2001 and 108,404 metric tons in 2008. The share of early millet production in cereal production increased from 27% in 2001 to 38% in 2008.

2.2.2.3. Late Millet

The crop often matures at the end of the cropping season (November/December). Production has been fluctuating between 8,200 metric tons in the early 1990s through 12,000 metric tons in the mid-1990s, 9,000 metric tons in the late 1990s and an all time high of 17,220 metric tons in 2008. The cultivated area has been almost constant between 16,090 ha in 2001 to 21,000 ha in 2008, with the yields stagnating around 1,000 kgs/ha. There has been a noticeable shift towards the cultivation of early maturing varieties of the crop, which are best suited to the short duration rainy season characteristic of the country, and provide an advantage as they mature at a time when farmers are in dire need of food, while waiting for harvest of the main crop, rice.

2.2.2.4. Maize

Production in terms of area and yield have been fluctuating for the past ten years dropping from 20,400 metric tons in 1991 to a low of 8,500 metric tons in 1997 and increasing thereafter to a high of 22,000 metric tons in year 2001. The highest production levels were recorded in 2004 with 33,350 metric tons and 44,894 metric tons in 2008. This occurrence gave indications of the high importance farmers realized the crop has to supplement staple food crops for increased household food security. The increases were also associated with the concentration of extension efforts on the Package Deal Programme which increased farmers' access to key production inputs, and the intensive promotion at the time for maize production to produce poultry feed.

The area brought under production also fluctuated for the same period dropping from 17,300 hectares in 1991 to a low of 7,200 hectares in 1997 and increasing thereafter up to 13,700 hectares in 2000. On-farm maize yields average 1,000 kg/ha and are declining due to the low fertility status of the upland soils, coupled with inadequate application of fertilizers, mainly due to inadequate access to the input because of its relatively high costs. The full potential of the crop has not been exhaustively exploited due to a general shortage of quality seeds, fertilizers and farm implements and continued difficulties with post-harvest processing technologies.

2.2.2.5. Sorghum

This is also a late maturing crop mainly grown in the Upper River Region (URR) of the country, with smaller scale production done in the Western and Lower River Regions of the country. Production ranged between 12,200 in the early 1990s through 13,700 metric tons in the mid-1990s, almost doubling in volume in 2000 to 25,000 metric tons and increasing slightly to an all time high of 25,624 metric tons in 2008. From 2001 to 2008, the cultivated area of the crop stabilized around 24,000 ha with the lowest area recorded in 2003 at 18,340 ha. Yields also stabilized around 1,000 kg/ha. The major constraint to increased production is the inadequacy of suitable varieties, fertilizer and farm implements (e.g. seeders and sine-hoes). .

2.2.2.6. Upland Rice

Production increased from 2,700 metric tons in 1991 to 3,400 metric tons in 1995, and increased further, but gradually from 4,000 tons in 1997, to 6,500 tons in 1998, 8,000 tons in 1999, 8,900 tons in 2000, and 22,800 tons in 2008. Upland rice production has great prospects owing to the introduction of the New Rice for Africa (NERICA – a drought tolerant rice variety) into the farming system of the country in 2005. Yields from NERICA in the country have been proven to reach 2.5 metric tons in farmers fields, more than double the yields obtained from the local varieties in the same areas.

2.2.2.7. Swamp Rice

Production had not been consistent between 1990 and 2000. In the early nineties production fluctuated between 12,500 metric tons, and 10,000 metric tons. It rose to an average of 16,000 metric tons in the mid-1990s but dropped to as low as 6,500 metric tons in 1997. Production then rose to an average of 10,500 metric tons in 2008. Swamp rice yields stagnated around 1,100 kg/ha with the lowest yield recorded in 2002 of 662 kg/ha closely associated with the 2002 dry spell experienced. The planned introduction of NERICA rice varieties for swamps will no doubt increase production. Key constraints in swamp rice production relate to timely operations, access to swamp land, salt intrusion and low input use.

2.2.2.8. Irrigated Rice

There are two basic systems of Rice irrigation in the country: pump and tidal irrigation, the latter being less costly. Between 1991 and 2000, production rose from 5,700 metric tons in 1991 13,400 in 2000. Several donor funded pump irrigated rice development projects have been executed in the country to promote the practice, particularly confined to the Central River Region. The projects ranged from the Taiwanese Rice irrigation scheme in the 1960s through to the Jahally/Pacharr Rice Development Project in 1980s, Irrigated Rice Development Project (IRRIDEP) in the early 2000 and the Farmer Managed Rice Irrigation Project (FMRIP) which has commenced with its base at Sapu Agricultural Station in the Central River Region, South. In the early 1990s, pump irrigated production was estimated at around 1,500 ha with an average yield of 2-3,000 kg/ha. The cultivated area under the system expanded to 2,300 ha in early 2000, and stood at 2,500 ha in early 2008. Yields from irrigated rice production have been very encouraging, with up to 6 metric tons/ha registered in both pump and tidal irrigated areas. Currently, yields between 6-7 metric tons/ha are recorded by the Chinese Agricultural Technical Mission based at Sapu.

2.2.3. Groundnuts (General)

Groundnut is the principal export crop constituting 66 percent of the earnings from agricultural exports, and the largest cash crop in the country. Its performance is a major function of the performance of both the crop sub-sector and the sector, and a major influence on poverty reduction in the hardest hit poverty areas in the country.

Until the privatization of groundnut sub-sector in 1989, the Gambia Produce Marketing Board (GPMB) and the Gambia Cooperative Union (GCU) were the two main institutions involved in the marketing of agricultural produce and supply of inputs. The GPMB was responsible for the financing, processing and export of groundnuts and importation of the necessary agricultural inputs in particular fertilizers. The Gambia Cooperative Union provided support for the collection, assembling and payment of farmers' produce as well as the distribution of inputs through the primary societies spread across the country. Under this structure, agricultural input and output marketing was greatly enhanced. However, the system was rather a State monopoly, which was not consistent with the structural adjustment and privatization policies, and the arrangements had to be terminated.

Groundnuts, as both food and cash crop has been the primary source of livelihood and foreign exchange earnings of the country and will remain so in the foreseeable future, contributing immensely to food security and commercialization of the sector. However, production has not been consistent since 1990 mainly due to marketing problems, which did not provide a reliable basis for planning, and for forecasting returns from the crop.

A number of actions are in various stages of implementation to address the two most critical constraints that affect the outputs of this sub sector, namely: availability of quality seeds and associated inputs, and marketing of the produce. This policy will advance those actions that have shown prospects of success; and continue to develop others that will produce the desired results to meet national priorities of poverty reduction.

2.2.3.1. Groundnuts (New Variety)

Production of the 73/33 variety has not been consistent in the period between 2000 and 2008. In the early 2000, production fluctuated between 34,400 metric tons, and 31,437 metric tons, rose to an average of 49,531 metric tons in the mid-2000s, dropped to as low as 17,961 metric tons in 2007, and rose again to an average of 48,717 metric tons in 2008. Generally, yields in 73/33 stagnated around 1000 kg/ha with the lowest yield recorded in 2007 of 550 kg/ha closely associated with the 2007 dry spell experienced 21 days after the first rains. This has affected negatively the production and productivity of the new variety in the country.

2.2.3.2. Groundnuts (old Variety)

Production of 28/206 as has mirrored that of the 73/33 variety, by not being consistent during the period 1990 and 2008. In the early 2000 production fluctuated between 58,538 metric tons, and 63,691 metric tons. In 2006, it dropped to 43,376 metric tons, and dropped further to as low as 41,120 metric tons in 2007. Production then rose to an estimated 60,925 metric tons in 2008. Generally, yields in 28/206 variety stagnated around 1000 kg/ha with the lowest yield of 680 kg/ha recorded in 2007, closely associated with the 2007 dry spell experienced at the beginning of rainy season which affected the performance of the crop.

2.2.4. Other Crops

2.2.4.1. Sesame

This is a cash crop, which is gaining popularity among farmers especially women farmers in the country. Although there are individual farmers who grow the crop, group (Sesame Growers Associations- SGAs) cultivation largely by women is the most common practice. The cultivated area and production fluctuated since 2004. Total cultivated area ranged from 3,000 to 4,000 ha annually with yields ranging between 300 to 400 kg/ha. Production increased from 51 metric tons in 1994 to 1,280 metric tons in 1998/99 and to 1,314.9 metric tons in 1998/99. In 2004, production increased from 1,230 metric tons in 2003 to 1,378 metric tons. Sesame is now a major field crop in the country with established market outlets. Its importance among producers is increasing as is manifested in the area planted and quantities produced. There is an increasing preference for the white varieties, which have less oil content, and greater export prospects than the red varieties, which are more oil-based. The major constraints to higher yields include low soil fertility, incidence of pests and diseases and drought.

2.2.4.2. Cowpeas

Despite the low output, the demand for consumption is increasing above local production, and as a result, the deficit is adjusted with imports from the sub region. Consumer preference for white seed and rough seed coat varieties other than agronomic qualities has also dictated the varieties grown and imported. No empirical study has been recently carried out on the crop's performance, especially its varieties, their yields, area cultivated or cost of production.

2.2.4.3. Cotton

Cotton was introduced as a diversification crop in the early 1970s, and it occupies slightly over 3,000 ha on average. Poor rains have had a devastating effect on its performance over the years. Although, the cultivated area increased briefly during the period 1993 to 1994 from 3,817 ha to 5,071 ha, the area under cultivation has continued to decline with only 762.6 ha in 2000, 2001 and 2002, however witnessed some recovery with area expansion. Production followed a similar trend and was only 238 metric tons in 2002. Low cultivated area and productivity have been attributed to unfavourable climatic factors, changing farmer attitudes (skewed towards more food production), high cost of inputs, and uncertainty in prices. Poor loan recovery of projects supporting the production of the crop weakened the continuation of such support resulting in declines in technical service to producers. There have not been available reliable statistics on the crop's performance since 2002 to date, mainly because interest in the crop waned for a number of reasons including some stated above. Nonetheless, drought tolerant, early maturing and high yielding varieties are currently being promoted for cultivation, with a view to reversing the decline in interest in, and production of the crop.

2.2.5. The Horticulture Sector

It is rapidly emerging as one of the key growth areas of The Gambian economy. The sector currently contributes about 4% to GDP on average, and over 65% of the agricultural labour force is involved in the sector. Horticultural production is presently an established key source of rural income, employment and food, making significant contribution to food security and poverty alleviation. Horticultural crops include tomatoes, onions, cabbage, eggplant, okra, peppers, lettuce, cucurbits, carrots, beans,

citrus fruits, mangoes, cashew, papaya, banana, cucumber. These crops especially vegetables are grown in small plots by smallholder farmers on an individual basis and through communal gardens mainly managed by women.

Smallholder plots are found in gardens where the major source of water for irrigation is groundwater through shallow hand dug or concrete lined wells. There are a few commercial horticultural enterprises such as Radville Farms and Gambia Horticultural Enterprise (GHE) as well as Gambia is Good, a non-profit horticulture marketing company and unique social business enterprise that links local farmers with the tourism market, managed by Concern Universal, an INGO. Nearly 88 percent of all women farmers in The Gambia are estimated to be engaged in individual or communal horticultural activities, which include the growing of perennial crops. Most of the vegetables are grown in the dry season (November to June) with limited yields and regard for quality. However, the gradual introduction of pest/disease and heat tolerant hybrid varieties is contributing to developing year round production”.

2.2.6. Roots and Tubers Production

Roots and tubers comprising cassava and sweet potato have been produced in The Gambia for generations, with cassava occupying the larger area. Production of cassava declined in the 1980's following the outbreak of the cassava mealy bug. Recently NARI has taken keen interest in adaptive trials and in promoting high yielding varieties of both cassava and sweet potato. A number of projects including the Peri-urban Smallholder Improvement Project have also been promoting cassava and sweet potato as diversification crops with about 800-1000 ha now under cultivation. Their flexible demand on labour, limited input requirements and short cycle nature make them favourable crops for enhanced food security.

2.2.7. Fisheries

The artisanal fishing industry has witnessed a marked increase in activity in the last two decades. The number of canoes and head fishermen increased from 1299 and 1399 respectively in 1983 to 1785 and 1969 in 1997 for both parameters. The total count of the canoes and head fishermen in 2006 however indicated a decrease from the 1997 numbers of the two parameters to 1702 and 1410 respectively. There has been a real reduction in the number of licensed industrial fishing trawlers operating in Gambian waters from over 90 in the early 1990s to just over 40 in 2007. No vessel is operating in Gambian waters through EU-Gambia compensatory fishing agreement as it expired in 1996.

Artisanal fisheries production over the years has been fluctuating but with an upward trend. Total production for 2006 was about 37 000 tonnes and just over 43 000 tonnes in 2007. The small pelagic species such as *Ethmalosa fimbriata* (bonga) constituted the bulk of total landings. The same trend is true for industrial catches, as landings fluctuated sharply between the period 1985 and 1993 gradually stabilising around 8,000 metric tonnes for five years. It then took an upward trend again in 1999 to present.

The volume of fish exports from the country is as low as 2 percent of total artisanal production. Almost all of the industrial production is exported directly from the fishing grounds and not reflected in the country's export figures. Over 90% of raw fish material processed and exported from The Gambia originated from the artisanal fishery segments. Exports have shown a gradual increase in the new millennium moving from 405 tonnes in 2004 to 624 tonnes in 2006 and then rising sharply to 1480 tonnes in 2007, with an

FOB value of D67 432 811 (US\$3,065,128), the increase being due mainly to the volume of fish exported by women entrepreneurs now venturing into fish trading and exporting.

2.2.8. Livestock

Domestic livestock, including cattle, sheep, goats, horses, donkeys, pigs and poultry, constitute a significant part of the Agricultural and Natural Resources Sector of The Gambia. Relative to its size and population, the country is well endowed with livestock; however, the potential of the sub-sector remains under-exploited and Gambia continues to be a net importer of livestock and livestock products. The sub-sector is estimated to contribute 5% to GDP, and possesses potential to increase this level significantly.

Livestock production in the Gambia is still predominantly traditional i.e. low input extensive system of husbandry. Current livestock population is estimated at around 300 000 cattle; 140-150 000 sheep and 200,000-230,000 goats; 10 000 pigs. Meat (beef and lamb) consumption is currently estimated at 10 kg per capita, with total national requirements estimated at just over 12,000 metric tons. Imports of bovine and lamb meat were 599 metric tons in 2007, and 893 metric tons in 2008.

The poultry population in 2007 comprised 300,000 broilers, 18,500 commercial layers and 550,271 local chickens. Import of poultry meat and products was 1894 metric tons in 2007 valued at D23.1 Million, and 2,495 metric tons in 2008, valued at D13 Million. The import of eggs and egg products in 2007 was 2,189 metric tons with an equivalent CIF value of D15.2 Million, while figures for 2008 were 1,685 metric tones valued at D11.7 Million (Gambia Bureau of Statistics; GBoS).

Production of commercial poultry is not competitive in price with cheaper competitive imports, primarily because of the relatively high costs of feeds and drugs which are imported. Furthermore, the lack of adequate processing and storage facilities has also not provided incentives to invest in production and improve competitiveness of the industry. The prevailing situation therefore encourages further dependence of the country on cheaper imports of poultry meat and eggs to supplement local production. This apparent demand for household consumption and that from the Hotels, Tourist and Entertainment industry present viable opportunities for the poultry industry in the country as a significant source of food security, income and employment

The unique characteristic (trypanotolerance) of the Ndama cattle, Djallonke sheep and the West African Dwarf goat which are prevalent in the Gambia provides them with a comparative advantage which increases their potential for export to humid tsetse-infested zones of the sub-region. In the past, the export of Ndama cattle to Nigeria, Gabon and Ghana between 1980 and 1987 brought in significant amounts of foreign exchange at a time of acute shortage in the country. The opportunity still exists because of the tolerance of the breed and the quality beef it possesses. Despite having a large number of sheep, Gambia is still a net importer of rams mainly for the Muslim feast of Tobaski, a situation which provides a strong market opportunity for such livestock at the national level.

The forecast for the demand for animal products for Sahel and West Africa is expected to increase by more than 250% by 2025 (ECOWAS). Since regional production is less than the demand for animal products, there will be an increasing demand for imports by some countries in the region – hence the potential for export.

The equine population (horses and donkeys) has dramatically increased in numbers and significance in view of their role as a source of animal traction and farm transportation.

The successful campaign to eradicate the tsetse fly and its accompanying sickness has also enabled horses and donkeys to survive and breed in most parts of the country

The Pig population is small, estimated at about 10,000 heads and concentrated in the western part of the country, especially in the urban and peri-urban areas. Pig production is an important source of income and livelihood for breeders and producers, and nutrition for consumers. The pig industry has been seriously affected by successive outbreaks of African swine fever. However recent trends indicate a steady increase in production, quietly revealing the enormous potential the industry has to generate employment and income, especially with the improved husbandry practices being applied by producers.

2.2.9. Forestry

The exact contribution of Forestry to GDP is not established. However, the sub sector does appear to be moving rapidly to position itself to make visible contributions to the country's Poverty Reduction Strategy in a number of its areas of comparative advantage, among them: food security through organised production and availability of biomass energy for domestic consumption, from fast growing tree species and woodlots, and providing supplementary food source (wild fruits and tubers). A Policy framework has been prepared for the sector, essentially to facilitate the direction and scope of its activities within the macroeconomic framework in the coming years.

New Programme directions are being developed under the policy Framework and a: "Gambia Forest Management Concept" has also been developed as a Strategy for modern forest management in partnership with all stakeholders for effective participatory and sustainable resource management.

Smart strategies are being forged, including developing an enabling environment, and collaborating with other sub sectors to exploit the comparative advantages and resources of the sub sector to produce competitive products for high value markets of Ecotourism, local markets and exports, and in the process generate income, employment and foreign exchange earnings which in turn will enhance efforts to modernize the ANR sector.

2.2.10. Parks and Wild Life

The Government attaches great importance to the conservation and sustainable use of the wildlife resource as a key component of biological diversity of species, genes and ecosystems of the Gambia, and the contribution such resources make to the country's socio-economic development. Government is aware of the potential of this sub sector to contribute measurably to achieving the MDGs and Vision 2020 objectives of the country. More particularly Government recognizes the potential contribution wildlife and parks can make to increase the productivity of the country's land and soil resources and competitiveness in products of high value markets, particularly tourism in the country.

A policy framework and a Biodiversity Strategy have been developed for the sub sector through a consultative and partnership process. This reflects the apparent shift of the Department of Parks and Wildlife toward a more participative and partnership resource management approach, and alliance with related sectors under the coordination of the National Environmental Agency. An enabling environment is being developed for private sector investment, community and civil society participation in Wildlife resource management for socio-economic development.

Activities are being advanced under the new policy framework in tandem with cross-cutting issues of concern such as:

- Population and social dimensions to maintain balanced eco-system;
- poverty alleviation; and
- Institutional and legal inadequacies for all stakeholder participation in wildlife resource management.

The sub sector has recently expanded its coverage to seven protected areas consisting of three national parks and four nature reserves covering a total land area of about 3.7% (about 395 sq. km) of the country's land area. A number of projects and interventions are in various stages of planning and implementation to support the introduction of protected area system management. They are mainly directed at awareness creation and sensitization; survey of bird and mammals; monitoring of marine turtles, dolphins and manatees in pilot project sites; and, developing community participation model in Protected Areas (PA) management.

2.2.11. Environment

There is a high awareness in the country of its delicate and in some cases fragile environment. It has also been highly recognised that the Gambia has sound environmental policies with one of the best policy implementation strategies in the sub-region. The Gambia Environment Action Plan (GEAP) developed in 1992, is one of the best frameworks that integrates the environmental concerns of the different sub-sectors into socio-economic development objective of the country.

The ANR sector is a major beneficiary of environmental protection, as it is a major threat to conservation of the potential of the resource. A number of practices in the sector pose serious risks to the environment, particularly: uncontrolled use of agro-chemicals, especially pesticides, herbicides and fertilizer result in accumulation of hazardous materials in the soil resulting in degradation of the areas affected. Use of mangrove wood as alternate cheap source of energy for domestic use and processing of fish reduces the capacity of the ecosystem to halt salt intrusion inland from the coastal areas. Uncontrolled logging from the forest exposes the land to serious soil wash, while unregulated hunting of wildlife reduces the biodiversity and natural environmental balance in such areas. Increasing agro-industrial activity using high levels of chemicals result in increased effluents and hazardous wastes into the environment. This in turn causes further pollution of waters and degradation of the land areas.

A number of key policy frameworks have been established to guide the management and protection of the environment, and they include:

- The National Environment Act (NEMA 1994)
- The Hazardous Chemicals and Pesticides Control and Management Act, 1994

The ANR sector will respect these instruments, and collaborate with existing institutions having oversight responsibility for other environmental matters to enable them pursue their respective mandates in regard to the activities of the ANR sector.

2.2.12. Water Resources

Water resources availability and its management are crucial to attainment and sustainability of the goals on poverty, hunger, health and environmental protection. This has been fully captured in The Gambia's second Poverty Reduction Strategy Paper, PRSP II (DOSFEA, 2006), and also aligned to the Millennium Development Goals (MDGs) of the country. The heightened importance of the water resources has had an

added value for the ANR sector especially since it aims to achieve a Strategic Objective of modernization and commercialization of its structures, systems and technologies. Water supplies will be invaluable in this pursuit, in achieving sustained increased productivity and competitiveness especially in the value chains of high value market commodities, particularly in production and processing activities.

Presently, an unknown number of traditional wells, estimated at no less than 10,000, are found in the Gambia. These are unlined wells dug into stable clayey-soil matrix. These are typically shallow and susceptible to drying outside periods of groundwater recharge. Water is collected by means of a bucket tied at the end of a rope of sufficient length, and lowered to the source of water below. If wells are sufficiently deep to warrant use of mechanical aids, a pulley system with bucket is often rigged over these traditional wells. More than 2,000 concrete-lined wells with depths between 25 and 70 meters can be found in rural settlements where the population is between 250 and 500. Yields from these modern wells could increase measurably when fitted with hand pumps, and produce up to 4 litres of water per second.

Until recently, provision of water supplies to the ANR sector has focused mainly on irrigation, (surface and tidal) obtained largely from freshwater resources from the River Gambia, and mainly for rice production. With greater attention now being paid to other potential users such as horticulture, livestock, (poultry), aquaculture, forestry and industry (processing and manufacture), other sources of water particularly groundwater, would need to be tapped and made available to meet the increased demand for the resource in the ANR sector.

Such attention will require putting in place measures that will address factors that limit presently the performance of the sub sector; especially, discontinuities in inter-bedded layers of sand and clay, leaky aquifers and the presence of iron-rich kaolinite clays all of which contribute to the higher costs of water resources development in some parts of the country; enhanced saline intrusion in the River Gambia, and secondly, costs of pumping and transporting water at a distance from, and with an elevation above the River Gambia; non-replacement of experienced and qualified staff on their departure from service, years of under-investment in technological assets; inadequate availability of 'hard' reliable data invaluable for analysis and resource planning; poor data exchange between related units within the sub sector, and inadequate coordination of the sub sector activities resulting from its weak institutional framework.

2.3. Potential of the ANR Sector for Poverty Reduction in The Gambia

There is ample available land for expansion of agricultural production

The sector as a whole holds encouraging prospects for its expansion and growth. Only about 54 per cent of the total arable areas is under cultivation. Evidence indicates that land degradation is being addressed in the projects and activities carried out in the country by the Government with support from Development Partners. The land potential will contribute measurably to achieve sustainable food security from self reliant sufficiency in the country's staple food crop commodities particularly rice, cereals, tubers; meat from short cycle animals and cattle, and its requirements of forest products. Greater potentials exist to increase crop yields from current levels: coarse grain yields can be increased by at least 100 percent to over 2,000 kg/ha from the present average of 1,000kg/ha, adopting best practices and improved access to adequate production inputs. Rice yields could also increase by at least 100 percent from current level of 1 ton/ha, and Groundnut yields by at least 100 percent and more over current levels of 1,2 00 kg/ha.

The Horticulture sub sector holds enormous promise for increased competitiveness, incomes, and employment, from production of commodities to meet requirements of high value markets in the country (Tourist and Entertainment industries, agro-processing, agro-industries). The sub sector can also support exports of fresh produce to meet increasing demands for off-season fresh fruits and vegetables in the lucrative European Markets, and under-exploited local and sub regional markets for such commodities.

There is significant potential for commercialisation of livestock enterprises (cattle and short cycle animals) to satisfy increasing demands for meat and dairy products from within the country, especially the hotel, tourist and entertainment industry and urban consumers and exports to the sub region. Off take of the ruminants is relatively low, and could be increased considerably through investment in small ruminant farming. Besides, the adoption of fattening practices by small ruminant producers would increase quality and quantity of such meat in time and limited land space available in the country.

Livestock also holds the potential to provide and improve on farm power sources (mechanization and draught) available in the country for land preparation and transportation of bulk produce from production to assembly areas. The 1993/94 Census found there were 77,559 animals (Oxen, Donkeys, Horses, Cows and Mules) providing draught power, and 87,862 such animals were recorded in the NAS Survey in 1998.

The Gambian waters have abundant and diverse fish resources that are enhanced by fresh water flows of the River Gambia and its estuarine character. Demersal and pelagic trawling surveys conducted in Gambian marine waters by FAO and NORAD estimated biomass level of 284,000 metric tons for pelagic in 2005 and 22,000 metric tons for demersal fish in 1995. The current production is about 1480 tons of fish.

The fish catch potential for the inland fishery is not exactly known because no research work to estimate fish stock biomass has been undertaken in and along the River Gambia. However, between the years 2000 and 2002, collaborative research work between the Fisheries Department and DIR (Development Research Institute) of France formerly OSTROM) identified 54 fish species within the river system and several of them are of commercial significance. Studies indicate that fish resources of the River Gambia are still under-exploited and improvements in fishing technology and techniques will allow for increased fish catch landings in the inland artisanal fishery.

The Forestry sub sector could make at least two significant contributions to poverty reduction efforts. Firstly, **the sub sector could arrest and reverse degradation of lands along river banks and mangrove areas and protect others at risk of degradation from erosion, and in the process expand land availability for increased rice production from tidal irrigation, and short cycle cash crops from uplands.** Secondly, Forestry could add measurably to management of forest cover and increase the quality of rangelands in the country for cost effective expansion of cattle rearing for commercial purposes. In the short run, the action could increase the efficiency of the value chains of livestock, especially increasing off-take and processing of cattle, which could bring additional income and employment to the populations in the areas of the rangelands.

Agro-industries hold tremendous potential to enhance the process of poverty reduction in the country. Processing of groundnuts in the Gambia brought measurable benefits to the country by way of stimulating increased production, expanding the marketing segment of the value chain of the crop, increasing income and generating employment in the industry. Efficient mechanized processing of rice and findo in the past had similar

results, and still possesses the prospects to increase considerably, availability from local production, access to these staple food commodities in addition to producing and increasing utilization and up take of safe, nutritious and diversified foods.

Agro-Industries and Markets possess the potential to transform the ANR sector in the Gambia from a traditional subsistence sector to a commercial and modern one by creating opportunities for production for markets, sustainable sources of income and employment for small producers and agents, and improving the efficiency of the value chains of selected high value commodities the country has comparative advantages in producing, such as horticulture, vegetable oil crops, livestock, fish and forest products. Agro-industries also provide other opportunities for the country to meet the challenges of cheap competitive imports of selected staple food commodities (cereals, vegetable oils, canned fruit products, dairy products, fish and meat, (poultry and beef)

2.4. General Constraints of the ANR Sector

Production is limited to over-reliance on rain fed agriculture in a uni-modal rainfall regime with increasingly uncertain predictability; and restricted in scope during the dry season to horticulture commodities, primarily because of inadequate water control measures and irrigation structures that will assure continuous production. Besides, available resources are not easily accessible to the large majority of producers who are small scale and have negligible capacities for investment. This and inadequate access to other essential inputs such as credit to even medium scale producers have constrained planning for agri-businesses and discouraged investment in the sector.

The Extension services are presently monovalent, with an extension/farmer ratio of 1: to over 3,500, and not cost effective in delivery performances. They are not equipped with essential working tools such as mobility or well planned extension messages, skills and knowledge to transfer appropriate technologies or provide much needed advice and information to producers in the investment and management of their enterprises.

Soils in the Gambia are generally poor in organic matter and chemical fertility, requiring high inputs of manure and fertiliser to increase yields and quality. The large majority of producers who are small holders do not have appropriate access to the required inputs such as fertilizers in quantities to improve on the quality of the resource situation. Degradation of river banks and coastal mangrove areas is increasing at a faster rate, reducing land available for farming.

Relatively high incidence of pests (weeds, insects) and diseases in horticultural crops, staple food crops and livestock, significantly reduce production and quality of the commodities, and minimise profit of the enterprises. Producers, particularly small holders experience difficulty in availability of, and access to essential production inputs such as resistant high yielding germ plasm, (seeds and livestock breeds) pesticides, farm power, affordable irrigation and water control technologies that could guarantee cost effective productivity and competitiveness of the locally produced commodities.

The value chains of the Livestock sub sector, particularly those of poultry and cattle are far from efficient. Commercial poultry production enterprises are very few, handling about 0.5 million birds, and producing products that are not competitive in price with cheap competitive products, whose imports are increasing into the country. The constraints are mainly structural with very high production costs resulting primarily from low outputs technologies being applied, and inefficiency of the inputs supplies systems. For example, almost all poultry and piggyery feeds are imported, there is an absence of

reliable sources of locally producing raw materials for composing nutritious and quality feeds especially using groundnut cake and fish meal in the country; veterinary drugs are not easily affordable, and there is a distinctively low investment in new enterprises.

Cattle production has also been constrained by factors similar to poultry: **scarcity of feed and water during the long dry season, aggravated by rampant bush fires which consume most of the standing hay, crop residues and by-products to feed cattle;** high incidence of diseases, including internal and external parasites. low genetic potential for milk production; inadequate access to, and high cost of inputs e.g. drugs, vaccines and credit, inadequate and inefficient infrastructure for processing; limited private sector involvement; weak extension and research services coupled with poor linkages with the private sector; weak or non-existent Community Based Organizations (CBOs) i.e Livestock Owners Association which could enable their members take full advantage of opportunities the value chains of the sub sector offer in the country.

Livestock marketing in the Gambia is predominantly non Gambian, with relatively very low Gambian participation. This has been recognized as an important sector constraint which is now being addressed through the 2008 Livestock Marketing Agency Bill recently passed by the National Assembly.

The absence of a Fisheries Port and lack of sufficient industrial on-shore facilities (fish factories) encourage high value fish catches from Gambian waters to be landed elsewhere, with resulting losses in revenue to the Government, and quality fish being unavailable to the local market or obtained at relatively higher costs. There is also inadequate appropriate fish handling and storage facilities (particularly cold storage); poor fish distribution and marketing systems and structures and insufficient number of premixed fuel stations in the country.

Local personnel with appropriate managerial and technical competence to operate fish business ventures (management of fish factories and fishing fleet) are few. The number of Tradesmen (mechanics) and technicians and other support services like repair and maintenance are limited and ill-equipped to provide satisfactory services. Appropriate knowledge and facilities in fish handling and processing are inadequate giving rise to a high degree of post-catch losses. The lack of precise knowledge on the biology, population and characteristics of fish species of economic importance is also a constraint. There is a serious shortage of specialised expertise in fisheries laboratory work to determine the safety and wholesomeness of fish for domestic and export markets and to conduct experiments on product development, promotion and value added.

The ANR sector particularly the food production sub sector is presently production led rather than market driven. The Agribusiness, Agro-industries, Agro-processing sub sectors, like the ANR sector are characterized by numerous smallholder (household) entities using low output technologies and labour intensive systems leading to leakages, low quality and low income. Market information, promotion systems and possibilities, particularly for cash and export commodities are not easily accessible especially by small holder farmers and agents in the sector. These operators hardly therefore make informed choices to invest their meagre resources to maximise returns to their enterprises.

Necessary infrastructures such as warehouses to support farm to market activities especially bulk storage and handling that enhance higher margins are very limited to absent. Most producers do not have appropriate storage facilities for high value agricultural commodities especially horticulture crops, fish and livestock products, which will enable them to extend shelf life of their commodities and increase their opportunities

for higher returns. Relatively high transport costs from production to market areas discourage producers from continuing to ensure supplies, and as such this input impacts negatively on production and local marketing of agriculture produce and products. Inadequate air cargo space during peak season and high costs of airfreight are the biggest constraints limiting the export of horticultural produce.

Financial services particularly credits are not easily accessible to small and medium scale producers, or at best, are perceived to be expensive. Inappropriate use of available credit by the small producers themselves limits sustainability of the services to them. Remunerative Outlets for local agricultural products are limited, and do not create enough incentives for planned production in the crops sector in particular.

The private sector operatives that are aware of the opportunities in the sector are few and not properly strong or appropriately informed to make the necessary investment. Those that possess the required capacities appear to have limited knowledge of the potential of the sector or are reluctant to make the necessary investment, and most times consider the sector too high risk for investment.

Institutions for policy advice, investment, information, research and extension are weak in quantity and quality and limited in resources to perform their expected tasks. Research and farmer extension linkages are limited to ad hoc projects and not programmed or widespread to provide needed inputs to commercialise and modernise small holder activities in the sector.

Although the control and management of water supplies are central to sustain increased productivity and competitiveness of the ANR sector, availability and affordability of the resource, particularly by small and medium scale holders in the sector, especially for the production of high value commodities are still of major concern to the Government. The Department of Water Resources and the Local Government Authorities are constrained by inadequate numbers and qualified personnel particularly hydrologists and civil engineers, who could ensure cost-effective availability and delivery of the resource as needed.

2.5. Past Policy Approaches for the ANR Sector, results and lessons learnt

Pre- Independence

Agricultural policy objectives were directed mainly at exploiting segments of the value chains of selected export commodities. The Groundnuts crop was the focus of the Government's policy in this regard, essentially to meet the industrial demands of Great Britain. Mixed farming centres were established to promote the production of the crop and the activity was not confined to any particular region in the country, rather, it had a national character in terms of coverage and popularity. There were limited activities at Government led tractorization for rice production, albeit with little involvement of the subsistence farmers either in the planning or implementation of these activities. Animal Draught power technologies were being promoted throughout the country, but the practice has diminished with the decline of the Mixed Farming Centres which offered the training. The Mixed Centres popularized the draught power practice beyond its use for land preparation to transportation of farm to market inputs and outputs materials.

Post Independence 1960s

The emphasis was on general food production popularizing pump irrigation

Government policy was increasingly being focussed on food production, with rice emerging as a priority to meet national requirements. There was much greater focus on the production and processing segments of the value chain of the crop, laying emphasis on irrigated production, with much attention on popularizing pump irrigation, introduced by the Chinese, both Taiwanese and Mainland China respectively.

1970s

Focus on Self sufficiency in food production heightened, and was pursued mainly through increased rice production from irrigation

Agricultural policy objectives during this period were mainly directed at production of irrigated rice. In the seventies, pump irrigation for rice intensified and attracted support from various funding sources: the World Bank-funded Rice Development Project of 1973-1978, the government-funded Irrigated Rice Development Programme of 1978-1983. The African Development Bank-funded Rice Development Project of 1989-1997 were for pump irrigation of rice. However the technology gradually revealed itself to be limited, mainly because of its high operational and maintenance costs which could not be supported by the small scale farmers for whom it was designed.

Groundnuts still remained the dominant crop of the economy receiving Government priority support, providing incomes for a large part of the population and appreciable foreign exchange earnings. Cotton was introduced in the early 1970s not only as a drought-tolerant complementary cash crop but also as a means of reducing the economy's overdependence on the groundnuts crop which was always vulnerable to weather uncertainties. Unfortunately a number of factors reduced the intended use of Cotton to diversify the production base, among them: unfavourable climatic factors, changing farmer attitudes (skewed towards more food production), high cost of inputs, and relative uncertainty in prices. Poor loan recovery of projects supporting the production of the crop weakened the continuation support to the crop, resulting in declines in technical services provided to producers.

Livestock received some attention with the Government's promotion of marketing beef, processing hides and skins and production of dairy products, albeit on a pilot scale. Policy direction for animal health was mainly in support of research and development of trypanotolerant breeds. The oil price hike shocks of mid 1970s and its accompanying price increases in essential inputs triggered the decline of the performance of the sub sector, from high production costs resulting from increases in prices of essential inputs such as feeds, drugs and fuel related inputs.

1980s

Macro-economic Structural Adjustment without due regard to the ANR sector's requirements reduced the prospects for sustaining increased levels of food self sufficiency, incomes and employment being built up prior to and in the early eighties

Although the country was not meeting its complete requirements for rice from local sources, production levels were steadily increasing as a result of Government's strong emphasis on irrigated production. Production of other food crops was mainly steady with some occasional increases and dips. Support to Livestock production was also increasing under promotional programmes by the Government. However the **Structural Adjustment Programme** that was put in place in the mid to late eighties all but wiped out the gains achieved and being consolidated in food production and exports. Major income producing and employment segments of the value chains of key commodities, particularly groundnuts and livestock were privatised without sequencing. Inputs support

particularly to livestock was disrupted with removal of subsidies and retrenchment of instructors and demonstrators. The poultry industry collapsed almost overnight as a result of high costs of drugs from the private sector, animal traction slowed down, resulting in decrease in planted areas. The sector was virtually in disarray when public support was drastically reduced without much time to put in place effective alternatives.

1990s

This was the decade of robust response to reverse declining trends in agricultural outputs, and direct the sector to holistic contributions to macro-economic priorities. Food Security emerged as a theme and a way forward for the agriculture sector, and diversification of the food and export base became a focus for Government action

Fluctuating shortfalls in availability of food supplies from low production and high costs of imported supplies started posing serious threats of food insecurity. The diversification of the food and export production base was being promoted and incentives being identified by both Government and Donors to increase the trend. Sesame was recognized as a major field crop in the country with established market outlets. The World Food Security Summit in Rome in 1996 heightened the focus on Food Security as a national overarching policy objective.

A number of policy and Programme frameworks were prepared to define the goals and chart the methodologies of achieving the objectives, among them: an in-depth review of the ANR Sector was carried out: A Medium Term Agricultural and Natural Resources Sector Policy Objectives and Strategy (1998-2002) was prepared; A National Agricultural Development – Horizon 2010 was elaborated; A National Food Security Outline was elaborated. Government policy objectives were directed at a holistic approach to food and nutrition, and Food Security became the flagship policy objective of the sector. A number of actions were taken to operationalise the concept, including the Special Programme on Food Security and the Peri-Urban Project. The former laid the ground for succeeding comprehensive projects for food security, and the latter enhanced awareness of producing food in urban areas for home consumption and markets.

The decade saw Poverty Reduction Strategies (PRSs) being introduced as the macro-economic framework for Sustainable Human Development and economic development and growth. The ANR sector was identified in the frameworks but not appreciably supported or facilitated to make contributions to the implementation of the PRSs.

During the same period, Tidal irrigation gradually took priority over pump irrigation technologies to meet production demands for rice, because it was seen to be less expensive in inputs and management by the users. Support from funding sources continued: the African Development Bank-funded Rice Development Project of 1989-1997; the International Agricultural Development Fund-funded Small-scale Water Control Project of 1991-1997 was for tidal irrigation and the multi-donor-funded Jahally/Pacharr Project of 1990-1997.

The fisheries sector received strong support with the implementation of key projects that strengthened the value chain of the commodity particularly for the small holders with the integrated projects supporting production, post catch handling and marketing. This increased the income and employment of the small scale agents in the sub sector, and encouraged some level of investment by indigenes in fisheries enterprises.

Government's strong support to the value chain of Groundnuts continued as the crop established itself as the main economic commodity providing income for food security at household level, employment at various segments of the value chain of the crop, (agro-processing, marketing, product development) and foreign exchange earnings.

2000 to 2008

Food Security at both household and national levels has not only become the flagship policy approach for the sector but the yardstick of the sector's contribution to the macro-economic priority of Poverty Reduction and economic growth.

A number of Programmes were elaborated and are in various stages of implementation directed expressly at food security. The Government took action to integrate its policies and programmes in the sector with Global Initiatives such as the Millennium Development Goals (MDGs), regional Initiatives such as NEPAD/CAADP, ECOWAS's Common Agriculture Policy (ECOWAP). The priorities of the sector have during the decade been redirected to focus on achieving sustainable levels of food security at household and national levels. There is increasing advocacy and urgency for support to the ANR sector to be commercialized, emphasizing on sustainable linkages between small-medium producers and improved technologies and markets; increasing the competitiveness of the sector's products; reducing domestic production costs and improving quality to meet demands of high value markets within and without the sector.

The institutional structure of the sector is being reformed to enable it meet the emerging trends on the sector for advice, delivery of services, planning, data monitoring and coordination, planning and policy. Presidential expediency has also been added to spice up the drive to food security in a number of ways, notably the **BACK TO THE LAND APPEAL** by H.E. the President of the Gambia. His numerous **MEET THE PEOPLE** tours and consultations with the people throughout the country, establishment of successful projects in Fish Farming, Rice farms, Wildlife Parks and Livestock Units have all created greater awareness among the people that such technologies are not beyond the average Gambian and more importantly, that agriculture is business.

2009-2015

C. A NEW VISION FOR THE ANR SECTOR

A sharpened focus on transformation of the sector from a traditional low output, subsistence economy with centralised structures to a modern, market led sector with efficient value chains diversified production base and effective decentralised structures

The population of the country is increasing steadily, accompanied by similar upward pressure for land, self reliant, sufficient accessible nutritious, diversified and safe foods, increased income and employment and better living standards. Relatively high poverty levels in the country are a serious impediment to meet these demands and ensure sustainable human development. At the same time, there is full knowledge and heightened awareness from the lessons learnt from past and present policies and programmes that the ANR sector can play major roles and make measurable contributions to meet the challenges these demands pose to the Government of the Gambia and its peoples. The sector does possess potential and opportunities which provide a calculated basis for self-reliant sufficiency in nutritious staple foods, employment and incomes particularly for women and youths, as well as for development and growth.

Notwithstanding its strengths, the weaknesses of the sector are many but mainly structural. The current processes and systems largely operating in the sector are slow, traditional, inefficient and of low output. They are not firmly embedded in the markets, nor is there noticeable significant investment in or profitable exploitation of its resources by the private sector, the availability of which will allow the sector to move with speed and efficiency to meet national priorities and expectations. Experiences from past policies and programmes in the ANR sector have shown that stand alone, ad hoc policy approaches, without effective coordination with the macro-economic and other supporting sectors, direct involvement of the private and commercial sector, and more importantly, without effectively linking the small producers to cost recovery technologies and the markets will not produce sustainable results.

The Vision for the ANR sector is therefore:

A robust, market oriented, commercialized (ANR) competitive Agriculture and Natural Resources sector that is directly aligned with the macro-economic framework of the country, contributing measurably to shared, inclusive and sustainable poverty reduction and economic growth in the Gambia, and meeting the country's Millennium Development Goals.

3.1 The Key Strategic Objectives for the ANR Sector by 2015

1. *Improved and sustainable measurable levels of food and nutrition security in the country in general and vulnerable populations in particular*
2. *A Commercialized ANR sector ensuring measurable competitive, efficient, and sustainable food and agricultural value chains, and linkages to markets*
3. *Institutions (public and private) in the sector are strengthened, and providing needed services, strong and enabling environment, and reducing vulnerability in food and nutrition security*
4. *Sustainable effective management of the natural resource base of the sector*

3.2 Areas of Focus of the Policy

The ANR sector offers many options of actions with which to achieve its clear objectives of a commercialised and modern sector, and high contribution to poverty reduction and economic growth. A number of areas have been identified as critical for actions in the next 5-10 years in the ANR sector.

The key areas of focus for action this policy will be the following:

1. Sensitization, Awareness creation, Consultations, Dialogues among stakeholders mainly to **extend the information outreach** on the availability of economic resources, especially inputs/outputs markets; advocacy to strengthen the sector to take advantage of opportunities and possibilities to invest particularly small holders, and medium to large scale investors, and to facilitate partnerships and participation
2. **Increasing Food production and meeting national sufficiency on a self reliant basis** through: intensified (irrigated and mechanized) production of the staple food crop rice, and producing other staples such as Findi; diversifying the food production

base focusing on production of tubers and other cereals; increasing the production of ruminants for domestic consumption; adopting modern labour saving methods to increase fish catch from artisanal sources, increasing processing to reduce losses

3. **Advancing the process of commercializing and modernizing** the sector through implementation of special programmes promoting and popularising the use and access to affordable technologies, essential inputs and other resource in order to increase productivity and competitiveness in selected commodities for high value markets. These programmes cover:

- Targeting the **production of selected high value market commodities** horticultural crops for markets, cereals (maize) and legumes for industry; non traditional crops for exports; livestock (beef and poultry), quality fish from mechanized practices,
- **Availability of Financial services:** ensuring affordability and access to such resources, and the maximization of effective use of the services and facilities by small and medium scale users
- **Availability and access to affordable water supplies year round** for production of food and high value market crops, livestock, and promoting decentralized management operations of water supplies to agriculture
- Popularising **Mechanised farm power, and ensuring it is** affordable and accessible particularly to small producers of crops, fisheries, livestock in order to underpin productivity, enhance competitiveness and attract investment in the sector
- Increasing **private sector involvement in investing in the value chains of selected high value market commodities, particularly through agro-processing, agro-industries and marketing**, and investment in large scale production activities and infrastructure
- **Enhancing agribusiness and advocating creation of markets and expanding the growth of existing ones, at the same time involving small producers** in partnerships with large commercial entities and operators of high value markets (Hotels and Tourist and Entertainment industry); expanding exports

4. **Strengthening selected institutions to deliver needed services** for the public and private sectors:

- Policy analysis, coordination, monitoring and regulation: Early Warning systems for food and nutrition considerations; preparedness and management of disasters (natural and manmade);
- Extension services making them polyvalent, efficient, knowledgeable with public and private partnerships and responding to needs of clients;
- Research to produce and make available affordable high quality and yielding crops and livestock germ plasm;
- Mainstreaming Gender in planning and development activities; increase considerations of support to vulnerable groups, particularly youths;

- Cooperatives, CBOs, farmers groups and organizations and their Apex bodies for advocacy and policy dialogues to support their institutions; enhancing commercialization and modernization of their enterprises in the sector; and their sustainable linkages to markets;
 - Environment Unit for monitoring applications of guidelines and best practices in the ANR sector for protection of the environment.
5. **Supporting the Livestock, Fisheries and Forestry sub sectors** for productivity, competitiveness, income generation and exports, with greater promotion of selected segments of the value chains of commodities in these sub sectors
 6. Enhancing **sustainable management of natural resources** and protecting the environment
 7. Strengthening capacities for preparedness and management of disasters (natural and manmade)

D. SUB SECTOR POLICIES AND STRATEGIES

4.1 Institutions (Public and Private Sectors)

There are broadly four categories of institutions in the country that are involved in the Agriculture and Natural Resources sector:

- Government or public sector
- Private sector (for profit businesses)
- Non-Governmental Organizations (NGOs)
- Community Based Organizations including Cooperatives and Farmers Organizations and Groups, and producer organisations

All these institutions are expected to provide services to the sector in various forms and ways – regulatory, advisory, technical, advocacy, marketing and financial. Such services will be crucial to the efforts and overall objective of the sector to transform itself to commercial modern sector.

General Constraints

- There is no clear definition of roles and responsibilities and negligible effective and efficient coordination in providing support to the sector and its clients. This situation has resulted in duplication of efforts, inadequate provision of many of these services in quantity and quality and low productivity among most institutions providing required support services to the ANR sector. All these shortcomings have contributed to the overall declining performance of the sector.
- Community Based institutions are not properly organized, and equipped to provide the necessary delivery services of coordination, advocacy, lobbying, monitoring, resource mobilization and information dissemination for their members. Their activities are mainly ad hoc and most times uncoordinated, and as such they do not present a concerted power base to lead, guide and motivate small producers to transform their enterprises to a modern and commercialized and market oriented entities commensurate with the macro-economic environment in which they are operating.

- The public sector appears to be the major source through which essential services to the sector are provided. However, with declining to inadequate budgetary allocations of Government Departments, the public sector's ability to provide efficient services have reduced significantly. Some services such as extension and mechanization could have been provided in partnerships with, or handled by the private sector, but this is not the case, with the result that the scope and efficiency of the services available are inadequate in quantity and quality.
- Private sector, especially those with investment potential are not fully committed or involved in the various value chains of food or cash commodities in the sector, individually or severally.

4.1.1 Policy Objectives for the Roles of Stakeholders in the sector

- The role of the public sector will focus largely in the areas of policy formulation and monitoring, coordination of all development cooperation activities and programmes in the sector, research and development, knowledge transfer, resource mobilization and other minor roles that will be clearly defined in various Frameworks of policy implementation. The Government Ministries or /Departments of State responsible for the management of the ANR sector shall collaborate with the Ministry or Department of State responsible for Development Cooperation to establish a Technical Cooperation policy, which will provide comprehensive guidelines on the nature and scope of providing technical and development assistance to the ANR sector by Development Partners and NGOs.
- The Policy will facilitate a participatory implementation strategy through which the above roles, functions and activities will be more appropriately established and carried out.
- The roles of the private sector (*CSO's and CBOs*) including producer organisations will focus on activities such as commercial aspects of agriculture (production, processing, marketing (both internal and external), exports, investment, including joint ventures, capacity building for development; advocacy for mobilization of resources and empowerment and policy engagement; promotion of appropriate technologies, for both production and natural resource management, in collaboration with the public sector;.

4.1.2 Institutional Support Services (Technical Departments)

In general, Government will maintain a core of technical Units in the ANR sector capable of delivering technical advisory and supervisory services required to sustain increased production and productivity and other needs in food and agricultural matters in the country. Specific policy objectives for Government's technical support services are indicated below.

Policy Objectives

- i) Ensuring a range of technical services strengthened and or established, well equipped, disciplined, motivated and responsive to the needs of the economic agents in the sector, especially small holders and women providing support to the development of modern, commercialized and market-oriented enterprises;

- ii) An established organizational environment for technical services, conducive to the development of creativity and coordination, at the same time, consistent with the maintenance of team spirit and achievement of common objectives;
- iii) A strengthened decentralized administrative and technical structure with increased organizational transparency and flexibility and sufficient authority at all levels, consistent with a higher degree of accountability and financial discipline based on principles of client-focus, gender-sensitive, demand-driven participatory approaches to increase production enterprises, and promoting a pluralism of actors and partnerships (including private sector entities and farmers organisations)

The Government's commitment to creating effective and efficient agricultural delivery systems will be pursued through the following:

Strategies

- effective integration and coordination of the professional activities of technical departments to develop a multidisciplinary approach in addressing problems in the sector;
- adoption of effective budgetary allocation and control systems that relate scarce resources of funds to priority objectives
- accelerated development of trained and experienced manpower at all levels
- clear definition of roles and responsibilities and decentralization of authority
- update the agricultural data base as a matter of urgency
- improved planning, coordination and monitoring functions in the ANR sector
- improved performance of farmer and producer organizations through greater management and organizational training
- established management advisory service to improve private sector project management capacity
- improved linkages and coordination between ANR management and NGOs operating in agriculture and rural development.

The Policy will facilitate a participatory process through which to establish the above and other strategies for efficient delivery systems

4.1.3. Farmers and Community Based Organizations (FBOs and CBOs)

Government is committed to a policy of encouraging and supporting all types of genuine self-help autonomous producer economic groupings/associations in society in the ANR sector. The primary objective of this policy is the continuous facilitation of organizing producers into groups and associations for their empowerment and effective performance in achieving their goals and objectives, and servicing their member groups and associations. Farmers and Community Based Organizations, Associations and Groups in the ANR sector are sometimes understandably used interchangeably, because they are formed by people who know each other and share common interests and experiences, and are loosely established and fairly democratic.

Constraints

- Existing Farmers and Producers Organizations, Associations and Groups in the ANR sector are not clearly defined or functioning as entities focused on common objectives and endeavours, and not clearly defined and functioning Apex Bodies

- Most farmers and producers organizations are small, informal and not suitable investment and business management institutions
- There is a fairly high level of illiteracy in the target groups, and they lack capital for investment and exhibit low levels of business management skills
- Support to such entities in the sector is ad hoc and mostly through projects by Development Partners

Policy Objectives

- i). Ensuring existing and/or emerging farmers organisations are facilitated to be well organised, formally recognised, with appropriate capacities to manage their enterprises and develop and maintain effective institutional performance, including planning, negotiating, communicating and networking, transforming themselves into formal institutions, building partnerships, facilitating the mobilization of resources that will enable them to be:-
 - empowered and sustainable organisations capable of defining, working towards and reaching their identified long-term goals and objectives within a strategy and terms of good governance and practices;
 - serving as inputs/outputs marketing agents for their farmers' produce that will maximize their income potentials
 - linking producers through their associations to value-added opportunities in the value chain of their produce, in order to increase returns from the final products;
 - mobilizing resources of skills, physical assets, savings and enterprise so as to improve the incomes and living standards of their members
 - contributing to the overall improvement of the standards of their members specifically, and the building of a better society in the Gambia in general
 - Facilitating their members' capacities to analyze information, and advocate in favour of their interests and priorities
 - Facilitating members' networks, access to information and communication links to enhance their knowledge, skills and resource base toward achieving their goals

Strategies

- Support to Farmers and Producers Organizations, Associations and Groups mainstreamed into the planning and development process of the ANR sector
- A Special Programme established for sensitization, awareness and advocacy on various aspects of involvement, performance of, support to, and consultations with various farmers and producers organizations, associations and groups in the ANR sector
- Establishment of appropriate Legislative Framework for the operations of Farmers and Producers Organizations, Associations and Groups in the ANR sector

4.1.4. Cooperatives

Over the past two decades, agricultural cooperatives in the country have suffered major setbacks stemming from the effects of the country's economic recovery programme.

Organizationally weak primary societies, absence of effective apex bodies and lack of adequate support for cooperatives reduced Cooperative Produce Marketing Societies (CPMS) to outlets for marketing of farmers produce rather than organisations serving the interest of their members. The problem was, and is further compounded by the inadequate capacities of the Cooperatives and other private sector interests to adequately handle inputs and outputs markets of farmers. This weakness in grass roots institutions led to high government involvement in most of the commercial areas of Cooperatives. The legal instruments designed to regulate cooperatives, namely the Cooperative societies Act, Rules and Bye-laws are also presently obsolete and need to be updated.

Constraints

- Loosely organised Cooperatives in the Agricultural Sector leading to realisation of potential benefits of Cooperatives;
- Lack of required management skills and competence on the part of the Board and employees of cooperatives especially at primary level;
- Absence of Cooperative Policy consistent with the Vision 2020 and the PRSPII
- Weak coordination of activities of cooperative societies leading to duplication of efforts and high costs of operations within the sub-sector;
- Poor image of the Cooperatives due to past failures on the realization of expectations of their members
- Inadequate Technical assistance to strengthen the capacity of cooperatives especially at primary level.

Policy Objectives

- i). A Revitalized strong and effective Cooperative Movement in the ANR Sector providing services to it's constituent member societies, for regulation, advocacy, monitoring, inputs outputs marketing and building capacities of the societies
- ii). A vibrant Cooperative Movement providing support to it's members in increasing production of staple food commodities, advocating for, taking advantage and investing in opportunities being made available in the value chains (production, agro-processing, marketing and product development) of high value market agricultural commodities especially local tourism, entertainment industries and exports, and sustainable management of the natural resources of the ANR sector;

Strategies

- Government will facilitate the carrying out of Policy and legislative reforms of the Cooperative Movement including it's constituent member societies;
- Government will facilitate the establishment of supervisory and monitoring mechanisms of the activities of the Cooperative Movement;
- Government will facilitate and advocate for the mobilisation of resources to strengthen the capacities of the Cooperative Movement in order to enable it carry out it's roles and responsibilities as an autonomous entity;
- Government will facilitate the Cooperative Movement to establish sustainable partnerships and mobilize resources to re-vitalize existing networks of cooperative societies and establish new ones in the ANR sector;
- Facilitate linkages between cooperative societies and operators for availability of, and access to essential inputs for production, productivity, and outputs markets;

- Empower the cooperative societies with knowledge and skills to produce competitive products and apply technical standards for quality and safety controls and invest in profitable opportunities in the ANR Sector;
- Assist the Cooperatives establish and continuously update an inventory of Agribusiness agents by specialization, and other sources of support, information and communication;

4.1.5 Civil Society Organizations (CSOs)

CSOs particularly NGOs significantly contribute to national socio-economic development, and have positively influenced the lives of many people through interventions in health, education, agriculture and cross cutting issues such as environment, gender and HIV/AIDS. They directly intervene in the value chains of various commodities in the ANR sector to enhance food security, income generation and employment creation. Furthermore, CSOs do influence policies in favour of the poor and marginalized people through advocacy and campaign work.

A total of 67 NGOs are registered with TANGO and out of this, 34 are working in one or a combination of ANR sub-sectors such as environmental protection, agriculture, water resources, fisheries, beekeeping or livestock.

Constraints

- Weak capacities in management, technical skills, poor governance in terms of decision making processes and information sharing among the membership.
- Some CSOs lack a clear strategic direction, clarity of organizational vision, mission, goals and objectives. Such organisations operate on an ad hoc basis without any cohesive and long-term development programme.
- Poor resource mobilization and funding constraints especially for local NGOs and CBOs have limited the scope of some organizational programmes.
- Low participation; for many organisations participation is only limited to just a few people within the executive committee leaving most of the membership unaware of what goes on in the organisations with regards resource mobilization, management and use. Over time this can lead to frustration and decrease in performance.
- Coordination, networking, learning and sharing between organisations is below expectation as a result the synergy that can accrue from it is a missed opportunity.
- The poor governance, lack of accountability and transparency and low membership participation in decision making processes together create a fertile ground for corruption and mismanagement of organizational resources.

Policy Objectives

- i). Strong and vibrant networks and alliances of farmers and producer groups and CSOs effectively advocating for pro-poor macro-economic policies at all levels (local, national and international) and mobilizing resources for their use and establishing linkages between their members and sources of support
- ii). Farmers and producer groups are constantly being made aware and complying with established guidelines on agricultural practices for sustainable and effective management of the natural resource base of the sector

- iii). Seeds for production of major staple cereals, and reserves of cereals are available in adequate quantities and quality and being managed at community level by CBOs

Strategies

- Establishing and managing seed and cereal banks at community level by CBOs
- Mobilization of communities into functional and operational groups and facilitating the availability of essential inputs for production of surplus food commodities by the communities and for their use

4.2 Crops

4.2.1. *Staple Food Crops*

The country possesses self reliant sufficiency in its national requirements for coarse grains (millet, sorghum and maize) It is however seriously deficient in meeting its national requirements of the major food crop, Rice. Production of the crop has been on average 15-20 percent of total national requirements. In 2008, about 34,000 hectares were under production for the crop, producing about 38,300 metric tons of paddy. This was about 236 percent over the 2007 production of 11,394 metric tons. There is an on-going plan initiated by the government and activities have started to expand the area under production of the crop to 250,000 hectares in 4-5 years, with the expectation that this expansion will produce about 625,000 metric tons paddy.

Constraints

- Yearly uncertain availability of high yielding certified quality seeds and planting materials;
- Low access to available credit; inadequate use and management of financial services;
- Unreliable weather conditions, long periods of drought and heavy dependence on rain fed production;
- Poor and inequitable access to credit and control of land resources by small producers, especially women who constitute a significant percentage of producers of staple food crops;
- Relatively unavailable and unaffordable water control technologies by small producers; costs for irrigation facilities are high, threaten to reduce margins and create disincentives to investment
- Low capacities to afford improved technologies, pest control, agro-chemicals, post harvest handling (storage and agro-processing)
- Predominantly low output manual farm power, and inadequate use of mechanical power; low post harvest handling and storage technologies, and fragmented small size farm holdings;
- Low level of research support to crops particularly in reducing costs of domestic production and raising quality which would increase competitively with cheap imports;
- Declining soil fertility and soil erosion, particularly for the uplands, resulting from unsustainable land use practices; salt intrusions upstream of the river, particularly during dry season;
- The markets re relatively inefficient with negligible infrastructure and inadequate information dissemination.

Policy Objectives

- i). Availability of, and access to safe and nutritious staple food crops ensured to meet national requirements, through sustainable self reliant increased production of rice and findo by at least 600% over present total production levels; sustaining and surpassing present production levels of other coarse grains and leguminous food crops, and make them affordable particularly to vulnerable populations;
- ii). Effective delivery services and essential inputs are available timely, affordable, accessible in every district of the country, and being used, especially by vulnerable populations, to diversify the food and cash crop production base, for income and food security at household levels;
- iii). Small to medium scale producers are being facilitated and supported to improve their capacities and linkages to markets, and take advantage of opportunities in the value chains of targeted high value crops: groundnuts, sesame, horticulture, cowpea, and maize to increase the competitiveness of the commodities and the incomes and profit from the investment enterprises of the producers;
- iv). National policies in the value chains of crops (food and cash) harmonized with policies, and other initiatives of ECOWAS and other regional and international bodies, thereby enhancing the integration of The Gambia into the sub regional economy and expanding its opportunities for inputs/outputs markets in selected crop commodities;
- v). Guidelines, measures and regulations for safe crop production practices being enforced and ensuring sustainable management of the country's ANR sector resources (land, soils, biodiversity and water resources);
- vi). By 2015 a modernized, commercialized and vibrant horticulture sub sector with sustainable measurable increased productivity and competitive products for high value markets both local (tourist and entertainment industry) and exports markets.

Strategies

Priority

- Special National Initiative prepared and being implemented to increase rice and findi production by about 600 percent of present production levels by the year 2015, through increasing the area under cultivation of rice to 250,000 hectares, and that under findi by at least 400 percent of present levels
- Special Programme prepared and implemented promoting and facilitating sustainable diversification of food crop production with emphasis on targeted production of millet, sorghum, tubers and plantains, legumes;
- Preparing and implementing an Action Plan to establish linkages with recognized sources (providers and users) for affordable availability, access and utilization of year round water supplies for food crop production;

- Preparing and implementing a Programme for strengthening the institutional framework for crop production is prepared and being implemented, covering the following:-
 - Establishment and management of data base on crops;
 - Extension services linked to research;
 - Train Data base unit 1 BSc and Masters and 8 data entry clerks, 51 enumerators, 9 market price collectors to certificate, diploma BSc levels by 2015;
 - Quality seasonal inputs (seeds, fertilizers, pesticides) timely made available, affordable and accessible to producers;
 - Mixed farming centers rehabilitated and equipped to function effectively;
 - Strengthening planning, coordination and data management unit.
- A Special Initiative is prepared and being carried out to support small-medium scale producers to improve their capacities and take advantage of opportunities in value chains of selected high value crops: groundnuts, sesame, horticulture, cowpea and maize. The key components of the special Initiative will include:-
 - Establishing selected infrastructure that are available and accessible specifically to small scale producers to increase their involvement in high value markets agribusiness activities;
 - Selected incentives to encourage investment of small to medium enterprises to be involved in agro industrial processing and marketing (improved transport, handling facilities and storage, processing and packaging);
 - Forging sustainable linkages between organized groups of small to medium producers in the sub-sector and operators from the high value markets including catering industry and livestock feed industry;
 - Appropriate financial intermediaries to increase access particularly of small holders to financial services, particularly credit and savings.
- Strengthening the Units in the Government Ministries and Departments responsible for Planning in the ANR Sector to functionally perform their roles to position the country in reviewing all policies, Initiatives, Programmes and arrangements regarding the sub sectors of the ANR sector, and provide appropriate advice for the Government to align the country with sub regional and regional policies and other similar instruments for harmonization and integration

Other Strategies

Establishing linkages with authorities in selected sub sectors advocating for, and facilitating support to crop production from the following:

- Integrated Pest Management activities, with biological and chemical technologies such as herbicides in crop production;
- strengthened financial intermediation in order to increase access of particularly small holders to credit and savings;
- availability and access to affordable year round water supplies;
- widespread availability of user managed mechanization devices particularly tractors and draught animal power, primarily by small producers;

- improved transport, handling facilities and storage infrastructure, including pursuing Warehouse schemes under private sector management; facilitate the establishment and growth of packaging industry;
- sustainable agribusiness linkages between organised groups of crops producers and operators from high value markets such as Hotels Associations, tourist and entertainment association's, catering industry, livestock feed industry marketers and exporters;
- FBOs, Cooperatives, other producers groups for economies of scale particularly land cultivation for cost effective mechanization, infrastructure and financial services
- Private sector for investment in selected value chains of crops, particularly agro-processing, agro-industry and exports.

4.2.2. Horticulture

Over the last few years, there has been tremendous improvement in horticultural production in the country. A wide variety of high value tropical and off-season fresh fruits and vegetables are now grown in the Gambia primarily for exports and also for the domestic/tourist market. However, fruits and vegetable exports are less developed and mainly practised by commercial farms. Significant hectares are steadily being brought under horticultural production by both commercial farms and smallholder farmers. The demand for seedlings of high value horticultural crops (particularly fruits) has increased over the years and Government, NGOs and individuals are providing support to meet the demand. Women are predominant in horticultural activities especially the management of small gardens of vegetables and marketing the commodities. Government and International NGOs in collaboration with their local partners are involved in capacity building activities, including those of extension workers and farmers. The actions have significantly contributed to boosting local production over the last five years.

The sub sector has enormous prospects for investment, exports, import substitution for the local tourism and entertainment industry. The local market for horticultural produce is under-exploited, and there is increasing demand for tropical and off-season fresh fruits and vegetables in the lucrative European Markets. The sub sector however faces two major challenges; the first - a sustainable production of competitive products for high value external markets in Europe, the growing sub regional markets and its own local Tourist and entertainment markets; the second of ensuring a dynamic locally managed agri-business in the sub sector to meet demand and supply requirements.

Constraints

- high supplies of horticultural produce are realised mainly in the dry season due to scarcity of suitable rainy season cultivars, harsh weather, pests problems and greater engagement of women in food production activities during the rainy season;
- costs of water for irrigation are high and threaten to reduce margins and create disincentives to investment;
- the level of research support to the industry is low and may expose the industry to low competitive products and of course make it unattractive for further investment;
- proper soil management is lacking and may limit the industry to meet quality requirements of its products;
- pests – weeds, insects, diseases in horticultural crops are relatively high in production areas, and they pose a serious threat to the quality of the products and produce and may result in high production costs which may make the industry also uncompetitive;

- Availability and accessibility to essential production inputs such as seeds fertiliser, pesticides are most inadequate, especially for small holders, because of their relatively low investment capacities;
- Small scale horticulture farmers cannot afford to construct durable fences on their gardens, owing to high costs of the materials
- lack of proper local markets/market space in most of the areas, glut in markets, inadequate market outlets, particularly export markets, and lack of proper market information and promotion, which small holders or producer organisations could benefit from, and as such they could not participate well in the industry;
- The infrastructure to support higher returns to producers and marketers is low to discouraging with the farm to market roads very poor, (impassable during and after heavy rains); storage facilities to handle perishable commodities are mostly ground floor spaces in verandas of houses, rickety baskets or damaged wooden or plastic boxes; air cargo space during peak horticultural season are inadequate and air freight costs are high; processing and preservation technologies are low output, with far less quality products;
- There is very little institutional support for horticultural exporters. Export promotion which should be handled by Government Institutions and private and civil society organisations is at best an expressed intention;
- Packaging materials are imported and costly;
- Land Tenure System not Amenable to Conservation Investment.

Policy Objectives

- i). By 2015 a modernized, commercialized and vibrant horticulture sub sector with sustainable measurable increased productivity and competitive products for high value markets both local (tourist and entertainment industry) and exports, and a high participation of small producers;
- ii). The Horticulture industry is being promoted to produce quality, competitive products in pomology (fruits), floriculture, ornamental and landscape designs for local and export markets
- iii). Established sustainable linkages and transactions between the small to medium scale producers of the horticulture sector and operators of high value markets in country (hotels associations, tourist associations, entertainment businesses, marketers, exporters, manufacturers, processors) for a strengthened agribusiness in the sub-sector;
- iv). Infrastructures (particularly warehouses, processing facilities, market information systems and transport) that will increase competitiveness, added value, income, employment and product development in the horticulture sub sector are available and functioning.

Strategies

Priority

- Special Programme in force for availability and access to affordable essential inputs by small and medium scale producers (seeds, seedlings, fertilizer, pesticides, implements, extension service support, accessible affordable water for year round irrigation) for high value market crops;
- Intensive advocacy for and facilitation of agri-business arrangements, available and functioning infrastructures (particularly warehouses, processing facilities, market information systems, transport and establishment and growth of packaging industry) that will increase competitiveness, added value, income, employment and product development in the horticulture sub sector.

Other Strategies

Establishing linkages with authorities in selected sub sectors advocating for, and facilitating support to improve horticulture production from the following:

- Consultations and dialogues with relevant Government Ministries the private sector, Development Partners and external investors, advocating for and encouraging public/ private sector partnerships in research and cost-recovery extension services; investment in value chain activities; establishment of market information systems and services; contract farming and/or out-grower schemes;
- Promoting and facilitating sustainable linkages between organised groups of producers from the sub sector and operators from the high value markets, including hotels associations, tourist and entertainment association's marketers and exporters;
- Establishment of Nurseries and Orchards for easy access to parent materials
- Promotion and facilitation of the establishment and functioning of private sector managed units for availability, distribution and accessibility of essential inputs for production and productivity of horticultural products for high value markets
- Promoting and facilitating the strengthening of existing and setting up new financial intermediation mechanisms in order to increase access of particularly small holders and vulnerable populations to credit and savings;
- Establishing in the MOA specific institutional mechanisms to monitor the sub sector's performance in productivity and its competitiveness, set guidelines and extend the information outreach on food quality, technical standards.

4.3 Livestock

The livestock sub-sector is a major potential source to contribute significantly to poverty reduction and growth of the sector in particular and the economy in general. The sub sector has an apparent comparative advantage in producing competitive beef products for the high value markets of the local Tourist Industry and for exports, and self reliant sufficient ruminant and poultry meat for household consumption and income from local sales and import substitution. The value chains of the sub sector, especially production and processing offer great opportunities for increasing income and employment of rural populations where the resource is prevalent, and investment in agro-processing. The realization of these prospects will however depend largely on the level and extent of modernizing and commercializing the sector, with greater emphasis on production, marketing and processing, diversifying the production base for food security, and intensive sensitization of the grass roots institutions in the sector, business interests for investment, and strengthened delivery services to transfer knowledge and skills.

Constraints

The Livestock sub sector is not fully sensitized on the opportunities in the sub sector, nor does it possess the essential inputs, particularly investment, technologies and management to produce competitive (low cost) products for high value and food markets in country and exports. It is constrained by many factors including the following:

- a relatively high domestic cost of production of particularly poultry products;
- scarcity of feed and drinking water especially during the long dry season;
- inadequate and traditionally low input and output husbandry practices especially in small ruminants and cattle;
- inadequate access to affordable credit;

- inadequate marketing strategies and systems; infrastructure for product development, and competitive products; non-functioning grading and pricing policy, poor organization of markets, distortion of prices by livestock dealers and middlemen
- frequent outbreaks of diseases; inadequate infrastructure such as marketing and processing facilities;
- the current state of existing infrastructure for livestock development ranges from underutilization and poor management to complete absence of modern structures in the key areas of the value chain: production, processing and marketing of livestock products.

Policy Objectives

- i). By the year 2015 sustainable production and productivity of livestock improved and meeting at least 75% of national demands in meat and meat products and by at least 25% of milk products over present levels;
- ii). Policy advice and regulation, functional delivery services and essential inputs are available, affordable and accessible in every region, and contributing to measurable increase in production of livestock;
- iii). Value chains (production, processing and marketing) of the livestock sub sector are efficient, effective and linked directly to markets, producing competitive products and increasing incomes and employment;
- iv). National policies coordinated and harmonised with regional and international Policies and Initiatives for increased economic integration of the Gambia into the sub region, and enhanced complementarities between the Gambia and other countries in the region;
- v). Guidelines, measures and regulations enforced to ensure sustainable management of the country's natural resource base (land and water resources and germ plasm).

Strategies

Priorities

- Preparing and carrying out a Special Initiative to revitalize, modernize and commercialise the sub sector to enable it make clear significant increases in producing competitive meat and dairy products: poultry, small ruminants and cattle for national requirements and local high value markets (Tourist and entertainment industries), and diversifying the livestock production base through a number of key actions including the following:-
 - setting up a Livestock Service Department in the MOA with a national mandate, and functioning laboratory diagnostic services with necessary equipment and materials, extension support with at least one Livestock Assistant per ward and one Veterinary Doctor and production specialist stationed in every region throughout the country for special activities of immediate animal health care (prevention and cure) delivery services;
 - Establishing and implementing a medium term Special Plan for increased production of competitive (low domestic production costs) meat and meat products of poultry, beef, sheep, goats and pigs, and promoting the production of selected short cycle species (e.g. Rabbits, guinea fowl, wild life and grass cutters) to diversify the livestock production base. The Plan will be participatory and include a review of best practices in livestock

management for markets, especially the value chain approach, and livestock fattening.

Other Strategies

- Implement an Action Plan to rehabilitate and make functional, the central and regional laboratories and training for selected purposes: staff, to enhance early diagnosis and food testing; at least 10 veterinarians and 115 Livestock Assistants to certificate and diploma levels for animal health; farmer groups/ farmers in improved animal health and production practices and strengthening of community participatory disease surveillance;
- establish and implement with private sector partnerships a Special Plan to improve the efficiency of existing abattoirs, small scale slaughter Slabs and sales enterprises, other processing and marketing infrastructures to add value and assure quality to promote the commercialization and market access for livestock products and by-products;
- Facilitate consultations and dialogues between livestock producers and Financial Services groups in order to allocate a certain percentage of VISACA loan products and those of other similar Financial service agents for the acquisition of livestock feed particularly maize;
- Undertake a detailed review of Reports of recent studies and assessments of the sub sector, including that done by the ADB in partnership with the private sector, essentially to determine the value chain opportunities to pursue in order to improve the availability and use of infrastructure, particularly ranch and range management, housing, feed mills, hatcheries, abattoirs, marketing and small scale product development plants;
- Strengthen technical norms and facilities for quality and safety controls and their compliance in order to facilitate access to high value markets for livestock and livestock products both at national level and outside;
- Review and update all legislation pertaining to the livestock sub sector, especially disease control, Veterinary public health and veterinary drugs;
- Facilitate access to livestock production inputs (drugs, vaccines, feed , fertile eggs for the production of day old chicks and equipment) to ensure availability and affordability; Ensure that a certain quantity of locally produced groundnut cake is reserved for local animal feed production;
- Regularize membership obligations of the Gambia to OIE and other regional and international organizations dealing with livestock development in order to fully benefit from the resources of such bodies;
- The Government will strengthen its collaboration with the International Office for Epizootics, IOE, and the Inter-African Bureau for Animal Resources AU/IBAR

4.4 Fisheries

The Gambia has exceptional natural conditions which support a diverse fisheries resource base. Nourished by huge influxes of nutrients from the river, marine waters of the Gambia are rich in species (over 500 marine species) abundance and diversity.

Studies have indicated the existence of an important commercial fish biomass in the Gambia River Estuary, and enormous aquaculture and mariculture potentials in the country. The fisheries sub sector therefore has the potential to contribute immensely to the social, economic and cultural advancement of the Gambia.

Constraints

The sector is currently constrained largely by structural deficiencies such as weak production systems, (negligible mechanization of catch and handling activities), inadequate infrastructure, unaffordable and very low access to financial services, high cost of energy and fuel, high interest rates on loans being charged by the banks and lack of adequate protection of the resources from illegal fishing. The key constraints include those categorised below.

General Constraints

- There is no fisheries port in the Gambia. Industrial Fishing Vessels granted licences by the Government to fish in Gambian waters land their catches in foreign ports where the fish is processed, packaged and labelled as products originating from those foreign ports;
- The majority of Gambian small scale operators in the sub sector use low input technologies resulting in low productivity and uncompetitive outputs;
- The majority of licensed industrial fishing vessels operating in Gambian waters are owned and operated by foreigners;
- Existing industrial companies are unwilling to form joint ventures among themselves and initiate project or 'shed off' shares to other entrepreneurs; they are also reluctant or unable to improve capacity for effective financial management of their factories;
- Inadequate monitoring, border control and fisheries surveillance (MSC), and un-enforced institutional guidelines and regulations have caused illegal, unreported and unregulated fishing in Gambian waters. The Gambia and Gambians are not deriving maximum benefits from the exploitation and utilization of their own natural resources;
- Inadequate facilities in major fish landing sites, particularly ice for handling, storage, distribution and marketing; fish landed in the coastal areas have reduced quality and volume for local market and export to the sub region. The inadequacy has contributed to serious post catch losses encountered mainly by small scale handlers;
- Insufficient fish distribution and marketing centres that cater for the artisanal operators
- The lack of precise knowledge on the biology, population and characteristics of fish species of economic importance is a limitation to planning for and investment in increased competitiveness of the products from the country for the high value markets.

Institutional constraints

- Weak mechanisms for inter institutional coordination to targeted objectives;
- Weak human capacity and lack of a policy objective for continuous training of Fisheries Department personnel;
- serious shortage of specialised expertise in fisheries laboratory work
- Inadequate budgetary provision limits the capacity of the Fisheries Department to carry out research extensively and mobilize extension staff for monitoring, control and surveillance of artisanal operations.

Technical Constraints

- Absence of nationals with technical competence to manage fishing vessels as skippers and engineers;
- Inadequate (absent in the case of inland sites) repair and maintenance services/facilities for equipment and fishing crafts in artisanal fisheries;
- Inadequate knowledge of the biology, population dynamics and annual sustainable yields of demersal stocks and riverine resources.

Financial Constraints

- High costs of fuel and energy;
- inadequate access to micro-finance facilities for artisanal operators, and financial services for long term lending;
- Prevailing high interest rates at the commercial banks are unfavourable for the development of especially the industrial sub-sector.

Social Constraints

- Difficulties in recruiting, training and retaining Gambians in artisanal fisheries;
- The most vulnerable group in the artisanal sub-sector are women operators (fish processors and vendors) who are yet to be adequately empowered to enhance the effectiveness of their operations;
- Inadequate sensitization of Gambian youths to dispel the notion that artisanal fishing is a low grade, unrewarding occupation;
- Lack of community participation in enforcement of regulations to prevent and eliminate harmful fishing practices.

Policy Objectives

- i). Fish supplies increased by at least 30 % of present levels to meet food fish security needs of the country particularly the vulnerable populations;
- ii). Artisanal fisheries significantly linked to and operating with markets realising increased income and employment and taking advantage of investment opportunities being made available;
- iii). Artisanal fisheries significantly linked to and operating with markets realising increased income and employment and taking advantage of investment opportunities being made available;
- iv). Appropriate advice, delivery services, data and information being provided on a continuous basis for policy, planning and investment in productivity and competitively in the sub sector;
- v). Appropriate legislations, guidelines and practices would be in-force and being monitored in the exploitation of natural resource base.

Strategies

Priority

Establish and implement a Special Plan to increase fish availability from self reliance by at least 30 percent within 3- years, to meet household food consumption. The Plan will involve actions including the following:

- Increasing marine and river demersal fish production by 2% ;
- Increasing small pelagic fish production by 10 %;
- Promote the development of aquaculture throughout the country to contribute 18 % to the total fish production in the country;
- review fishing licensing process, directed mainly at increasing and enforcing regulations including the following: periodic revision of the fishing license fees for foreign trawlers to reflect resources, rent and management costs; setting fishing license fees for foreign registered vessels, and for local vessels landing fish catches inside the country or elsewhere;
- Ensure at least 90% of artisanal fisheries operations mechanized;
- Strengthen the Fisheries Department for planning and monitoring.

Other priorities

- Increase participation of young men in artisanal fisheries Every fish landing site will possess facilities for improved handling and storage and processing (primary) of fish products;
- Facilitate the access to finance and appropriate technologies for use by young men and women fisheries operators and other investors
- Support and facilitate skills development and improved knowledge of fishermen organization for management of their enterprises and agribusiness
- Promoting aquaculture as a business venture at communal and individual levels
- Facilitate the establishment of mariculture production systems of high value, exportable species (e.g. Crustaceans)
- Develop and maintain a pool of skilled and subject matter specialists in all aspects of fisheries value chains
- Improve fisheries and related data and information collection, analysis, management dissemination
- Establish monitoring and evaluation mechanisms and facilitate the development of partnerships for agribusiness and investment
- Establish the status of fisheries resources
- Enhance monitoring, control and surveillance activities in fisheries sub-sector
- Promote partnerships for management of fisheries resources

4.5 Forestry

There is currently a heightened awareness of the importance and value of the Forestry sub sector to macro-economic development of the country, particularly to food and nutrition security for poverty reduction, economic growth, climate change implications, conservation of the country's biodiversity and its fragile ecology. Nonetheless, the constraints in the sub sector are mainly structural, particularly weak institutional setting, with the sub sector policy not yet operational that will provide guidance on the nature and scope of taking advantage of the opportunities the sub sector offers, at the same time ensuring its sustainable management.

Constraints

- Limited institutional support to strengthen local structures (CFM Committees, Area Councils etc.);
- little or no engagement in research and development to generate and transfer new technology;
- The framework and mechanism for a more decentralised system of governance of the sub sector has not yet been fully realised;
- Frequent bush fires are reducing the potential for forest growth and management
- M&E tools for assessment of program performance and impacts are not fully developed;
- there are neither criteria nor indicators for measuring policy performance and impacts;
- limitations in human and financial resources and capacity;
- There are inadequate provisions for human resource development;
- Department works in relative isolation of other institutions which has placed it in a poor position to respond to changing needs of macro dynamics; and,
- Forestry Department has virtual monopoly of decision making process of all program components.

Policy Objectives

- i). A Special Initiative will be in force, ensuring Wood and non-wood forest products are sufficiently available in a sustainable way to meet national requirements;
- ii). Advanced mechanisms will be in place and being applied in a participatory way, ensuring multiple use of forests and forest resources/products in a sustainable way for food and nutrition security, incomes, employment and investment;
- iii). Wildlife and forest producers are enabled, facilitated, guided and linked to markets in producing quality products for income, employment and investment; ,
- iv). An effective institutional framework will be in place providing appropriate advice, delivery services, data and information on a continuous basis for policy, planning and investment, and appropriate legislations, guidelines and practices in-force regulating the exploitation of the natural forest resource base.
- v). At least 20% of the total land area will be under effective forest management
- vi). Forest policy will be promoted and harmonized with sub-regional and regional initiatives, e.g. NEPAD/ CAADP, ECOWAP, ECOWAS, etc.

Strategies

Priority

- Implementing the new Forest Policy;
- Promoting the management of forest resources through establishment and functioning of community and private partnerships;
- Participatory development and implementation of enterprise programmes;
- Develop and maintain a pool of competencies in all aspects of forestry
- Promotion of agro forestry and national tree planting day

Other Priorities

- Potential forest areas and resources mapped and classified
- Strengthening the management of the National Forestry Fund

- Rehabilitation of forest lands (enrichment of forest ecologies with indigenous tree species);
- Establishing fast growing tree species plantations and community woodlots;
- Development of forest resource- base enterprise development program;
- Develop and maintain a pool of competences in all aspects of forestry; and,
- Improve forestry and forestry related data collection, analysis and information dissemination and storage.
- Develop participatory biodiversity conservation methods based on non timber edible species (forest fruits, edible leaves, etc.) through forest regeneration and management, prevention and control of forest bush fires by local communities, with the collaboration of other sources including Government and Development Partners.

4.6 Parks and Wildlife

Government attaches great importance and has demonstrated political will to ensure the conservation and sustainable use of the wildlife resource as a key component of biological diversity of species, genes and ecosystems of the Gambia, and the contribution such resources make to the country's socio-economic development. Government is aware of the potential of this sub sector to contribute measurably to achieving the MDGs and Vision 2020 objectives of the country. More particularly Government recognizes the potential contribution wildlife and parks can make to increase the productivity of the country's land and soil resources and competitiveness in products of high value markets, particularly tourism in the country. The DPWM has developed programs and actions within the framework of its Policy directives and the Biodiversity strategy document through consultative and partnership process for effective sustainable resource management Department has shifted towards a more participative and partnership resource management approach.

Constraints

- increasing population and desertification are currently exerting considerable pressure on the availability of wildlife and maintenance of their natural habitat;
- hunting pressure (poaching) and gradual reduction of vegetation density;
- frequent bush fires and drying of streams and other drinking points have significantly contributed to the disappearance of the natural habitats and indigenous traditional wildlife species;
- Limited institutional and financial support to cope with the numerous challenges of the sector;
- Little or no engagement in research and development to generate and transfer new technology;
- The absence of decentralisation of management apparatus for a more decentralised system of governance;
- Devolution of authority in wildlife resource management not fully operational at Local Government, district authorities and village community levels;
- There are no criteria or indicators to measure policy performance and impacts;
- At local level, access to land and security of tenure is inadequate to stimulate private sector investment in wildlife resource management.

Policy objectives

- i). By 2015, the level of protection and availability of wildlife of the Gambia and their habitat would have risen by at least 75% of present levels, and incidence of pest-

farmer conflict on the production of food crops would have been reduced to below 5% of present records;

- ii). Parks and wild life resources would be under organised and sustainable participatory management, producing opportunities for Wildlife and forest producers to produce quality products for food, incomes, employment, investment in Ecotourism, and increasing the level and health of wild life in the country;
- iii). Appropriate advice, delivery services, data and information being provided on a continuous basis for policy, planning and investment, and appropriate legislations, guidelines and practices would be in-force in the exploitation of natural resource base
- iv). Established national parks, nature reserves and other protected areas will be increased from 4% to 10%, and Biodiversity conservation mainstreamed in all socio-economic sectors for adequate protection of marine and coastal habitats

Strategies

Priority

- Carrying out an in-depth assessment of the nature, extent strengths and weaknesses of the wildlife resources in the country by location, for mapping and classification of the resources
- Establishing and implementing a Special Action Plan for participatory management and conservation of the wild life resources and Parks
- increasing the management capacity of the Department of Parks and Wildlife Management to: deliver professional services to communities and individuals; administer, develop and manage effectively and in accordance with the biodiversity policy goals for the conservation and sustainable use of biodiversity; increase revenue generation from wildlife resources for the development of both wildlife and surrounding local communities;
- Create favourable conditions for the involvement and empowerment of local communities to participate in the management of biodiversity/wildlife schemes so that tangible benefits accrue to these communities
- Special actions will be taken periodically to step up the scope and coverage of the ongoing nation-wide public awareness and environmental conservation education programme to include all aspects of biodiversity targeted at all strata of society
- Establish a programme for domestication of selected wildlife specie, essentially to increase availability and affordability of nutritious wild life meat products for food and nutrition security a household levels and for Ecotourism
- Establishing a reliable data base on wild life activities and resources on a continuous basis for policy, planning and investment

Other Strategies

- Increasing the establishment of National Parks, Nature Reserves and other categories of protected areas covering at least 10% of the total land area by 2015 for conservation, protection, management and sustainable use of fauna and flora;
- Through participatory approaches develop and manage in accordance with the forest policy, at least 30% of the total land area under forest nature conservation with a view to enhancing environmental protection, minimizing soil degradation and erosion, maintaining river bank stability, protecting wetlands and improving, conserving and preserving biodiversity
- Set up through participatory approaches, appropriate incentive measures for the conservation and sustainable use of biodiversity originating from within and outside

the Gambia, and prevent all forms of bio-piracy and IPRs through appropriate legislation.

4.7 Lands and Soils

Lands and Soils are basic resources of agricultural production for food and markets, and their proper management is fundamental to enhancing the capacity and output of the sector, especially to meet macro-economic priorities of poverty reduction and economic growth. The soil resources in the Gambia are fragile and not renewable, possessing relatively low fertility, taking into consideration the country's geo-physical location in the semi- to arid zone of West Africa, with an almost drought prone ecology. Current farming practices (crops and livestock) have not been overtly helpful to prevent the depletion of the already limited fertility of the resources, especially their continuous use without soil cover, fertilizers, and unsupervised mechanization with tractor powered implements during land preparation.

Constraints

- Inadequate institutional capacities and instruments (land use and soil maps, Core technical expertise and field operators), to provide appropriate advice on the appropriate practices to employ on selected land and soil resources, offer technical support in planning, use and management of resources prior to, during and after use;
- Absence of participatory guidelines, programmes, legislation and monitoring systems for the use and management of lands and soils in the country for agricultural purposes;
- Inadequate knowledge and skills of small producers and their use of appropriate technologies to manage the resources, and prevent their irreversible depletion.

Policy objectives

- i). Throughout all production areas in the country, there will be visible and measurable reduction of land and soil degradation, from participatory application and monitoring of appropriate land use and soil management best practices, especially by small and medium producers, agro-processing and agro-industrial enterprises in the ANR sector;
- ii). Proper advice, supervision, guidance and monitoring are being provided by a critical mass of skilled and knowledgeable technicians both at the level of service providers and users of the resources, on the appropriate use and management of best practices and user managed proven technologies by small and medium holders and other enterprises in the ANR sector involved with land and soil use;
- iii). Periodic review and assessment of lands, soils and water resources of the country are being carried out, to update actions supporting modernization and commercialization of the ANR sector, and for increased productivity and competitiveness.

Strategies

- Existing technical institutions will be restructured and strengthened to provide appropriate advice and supervision to extend the information outreach and transfer knowledge and skills in the sustainable use, management and protection of fragile arable lands and soils in the country. The Soil and Water Management Unit in the MOA/OSA will be provided with the necessary support to upgrade its status, clarify

- its responsibilities, strengthen its capacities and delivery systems in order to enable it provide appropriate leadership and technical assistance for sustainable management of arable lands and soils in the country;
- the Ministry/Department of State responsible for lands, soils, water resources will institute a number of policy processes with the direct collaboration of the respective Agencies, Government, Development Partners, NGOs, Civil Societies, Farmers Organizations and Communities to periodically review the situation on arable lands and soils in the country, with a view to:-
 - determine the nature and scope of actions to take, responsibilities to be carried out and by whom, in order to: arrest soil and land degradation, particularly erosion, loss of fertility, increasing salinisation; enforce conservation of lands and soils for agricultural purposes;
 - ensuring Human Resource development in the sub sector;
 - mainstreaming soil fertility measures in all land agricultural production activities, community oriented, private and or public led;
 - monitoring and providing guidelines in the use of inorganic fertilizers;
 - monitoring the implications of agricultural mechanization and tax exemptions on agricultural inputs;
 - With the collaboration of Government Institutions at central and decentralized levels, Development Partners, land users, Communities and Civil societies, Special Programmes and activities will be designed and implemented, guidelines established, existing ones reviewed for reclamation of all acid and salt affected areas which may have implications for agriculture production and productivity;
 - A number of key activities will be carried out country wide directed at planning, use and monitoring of the status of arable lands and soils, among them:-
 - conduct participatory national soil survey activities;
 - conduct participatory periodic but specific soil fertility tests/research with a view to determining and establishing updates on soil fertility status;
 - guidelines for the improvement of lands and soils, particularly nutrient regimes including use and application of fertilizers and irrigation systems;
 - internalise and programme into the Government's annual and special plans for the ANR sector, the outcomes of the Africa Fertilizer Summit of 12 June 2006, Abuja Nigeria, and updates on such regional Initiatives relating to soil fertility and fertilizers in particular;
 - encourage and promote the practice of organic farming; land classification system or a local system that can be conveniently correlated with internationally accepted systems;
 - determine research activities for improved soil fertility, bearing in mind the focus of the policy for a commercial and modern sector with sustainable increased productivity and competitiveness; undertake mobilization of resources for implementation;

4.8 Water Resources

Water resource availability and accessibility on a timely basis allow for forward planning, optimization of appropriate investment, and realistic prediction of inputs and outputs. These modernized methods of farming are not easily applied under current widespread rainfall-dependent farming systems in the country with accompanying uncertainties and high risks, with the result that performance and investment in the sector are low and unattractive.

Constraints

- Water supplies to agricultural production areas are ad hoc, uncertain, and where available, they are unaffordable in most cases by the small holders;
- inadequate data and information on the nature, quantum and availability of water sources for production of food and cash crops, and for agro-processing and agro-industrial activities, and mechanisms of delivery of the resource;
- no established structures (public and private) for timely delivery and management of water supplies to agricultural areas of need, and monitoring their use for food and cash crop production;
- there are no clear instruments of governance of the resource, or those that will accord priority to the ANR sector, and ensure availability, delivery and monitoring of the use, management and monitoring of water resources for agriculture purposes,

Policy Objectives

- i). Farming communities in the country are having secured year-round supplies of affordable quality water for production of basic food commodities grown from their land holdings, and production of high value market agricultural commodities;
- ii). Both public and private sector entities are providing requisite policy advice, technical delivery and monitoring services especially at Regional and Division levels in a coordinated and participatory way, ensuring sustainable availability and use of affordable water supplies at all times;
- iii). Policy measures, Technical Guidelines, and Legislation are in force and being monitored in order to ensure efficient development and management of water resources for ANR Sector.

Strategies

Priority

- Upgrading data and information base on available water resources, delivery services and management systems of such resources, for immediate use, and development of others from various sources (Rivers, rainfall, groundwater) for use in lowlands, uplands and for production of staple food crops and livestock;
- Promoting and facilitating private sector participation and investment including partnerships in the provision and management of water supplies for operations in the value chains of high value market commodities;
- Establishing and managing reliable data and information bases on development, availability, demand and use of water supplies to the ANR sector;
- Building capacities in technical services of providers and water users groups at national, regional and community levels for planning, use and management of water supplies to the ANR sector;

- Establish policy measures for water resources for the ANR Sector; set Guidelines and Monitoring mechanisms for the development and management of water resources in the ANR Sector.

4.9 Irrigation

Constraints

- Irrigation water supply development, conveyance, distribution and application are inadequate in the horticulture and rice crop sub sectors;
- current cost of ground water pumping or lifting is high, and human powered water lifting devices particularly treadle pumps are laborious and difficult to operate by women;
- there is an inadequacy of qualified and skilled nationals in irrigation activities to provide technical advice in appropriate irrigation technologies by resources situation and supervise its installation and monitoring its management; and
- farmers organisations such as water users associations exist but would need to be more effective in securing better services at affordable costs.

Policy Objectives

- i). Irrigation schemes and practices affordable to users, particularly small holders will be promoted primarily for high value crops; existing schemes will be consolidated and expanded, and new ones established in collaboration with the National Environment Agency (NEA), with the process extending to cover each region in the country by 2015, providing water supplies year round;
- ii). Water Users Associations will be promoted, facilitated to be well organised, in partnerships with providers of water supplies and irrigation services, managing and monitoring year round affordable water supplies for their enterprises;
- iii). New areas of land will be developed with affordable irrigation schemes in collaboration with the NEA, to add to existing developed irrigation schemes, and put under full utilization by small producers, including vulnerable populations, mainly for rice production are under and other lands are being developed.

Strategies

Short Term

- Existing 350 ha under pump irrigation put under double cropping annually. This will increase productivity of the area and reduce the overhead costs rates;
- Two thousand three hundred and eighty two (2382) ha of tidal lowland schemes presently under irrigation will be fully utilised for rice cropping instead of staggered cropping as is done presently. This action will also improve the maintenance of the structures, and reduce overhead costs;
- Four thousand six hundred and fifty two (4652) ha of existing developed swamplands will be provided with structures for rainwater harvesting, and action taken to ensure they are fully utilised for rice production. Contour dykes and spillways will be constructed in order to impound water;
- Action will be taken to increase access to 3582 ha of riverine flood plains that are seasonally saline, but already developed, to make them fully utilised for rice production. There will be continuous participatory maintenance of roads and bridges to ensure access to such access at all times;

- much greater attention will be placed on management of structures and systems of irrigation, through continuous review and design of appropriate technologies and effecting training in their use and management;
- There will be greater encouragement for, and promotion of the establishment of Farmer organisations and Water users Associations in such areas and or re-activation and strengthening of others in order to enable them take charge of the schemes, operate and maintain them.

Medium Term

Actions will be directed at the following:

- increasing the current area under irrigated rice production to at least 25,000 ha in the next 5-10 years with emphasis on the fresh water tidal swamps and rain water harvesting from the current developed area of 11,086 ha, and the 11,155 ha planned under ongoing projects;
- develop national capacity in irrigation development (planning, design, and construction/construction supervision and water management) by year 2015, through establishing core teams of irrigation professionals in production areas;
- encourage the promotion of low pressure irrigation systems with a view to optimising water use efficiency;
- Situation review and establishing and carrying out a programme on capacity building for use and management of irrigation systems and structures.

4.10 Mechanization

Farm power is indispensable to sustained agriculture production and productivity. In the Gambia, such a resource is very largely labour intensive, low output and limited. Some level of mechanised power is being used particularly with the introduction of a fleet of tractors (100) into the farming system by H.E. the President. The use of these tractors is for land preparation. Furthermore, some mechanization activities are carried out in agro-processing. However, the demands on the sector to meet the goals of the PRS II of necessity require increasing land and labour efficiency in agriculture through increased and sustained farm power, which could best be provided through mechanization (both mechanical and animal draught). The critical areas for such input in crop production are in land preparation, planting, post harvest processing.

Constraints

- mechanization has been mainly controlled by the public sector on a promotional basis, without much participation of the beneficiaries in the planning, procurement and management of the operations; as such sustainability of achievements was very low;
- Use of tractors is isolated, and on individual basis. Support Service Units operate without regulation or proper training, making services expensive to the small holder farmers or not available even if payments have been made because of frequent breakdowns or over booking; advice of the adjustments and type of implements used are generally inappropriate; the continued use of these machines have negative effects on the fragile soils, increasing their degradation;
- available machinery is not standardised, their spare parts not easily available, and the machinery is not easily affordable by the large number of small holders or groups; hire services are not regulated and are expensive to the small holders
- holdings are very small in size and uneconomic for operation by the relatively large mechanical equipment available in the markets;

- mechanised processing is relatively large scale and not easily managed by users, who are largely small scale, with the result that operational costs are relatively high and not cost effective;
- generally, environmental impact assessments are not carried out prior to or during the use of machines with negative environmental results;
- large numbers of operators of machinery in the ANR sector (tractors, processors of crops, fish and forestry) are not properly trained to manage the machines;

Policy Objectives

- i). A Special Initiative on Mechanization established and ensuring widespread awareness, promotion and facilitation of partnerships (public/private sector), mobilization of resources for special packages for small producers; participation of grassroots organizations in, and use of mechanization in the value chains (production, post production handling, agro-processing and agro-industries) of food and cash commodities in the ANR sector, to raise productivity increased outputs, incomes and returns to investment;
- ii). A strong institutional capacity is built up, and in collaboration with the NEA providing technical advice, setting technical standards, monitoring, cost recovery delivery services at the level of users, building capacities at users level;
- iii). The local production and use of small scale machinery and spare parts will be encouraged and facilitated, in order to increase availability, access and widespread use of such inputs particularly by small to medium producer.

Strategies

- Preparation and implementation of a Special Initiative to popularise mechanization in agriculture and make it available to at least 40 percent of farming households; especially small to medium producers in order to enhance the modernization and commercialization of their enterprises, and to increase and sustain the productivity and competitiveness of their products; the Initiative will include setting up a scheme for innovative forms of ownership: especially collective ownership of such enterprises particularly by FBOs, or similar groups
- Restructure the Agricultural Engineering Unit (AEU) of MOA and strengthen it with increased and trained professional staff, facilities and authority in order to enable the Unit update existing regulations, establish guidelines on standardization of tractors and accessories to be used in the country, provide technical advice to users and supervision and guidance to service providers and monitoring of the activities of the sub sector, particularly ensuring that spare parts are easily obtained; quicker and cost effective technical services are provided without detriment to the small holder farmers;
- Facilitate established Farmers Organizations, CBOs, Cooperatives, other Associations of users of mechanization, private dealers in equipment, accessories and services to hold dialogues with the Government and other sources of support for an enabling environment (particularly incentives) for continuous supplies of affordable equipment; and monitoring activities to avoid negative environmental effects from the use of such equipment and disincentives to smallholder users.
- Prepare and implement an Action Plan to establish local production lines of manufacturing selected machinery and spare parts for machinery in use in the country for agricultural purposes.

4.10.1 Animal Draught Power

Animal draught power technologies have been in use in the country for decades, especially by family units and small producers groups mainly for land preparation and transportation of farm inputs and outputs. Oxen, donkeys and to some extent horses are used for draught power. Although the technologies have proven to be cost effective and easily managed by small holders, there is an apparent waning of advocacy for, support to and expansion of the technologies, especially at a time when there is a great need for much greater use and expansion of affordable farm power for productivity and competitiveness particularly by small producers in the ANR sector.

Constraints

- The services transferring knowledge and skills and providing other essential inputs of spares, credit and information are not currently effective, with the apparent loss of interest in the technology by small producers;
- Draught power Units are also currently not easily available and affordable to small producers for proper management of the animals (feed, health and handling).

Policy objective

- i). Draught power technologies are revitalized, cost effective, affordable, widely used by small holders, contributing measurably to increased production, productivity and the competitiveness of their agricultural enterprises

Strategies

- Undertake an in-depth review of draught power activities, identifying the strengths and weaknesses establishing an inventory of best practices with accompanying recommendations; establishing a medium term framework for enhancement of draught power use country wide, for increased productivity and competitiveness of products in the ANR Sector
- Establish a programme for support to existing groups of users of draught power, and the assistance to establish new ones directly involved in the activities of the value chains of high value market commodities in the ANR sector; provide assistance in training in the production, supply, use and management of the draught power Units, particularly the animals;
- Establish and strengthen a special Unit in the MOA to provide advice and supervision in, and monitoring of draught power activities in the country, for agricultural production
- ensure the preparation and implementation of annual plans of research and extension, in draught power activities in the agriculture sector;
- Intensify extension efforts through the newly established Unit in MOA for draught power activities, and the polyvalent extension services to: improve farmer education, health care, nutrition and other management aspects of draught animals; advice and supervise where necessary users groups and existing support services, in the setting up and provision of services for draught power; awareness of and adherence to environmental protection considerations
- Mobilise resources for planned promotion of increased and improved use of animal draught power use in selected deprived areas, and more particularly, agricultural areas with comparative advantages for rapid increased productivity and competitiveness;

- Facilitate private sector support services for the availability and access to essential inputs for draught animal power, such as adequate supplies of drugs, vaccines for treating equines, which are highly susceptible to trypanosomiasis.

4.11 Infrastructure

4.11.1 Storage

Appropriate storage will be a key input in achieving high level of quality, safety, competitiveness and commercialization of the agriculture sector; particularly food and horticulture crops, fisheries, and more so the small scale enterprises in these sub-sectors.

Constraints

- present structures and practices of storing produce are very limited in quality and volume, do not extend the shelf life agricultural commodities, or ensure retention of quality, and consequently competitiveness and value of the commodities
- refrigerated storage spaces are very few and at best expensive to secure, and are a relatively high inputs cost to the many small holder farmers in the sub sector;
- containers generally used to store horticulture produce for short or long term periods are neither technically appropriate nor safe medically or commercially;
- cold storage facilities for fish are few and mostly dependent on short term ice supported devices. The facilities required to maintain quality and volume are relatively expensive for the small-scale enterprises that dominate the food crops and horticulture sub sector.

Strategies

The actions being considered by the policy in the medium-term would focus on empowerment of small-scale enterprises for user managed facilities for handling and storage. The actions will include among others the following:-

- emphasis will be placed on, and Government will mobilise support for sustainable mechanisms on extending the information outreach to small enterprises and units, on the need, value and returns that could be obtained from appropriate handling and storage of high value agricultural commodities, crops and fisheries including livestock;
- Government will mobilise support for participatory assessment, inventory of best practices in storage of agricultural commodities, particularly high value crops, fisheries and livestock. The activity will focus primarily on practices appropriate to and affordable by small holders, communities and groups;
- appropriate mechanisms including brochures and mass media instruments will be established for reference, investment; selected best practices will be promoted targeting small holders for increased productivity and competitiveness;
- policy dialogues will be established to update quality controls and standards on high value agricultural produce and commodities, in order to guide the handling and storage of such products, and investment in infrastructure for such activities;
- Consultations will be held with the private sector, (particularly supply and demand side interest groups) on establishing Warehousing; their use, operation and management, and who will initiate such infrastructure.

4.11.2 Market Structures

Constraints

- highly perishable commodities (horticulture and fish) have lost quality and quantity from poor handling, storage and long transition from production to outlet points;
- proper disposal and assembly points for products are few and at best, open grounds with makeshift structures which barely offer shade from the sun, shelter from rain, and protection from pests and diseases;
- no organised market structures with appropriate storage to extend shelf life;
- Inadequate systems and capacities for generation, dissemination and availability of country wide market and trade information.
- Lack of affordable finance and adequate loans for business development

Policy Objective

Government is aware of the difference market structures could make to increase competitiveness of agriculture commodities for exports. In view of the implications of ownership, maintenance and sustainability of such infrastructure, Government will adopt a participatory approach to provide the enabling support, and facilitate the availability and use of market structures for agricultural purposes.

Strategies

- Ensure Decentralized Administrative and Technical structures include in their development plans, programmes and activities, the establishment of suitable market structures for agricultural purposes; carrying out assessments on needs, nature and scope of such markets and cost recovery management of such structures; making it a precondition for support to the Decentralised offices for resource mobilization for development of agriculture in their respective areas;
- undertake periodic surveys country wide on such structures, identifying needs and requirements, holding policy dialogues with interested parties, mobilizing resources and advocating for support to rehabilitation, upgrading of status or expansion of market structures based on agreed criteria for such support;
- encourage Community Based Organizations and agricultural groups and institutions to construct and manage sustainable market structures and information systems, and assist them build capacities to operate and maintain the structures and systems;
- ensure the inclusion of market structures for agriculture purposes in resource mobilization drives and campaigns for poverty reduction and food security, and the development plans of the decentralised administrative planning structures;
- organise Agricultural shows and Trade Fairs

E. SUPPORT SERVICES TO THE ANR SECTOR

5.1. Agricultural Research

The National Agricultural Research Institute (NARI) is client oriented and adaptive in outlook currently. The Institute is collaborating with extension services and other stakeholders for dissemination of results to the end users, however, the linkage needs to be strengthened. Although the Institute is currently understaffed and not fully equipped, it however could play major roles and make significant contributions to poverty reduction through increasing productivity of crops and livestock for food security,

competitiveness of high value market commodities and sustainable management of the sector's natural resource base.

Constraints

- The dominance and bias (70%) of crop research in the programmes of the National Agricultural Research Institute (NARI) to the disadvantage of the other productive sub sectors
- The financial status of NARS is weak and unsustainable with modest national expenditure and overall financial resources very heavily dependent on external funding, particularly for operations, equipments and field work;
- A weak human resource base (modest and inexperienced) resulting in declined scientific operations to about 50% of 1998 level due to staff attrition and significant reduction in urgent research activities;
- Inadequate and deteriorating research capacities particularly infrastructure and facilities such as poor office, laboratory and field conditions to accommodate the expected growth in research activities and output;
- Weak interfaces between agricultural research and stakeholders resulting in inadequate research in stakeholders' priority requirements, and direct involvement of the private sector in research;
- Regional and sub-regional collaboration in research programmes are not fully exploited to ensure transfer of success stories in food and agricultural technologies;
- Fewer policy objectives are appropriately focused to take advantage of global knowledge and technology for research activities directed at national priorities of productivity and competitiveness.

Policy Objectives

- i). Measurable increase in agricultural productivity, availability and widespread use of improved diversified and affordable varieties of quality genetic materials of crops and breeds of livestock in technical packages contributing to sustainable food and nutritional security, incomes, employment and foreign exchange earnings;
- ii). Strengthened relationships between agricultural research and extension services such as the University of The Gambia as well as NARI and interested INGOs including the CU in action-research joint initiatives and development partners for improved access to, and sharing of information and technology knowledge to enhance research for food security, income and foreign exchange earnings.
- iii). High quality genetic materials of selected high value horticultural crops, food and cash crops such as (rice, millet, sesame, cow pea) are available, affordable and being used for commercial purposes.
- iv). A National Agricultural Research Policy and National Agricultural Research Council established and operational

Strategies

- Crop intensification through utilization of accessible, affordable, high yielding and biotic/abiotic stress tolerant/resistant varieties (rice, maize, millet, groundnuts, sesame, "findo" and selected horticultural crops).
- Establish a core of skilled and knowledgeable operators for transfer of knowledge and feedback on research results
- Establish partnerships with private sector and for commodity/activity specific research and extension.
- Establish an operational Research, Extension and CSO Liaison Office for effective research/extension/farmer linkage

- Ensure regular consultations involving all the stakeholders including annual research reviews and planning meetings
- Establish a unit in NARI for research and extension in selected high value commodities.
- Establish a rolling program in NARI for research in selected high value commodities in short and medium term.
- Strengthened agricultural research facilities
- A comprehensive assessment of the agricultural research sub-sector of the country
- Restructuring of the institutional framework of the research sub-sector

5.2. Agricultural Extension

The Extension service is an agent of the Government currently monovalent, and has been undergoing restructuring for the past few years, aimed at ensuring effective/efficient service delivery. The service is currently relying mainly on agricultural projects for capacity building as well as support to farmer training. The service is presently understaffed at field level with an Extension Worker/farmer ratio of over 1: 2000. Nearly 70% of the highly professional qualified personnel will reach retirement within the next five years, raising the need for an urgent up scaling of the sub-sector's human capacity in order to meet emerging challenges. The sector's objectives are focused on development of the small producers for productivity and competitiveness. The extension service will be central to get the necessary messages across to the small holders who may not have had the opportunity to see, let alone adopted new technologies to be adopted.

Constraints

Institutional Constraints

- The sub-sector as a result of the series of restructuring/reorganisation, has experienced severe staff shortage especially at field level. This has resulted in a high Extension Worker/farmer ratio of over 1: 3,500. This, coupled with the aging of majority of the highly qualified personnel and weak linkages with research and other partners, has had severe negative impact on its performance.

Technical Constraints

- Inadequate and poor infrastructure (Staff housing and offices) and inadequate and poor mobility status of the staff continue to pose negative effects on staff morale, thus adversely impeding their effectiveness.
- The need to work out, implement and coordinate a continuous training system to improve and update staffs' technical skills in their key areas of specialty using existing structures (e.g.: the National Training Authority, NGOs)

Social Constraints

- Agricultural extension calls for constant touch with producers. This entails living in remote settlements where facilities are lacking. Boosting staff morale for the maintenance of the required linkage with the farmers through encouraging remunerations tends to be lacking. This seems to impose negative changes in staff attitude towards duties.

Policy Objectives

- Strong, efficient and dynamic extension service linked to research equipped with knowledge, technology packages and skills providing information and transferring knowledge to producers; particularly small;

- Well organised extension/research linkages providing improved knowledge and skills to producers particularly small to medium commercial farmers in increasing their productivity and competitiveness in the value chains of high value market agricultural commodities;
- Farmers and producer groups are constantly being made aware and complying with established guidelines on agricultural practices for sustainable and effective management of the natural resource base of the sector.

Strategies

- Upgrade and strengthen the capacities (skills and knowledge) of existing experienced extension personnel and increase the numbers of Extension Workers in facilitating farmers to adopt improved packages/technologies for increased productivity in staple food commodities;
- Facilitate their functioning capacities and ensure appropriate attitude to provide well organised activity specific extension services;
- A joint agricultural research and extension activity planning and implementation of activities;
- Established partnerships with research, extension and private sector facilitating the efficiency of value chains of selected high value market agricultural commodities.
- Increased responsibility of CSOs with key roles to be played by international NGOs (Concern Universal, Action Aid, etc.) and in coordination with CBOs and other local organizations.
- Confirming with appropriate sectors (Environment, fisheries, agriculture, livestock, forestry etc) the updated agricultural practices, guidelines and legislations for sustainable management of the natural resource base of the sector;
- Establish linkages with operators of existing Early Warning Systems (EWS) on disaster and conflict prevention and management to ensure human security.
- Link up with established recognized authorities to enhance sensitization and extend information outreach on attitudes and response to climate change and biodiversity.

5.3. Agricultural and Rural Financial Services

Government is committed to a market-determined pricing policy and liberalized agricultural commodity input/output markets, in line with its “Vision 2020” divestiture strategy on inputs marketing. The Government has tried various ways to make financial services available to the sector, particularly the small producers, essentially to increase their production. The establishment and functioning of the VISACA systems have gone a great way to address issues related to credit in the rural areas. The creation of the Agricultural Development Bank and the Gambian Cooperative Union are also tangible commitment to making financial services available to the ANR sector. However the gap between availability and needs for the services is significantly wide, especially at the small-medium scale producers levels. With the urgency to transform the present traditional subsistence system to a modern, commercialised market-oriented economy, the provision of available, affordable financial services, particularly credit is a priority.

Constraints

- Experiences from past and on-going activities to provide rural financial services indicate there is inadequacy in the capacities (analysis, processing procedures, timeliness) to deliver the services, and a corresponding inadequacy from the recipients to utilise the resources appropriately

- considerations of linking the provision of the resources to markets (prospective opportunities of demand and price) are most often times omitted, resulting in repayment difficulties
- absence of a national policy on agricultural finance, particularly rural finance including a recognized national institution championing the cause of agricultural finance
- Revolving funds (*Susus*) are used to finance the purchase of farm tools and equipment for those with retained earnings but they may not be an appropriate and reliable credit product for many agricultural operations which require working capital on an annual basis
- Medium to large scale enterprises and other private sector agents who have capacities to exploit opportunities in the sector and create others for the small producers, most times do not have access to credit, or may do so at expensive rates

Policy Objective

Appropriate systems and mechanisms established providing financial services to all categories of farm enterprises with particular focus on small and medium holdings, youth and women constitute the ultimate objective of the sub-sector.

Priority Strategies

- Implement the key recommendations of the National Strategic Framework for the development of rural finance.
- Strengthen existing systems (VISACAs) and create different types of financial delivery systems and mechanisms to ensure sustainable access to such services to enable them meet the diverse needs of the farming population.
- Pursue, finalise and operationalise the creation of an Agricultural Development Fund/Bank to ensure appropriate processes of access and affordability to purpose in meeting the medium and long-term needs for financial services for production and commercialization.
- Build the capacities of selected institutions of both the supply and demand sides of rural finance in order to ensure efficient delivery of financial services and the corresponding efficient utilization of available financial resources.
- Strengthen and expand existing linkages between the economic agents (producers, processors, marketers, traders) and the financial services providers such as the informal financial services providers, the MFIs, the Commercial Banks and development and Investment Funds.
- Monitor and evaluate the financial performance of the financial services systems and the linkages established.

5.4. Agribusiness, Agro-Industry, Agro-Processing, Markets

The Agribusiness, Agro-industries, agro-processing sub sectors are characterized by numerous smallholder (household) entities using low output technologies and labour intensive systems leading to leakages, low quality and low income. In view of the limited size of the domestic market, and the opportunities the country has to produce a number of livestock, fisheries and horticulture products, The Gambia should take advantage of the opportunities being presented by processing and markets to produce competitive agricultural commodities for regional and international markets.

5.4.1. Agribusiness and Markets

Agribusiness is not well articulated in Government policies and programs. Stakeholders, particularly investors in the sub sector are few and mainly concentrated in horticulture with little or no technical or institutional support from the Government. The majority of stakeholders are farmers' organizations whose members are women and youth, and who lack the basic management, processing and marketing skills to operate successful enterprises. The inputs/outputs markets for agricultural commodities are apparently not efficient and do not appear to offer much motivation for investment in them especially by small scale supply side operators. Inadequacy of information and a serious mistrust between the supply and demand side agents coupled with negligible effective storage and handling infrastructure have contributed largely to the slow pace of commercialization and modernization of the ANR sector. The private sector has ventured into a few setups particularly in vegetable production and agro-processing but their impact is still marginal. It is important therefore to build and strengthen the capacities of the players in the sub sector in order to achieve the desired objectives of food security and commercialization of agriculture

Constraints

The constraints in the sub sector are many and varied but the most important is the lack of finance and initial capital outlay (infrastructure) to set up new businesses in processing and packaging. A lot of produce is wasted annually due to lack of processing plants coupled with limited markets for the sale of ANR produce. There has to be an enabling environment of available affordable finance and infrastructure and attractive incentives of tax concessions and partnerships for the private sector to venture into agribusiness and provide required capital and skills for the sub sector to thrive.

Other constraints include:

- Inadequate storage facilities, coupled with poor handling and high cost post-harvest transportation make post-harvest losses in quality and quantity (excluding pre-harvest losses) exceptionally high for many producers;
- Because of insufficient reliable produce traders, market information and handling facilities, considerable informal cross-border trade exists between The Gambia and her immediate neighbouring countries to the detriment of small producers

Policy Objectives

Ensuring an enabling environment is in force that guarantees and enhances the following:-

- i). a vibrant and sustainable agribusiness sub sector widespread in the country, with active participation of women and youth, especially small producers,
- ii). the sub sector is developing in effectiveness, and creating opportunities for increased income, employment and food security for rural people, particularly vulnerable populations;
- iii). significant reduction of post harvest losses and improving the competitiveness of agricultural commodities in quality and price;
- iv). increasing access of Gambian products to regional and international markets
- v). Consultations and joint actions to advocate for, facilitate and promote the availability and use of infrastructure, information and regulatory systems on food safety and quality standards, standardization of weights and measures,

appropriate laboratories that allow private markets to develop and function efficiently, and effective monitoring and regulation ensured

Strategies

Priority

- Establish, update on a periodic basis, and make available, information and data on recognizable key market outlets, commodities, producers processors and systems and arrangements for high value market commodities in the country
- Facilitate the establishment of sustainable Linkages between producers, processors and markets, for sustainable profitable business arrangements and partnerships
- Facilitate access to essential inputs outputs resources (finance, Infrastructure inputs, enabling policy measures, markets –national, regional and global)

Others

- Support and promote the establishment of **Agricultural Market Information Service** (Ministry of Agriculture and NGOs) that uses local FM Radios, mobile phones and the Internet, and links the national system with sub-regional (ECOWAS) market information system
- Establish mechanisms within the Ministry for market research and for establishing linkages between and among stakeholders, market Associations, farmer Associations, NGOs and Extension Services
- Support the strengthening of selected market places and construction of commercially based storage facilities such as warehouse receipt systems
- Assist small producers to link with established markets through the involvement of agricultural extension services, NGOs and farmer associations, dialogues and partnerships between and among such enterprises
- Support to small holder groups for greater participation and competition in the market place by taking actions to improve their access to finance and insurance markets, and build the skills of traders and cooperatives in businesses and enterprises
- Encourage and facilitate Insurance companies to offer agricultural insurance products, including crop insurance schemes against physical loss or damage and price decreases
- Support the introduction of standards for quantifying and grading products, and facilitating the small farmers to adopt the standards and measures

5.4.2. Agro-industries and Agro-processing

Constraints

- Only a few large-scale industries exist in the sector; two in crops, (one for groundnuts, the other for beer); two medium-scale units do process fruits and vegetables as raw materials; one meat-processing unit, one Feed mill and a tannery, which is presently not operational;
- Low capitalization due to limited access to and the high cost of, funds inhibit local participation in a sector that has a long gestation period with mixed returns;
- Disenchantment of the young for an enterprise seen as difficult and giving low financial returns;
- Market gluts, particularly in the fruits and vegetables but so also in the fisheries, inhibit producers from reaping the full benefit of their labour;

- In the absence of pre-defined rules of play, small holder producers mistrust large-scale commercial operators thus inhibiting meaningful and sustainable cooperation between them;
- Culture and tradition conflicting with the discipline required for commercial production of perishable high value products makes small producers perceived as unreliable partners by the large-scale export oriented agri-business;
- European Partnership Agreement and the ECOWAS Common External Tariff will further open the Gambian Market to much cheaper food products;
- Limited air freight capacity which is at the same time unpredictable
- Uncertainty of sustainability of supply of raw materials due to inadequate production data did not help investing in industrial level agro-processing;
- there is a chronic shortage of expertise in food technology/agro-processing, both in the private sector and in the extension services. Furthermore, apart from the groundnut sub sector, there is a complete lack of expertise in Quality Management;
- Of the numerous high investment commercial operators, only a few remain but some new high profile external and local entrants have emerged recently;
- The sector is inhibited from reaching its full potential due to the limited and inadequate infrastructure leading to significant post harvest losses and poor product quality. This has led to limited access to overseas markets as a result of standards and freight space. The disarray in the groundnut industry, the dominant export product did not help matters. This is compounded by the unpredictable and low farm outputs due to unreliable weather and low input investments. It is also being constrained by limited and unreliable freight space capacity to the extent that virtually all production of air freighted produce is suspended as of now.

Policy Objectives

Stakeholder Platforms in the sub sector are established, strengthened, functioning and carrying out the following:-

- i). addressing bottlenecks in, growth and efficiency of the Agro-industry Sector on an on-going basis
- ii). bring about mind set change and full participation in the sub sector, particularly by indigenous small and medium scale enterprises; various cost effective processing and industrial activities operating in the ANR sector, at all levels; interactions between small, medium and large scale investment enterprises.
- iii). facilitating the development of sustainable satellite production relationships between downstream and upstream operators for a demand driven production of high value market products,
- iv). Advocacy, resource mobilization for, and facilitating increased productivity and competitiveness of the sector through exports or import substitution thereby enhancing food and nutrition security, as well as opening up opportunities for local producers and agents especially for Tourism and Entertainment industries
- v). Advocacy, creation of opportunities and resource mobilization for increased women and youth involvement in the agro-industry value chains, especially agro-processing, thereby reducing waste and post harvest losses and also enhancing income generation, and employment through linkages with high value markets

Strategies

- Organizing and promoting institutionalized stakeholder forums for the establishment and monitoring of Stakeholder Platforms, directed at the advancement of agro-industry in the country, particularly focusing on food and export commodities, addressing among others:-

- an inventory of best practices in agro-processing and agro-industries in the ANR sector will be established, particularly for small and medium scale holders
- to facilitate Operatives of the high value markets, such as the receivers/users (Hotels, Supermarkets; Tourism and Travels Associations; Entertainment Enterprises and Export Businesses) of high value products (horticulture, livestock and fisheries) to establish organized contacts or linkages between them and producers and suppliers in the ANR sector,
- increasing air freight space
- advocacy for, and promoting the widespread establishment of agro-industries in the country, and establishing appropriate code of conduct to guide their use
- mechanisms and systems for operation of public and private agro-industry infra-structures, such as wholesale markets, cold stores,
- partnership formation within the value chains, especially to rehabilitate or strengthen existing Public sector processing complexes
- mobilizing support to develop quality standards for raw materials, inputs, processes and final products, and promote the introduction of a 'Quality Label from The Gambia'
- advocacy for priority considerations to be given by other relevant sectors to develop and improve infrastructure that will facilitate transportation in agricultural production areas; priority to establish storage, processing and marketing facilities; constructing and rehabilitating feeder roads, cold stores and warehouses, and installing utilities (water, electricity, fuel), and communication in the targeted production areas
- dispute resolution.
- Government will promote and institutionalize development of enterprises and entrepreneurial skills in agro-industries through facilitated access to the services of special institutions for rural finance, business skills and technology transfer
- Strengthening public sector institutions for efficient service delivery to the private sector, especially dissemination of knowledge on improved technologies for **Agro-industries and Agro-processing**
- National testing and analytical laboratories and their processes are audited and certified against international standards.
- Establishment, management and dissemination of data and information on comprehensive production and markets
- Prioritization of product and technology research and development of locally produced materials

F. CROSS CUTTING ISSUES (GENDER, ENVIRONMENT, CLIMATE CHANGE, PESTS AND DISEASES, BIOTECHNOLOGY, BIO-SECURITY)

6.1 Gender

Most of the agricultural programmes are gender insensitive since farmers are often perceived as male by policy makers, Development Partners and agriculture service providers. This perception and cultural norms in the country make it difficult for women to gain access to valuable resources such as land, credit and agriculture inputs, technologies, extension, training and services that enhance their production capacities.

The current agricultural strategies of the government do not have a framework that is focused on the specific demands of the gender empowerment paradigm, related to increasing productivity and output in household staple food production dominated by women. Although some technical advice is offered to few established self-help, bilateral donor and NGO assisted women horticultural schemes, the training, inputs allocation, producer pricing policies, and transportation, storage and marketing needs and constraints of the vast majority of women's commercial vegetable cultivation and small household rice cultivation activities generally remain unaddressed. Although their right to land is recognized in principle, in practice this right is hardly exercised since traditional laws favour communal rights to land over individual rights.

Extension services and agricultural research are very largely oriented towards male-dominated agricultural activities such as production of cash and export crops. Women farmers therefore have limited access to information on new technologies directly relevant to their vocations, or influence the decisions for research in agriculture. Despite the important role that women play in economic activities involving agriculture in the country, most of them seldom use improved farming technology, either because these are costly, unaffordable, unavailable or they have unexplained knowledge about the improved farming technologies..

Constraints

- Rural women have limited income, lack collaterals, have high levels of illiteracy, lack technological information, have constrained access to almost all forms of credit and major inputs to agricultural productivity;
- They have limited access to formal markets for marketing their produces as a result of lack of market information, decreased bargaining power and barriers they faced in meeting requirements of quality or sanitary regulations
- Women producers and or their groups and associations are limited in capacity for management and access to other essential inputs such as farm mechanization, which is a key factor in improving agricultural productivity

Policy Objectives

- i). Gender equity will be mainstreamed in all programmes and projects of the ANR sector, ensuring recognition of the roles and comparative advantages of women, access to essential resources and provision of support appropriate to their needs in their various vocations in food and agricultural matters in the ANR sector;
- ii). Priority attention will be provided to facilitating support to and promoting empowerment of women for increased productivity and competitiveness.

Strategies

- mainstreaming gender considerations in policy and programme development, delivery and monitoring in the ANR sector;
- advocacy and collaboration with relevant institutions for enactment and enforcement of appropriate Legislation in order to enhance full access, security and where appropriate, ownership of land by women, particularly land for agriculture purposes, auxiliary rights to such possessions including their use, and access to credit resources;
- increase advocacy for resource mobilization; strengthening existing rural finance facilities and establishing others directed mainly at women operators in the sector, especially crop, livestock and fisheries marketing and processing;

- inclusion in Research and extension programmes for transfer of appropriate farm technologies and accompanying support services and inputs, for women for different agricultural activities in their domain;
- formulating and implementing IEC programmes directed at appropriate changes in the attitudes of female farmers FOR full involvement in a commercialised and modern sector aiming at increased investment, productivity, competitiveness and optimum returns;
- ensuring the harmonization of inputs support programmes and activities of Development Partners including NGOs with Public sector services, for women target groups in the ANR sector, especially in value chain approach for selected commodities;
- targeting selected resource situations and technologies for women; assisting women groups in organization and skills building in areas of information, enterprise management, negotiations in marketing, access to resources; encouraging active participation and leadership in FBOs and apex producer organisations.

6.2. Environment

There is much widespread awareness among planners in the country, of the delicate and in some cases fragile environment of the country. There is also documented evidence of slowly advancing environmental degradation, and that a large number of agricultural practices from the major sub sectors contribute to the process. There is apparent increase in the use of agricultural chemicals to increase soil fertility, reduce incidence of pests and diseases from insects and weeds. However guidelines for handling, storage, and application of these chemicals are not strictly followed or observed, with the result that there are noticeable leakages and spills of chemicals into lands and waters in or close to the areas of operation causing serious irreversible damage to flora and fauna of the areas.

Agricultural processing activities also result in quantities of effluents spilling into nearby rivers and lands with resulting damage to those areas. Mangrove areas are gradually being depleted for wood fuel and post fish catch activities of smoking fish. The high rates of removal of the mangroves have resulted in the loss of not only the existing value of the tree but in addition, its functions of controlling salt intrusion from the sea.

Environmental conservation and preservation are now global priority issues, and have raised the need and urgency to integrate agriculturally sound and environmentally sustainable practices in order to provide ample safeguards against land degradation while guaranteeing food production on a sustainable basis, and ensuring a heritage for future generations. The Government is fully aware of these concerns and is putting in place institutional structures and instruments through which to address these concerns.

Constraints

- Very low levels of awareness of environmental degradation from human activities in general and agricultural activities in particular;
- Uncontrolled removal of forest cover and mangrove plants for wood fuel;
- Uncontrolled and unprofessional handling and use of hazardous chemicals in fragile land and water bodies, with the threats of pollution and irreversible damage to flora and fauna
- Lack of appropriate pesticides (organic and inorganic) for an effective pest and disease control in horticulture;

- Absence of guidelines for safe practices for crop and livestock production, fish catches and processing to prevent irreversible damage to land, soils and waters and land use policy has caused destruction of landscapes and ecosystems;
- Ineffective inter-agency collaboration to address agric-related environmental issues
- Environmental Impact Assessment (EIA) not yet incorporated in agricultural projects because of weak institutional capacity to monitor the activity.

Policy Objectives

- i). There will be country wide awareness of environmental degradation, and mainstreaming of all Environmental considerations in the planning and implementation of all activities in all segments of the value chains of the food and cash commodities of the ANR Sector;
- ii). Policy measures, Guidelines and Legislation will be in force, being applied, complied with, monitored and enforced in order to ensure sustainable management of the environment and protection from agricultural and related land use activities including crops, forestry, wild life and fisheries;
- iii). The ecological disruption of mangrove ecosystems along Bintang Bolong and similar ecologies would have been arrested and attempts made to restore sustainable production.

Strategies

- Set Guidelines on Best Agricultural Practices (BAP) and Best Environmental Practices (BEP) for the production and post production activities of food and cash commodities
- Establish national committee, community structures and a national programme for the control of bushfires
- Establish and extend information outreach on Environmental Agreements relating to the ANR Sector, and enforce application of Guidelines for Environmental Impact Assessment of agricultural activities
- establish Data Bases, Guidelines, monitoring systems and policy measures for sustainable management of the Environment
- Conduct Strategic Environmental Assessments (SEA) to determine cause(s) and extent of damage to mangrove ecosystems at the Bintong Bolong Creek and to correct anomalies
- Develop mechanisms to arrest land degradation with a view to restore crop production, fishing, bee keeping and wood supply.

6.3. Climate Change

The contribution of The Gambia to Climate change is presently negligible but like other Sahelian countries The Gambia is likely to be disproportionately affected by the impact of climate change, mainly due to the country's limited adaptive capacity and widespread poverty to mitigate the effects of such changes. More especially, The Gambia as a whole lacks access to resources to make quick changes to lifestyle especially for food supplies, strong social and human capital to contribute to serious levels of outcomes from climate changes, and regular access to risk-spreading mechanisms. The majority of the people are therefore highly susceptible to the causes and vulnerable to the results of climate changes. Besides, increasing rise in sea levels as a consequence of global warming and climate change poses a threat to Banjul and other low lying land areas in the country.

Constraints

- Inadequate information country wide on the activities in the ANR sector that contribute to or influence Climate Change, and actions that could minimise or prevent such occurrences in The Gambia
- Livelihood along coastal areas will be seriously affected by sea level rises
- Shortfalls in food production could worsen by further uncertainties and changes in rainfall patterns, especially shorter and of high intensity; increase in the incidence of insects, diseases, and invasive plants
- Global warming could increase the incidence of higher levels of locust invasions and extend the range of disease-causing vectors such as mosquitoes along the Gambia River

Policy objectives

- i). Mechanisms will be in place involving the ANR Sector, for monitoring Climate Change situation in The Gambia, ensuring that agricultural activities in the country do not contribute to such changes; and that such changes will not seriously impede actions and activities in planning and implementation in order to ensure sustainable food and nutrition security, poverty alleviation and environmental protection

Strategies

- Prepare and implement a programme on awareness and information outreach on the incidence of, and management of Climate Change in the country
- Put in place monitoring mechanisms that will ensure consistency in the application of best practices for sustainable management of natural resources in the country for production of food, forest protection, energy production and utilization, production of other economic commodities and development activities in the ANR Sector; such practices including conservation agriculture, and those which reduce vulnerability of cropping systems
- Set up special mechanisms to provide information and advice through statistical data and information, and mass media, about climate changes, causes and risks, especially in relation to the ANR sector
- Mainstream Climate Change considerations in all activities of the ANR Sector and support the institutionalization of adaptation capacities through partnerships with NGOs, civil societies, private sector and concerned government organizations
- Support climate change related research, education and training

6.4. Pests and Diseases

Constraints

- The Service is under-staffed and further, short of highly trained cadre
- Mobility and fuel inadequacy have markedly obstructed the operational capacities of the Service
- There is insufficient office furniture for the Service and Phytosanitary Stations
- Quarantine facilities, e.g. cages for screening pests and diseases are lacking.
- Membership of National Plant Protection Service in the Sahelian Pesticide Committee is pending
- The position of National Plant Protection Service Focal Point at International Plant Protection Convention (IPPC) is equally pending.
- 2008 plant health bill is yet to be enacted by Parliament
- Pesticide application facilities are inadequate

- Farmer brigades to monitor pests and diseases are very few.
- Funds are not readily available for training farmers and extension workers in pests and diseases prevention and management
- There is insufficient or lack of laboratory equipment (i.e. for culturing organisms, screening, detecting pesticide residues, etc.)
- Occasional interceptions of the Gambian commodities, e.g. groundnut crude oil and vegetables were made due to insufficient or lack of certain detecting facilities
- Agricultural projects tend to marginalise the technical role of Plant Protection Service.

Policy Objectives

- i). By 2015, outbreaks of major pests and diseases in staple food and high value market crops reduced to below thresholds to be set and surveyed on periodic basis until the target year set by the Government
- ii). Measures are in place and being applied reducing attacks of pests and diseases on import and export agricultural commodities, to manageable levels in conformity with the guidelines set by the International Plant Protection Convention, (IPPC) in order to ensure the efficiency and corresponding returns from the value chains of high value market commodities.
- iii). Institutional mechanisms are in place and operational in the relevant Ministries/Departments of State, the NEA and private sector Operatives for management and use of agrochemicals, particularly for safety to humans and animals, and protection of the environment

Strategies

- A Special Programme on preparedness to manage outbreaks of pests and diseases, especially (desert locust invasions) and diseases involving the provision of the following:-
 - Early Warning System in incidence and damage from pests and disease;
 - Control measures for major pests and diseases;
 - Pest monitoring and control teams (locust teams/Specialists, Farmers Brigades) equipped and operating in the 6 regions of the country;
 - Quarantine facilities (e.g. cages) provided for screening pests;
 - Trained human resources including at least 700 extension agents, 1500 farmers, 300 Farmers' Brigades and private dealers, for monitoring the status of preparedness to address outbreaks of major pests and diseases, military and police personnel for reinforcement during particularly locust threats.
- Revitalized and judicious use of herbicides to control weeds in all regions of the country;
- Technical Packages developed and being applied and managed to control diseases and vertebrate/invertebrate pests (e.g. insects, spider mites, birds, rodents, etc.);
- Define and implement effective measures aimed at effectively controlling stray animals;
- Ensure continuous technical staffs training on pest and disease control;
- Improved database on insects, weeds, pesticides stocks and volumes of import and export commodities

- Reinforced collaboration with national (NEA), regional and international institutions such as FAO, Regional Centre of AGRHYMET, ICRISAT and IRRI
- Strengthened Phytosanitary services at 12 inspection stations, with at least 26 inspectors posted at the said stations for effective and efficient coverage.

Other Strategies

- Guidelines, programmes and legislation, prepared tested, applied and monitored in handling and improvement of agrochemicals, particularly pesticides to safeguard humans, animals and environment,;
- Sensitization of farmers and others in the incidence of pests and diseases and being the responsibility of the various interest Groups in pesticide management;
- Promotion of the use of bio pesticides and botanicals to minimize heavy reliance on synthetic pesticides;
- Enactment of the validated Plant Health Bill by the National Assembly;
- Conformity with (NEMA – National Environment Management Act , - and CSP, Comité Sahélien de Pesticides)) in the management of pesticides;
- Implementation of the IPM (Integrated Pest Management) policy document (funded by AELP).

6.5. Biotechnology and Bio-security

There is increasing recognition of Biotechnology approaches in enhancing the achievements of key ANR sector objectives of increased productivity, and competitiveness

Constraints

The key constraints of applying such sciences are mainly:

- inadequate human and infrastructural capacities
- very low awareness by public and private sectors on the importance of biotechnology to enhance cost effective achievement of food, agriculture and nutrition objectives
- negligible institutional framework for research, extension and investment in biotechnology

Policy Objective

- i). An institutional and legal framework will be established on biotechnology in the country, its activities being carried out to advance the approaches, particularly in the ANR sector

Strategies

- The policy will advance the information outreach of biotechnology in the ANR sector and the benefits to be derived and the negative aspects to be avoided;
- A nucleus Unit on Biotechnology would be established to map out the nature and scope of actions and manage the processes to pursue biotechnology activities in the country; and
- Advocacy and resource mobilization to implement actions and strategies on biotechnology approaches.

G. FOOD AND NUTRITION SECURITY

Food and nutrition security is a major function of the achievement of poverty reduction in the Gambia, and as such it is now a flagship objective of the ANR sector in the medium term. The Government is committed to achieving this objective for everyone as a matter of right within the shortest possible period, in line with the Vision 2020, the World Food Summit Declaration., and the attainment of the Millennium Development Goals (MDGs) the country set for itself. The major policy focus is household food security, particularly availability, stability, access to and proper utilization of supplies of safe nutritious foods at all times.

The Government aims to achieve this objective on a self reliant basis, particularly through, increased production, improved productivity and sustainable competitiveness in staple food commodities, especially by small producers and large scale commercial enterprises. More specifically, the ANR policy will aim at reaching and surpassing the target of the MDG 1 to half the number of hungry people by 2015, to a self reliant sufficiency level of at least 90% of national requirements by the same period, and ensuring the remaining supplies are met from use of domestic resources, mainly from the country's balance of payments from its agricultural exports.

Constraints

- The country is now producing about 50% of its national food requirements, and only about 30% of the needs for its staple food crop rice from small producers who make up the production base of the country's staple food commodities, and who use traditional low input/output practices and have very little capacities to utilise modern market oriented high output technologies;
- Locally produced major staple food commodities (rice, poultry and beef) are not competitive with cheaper imports because of the relatively high costs of their production;
- Essential inputs such as high quality crop seeds, planting materials and livestock breeds, fertilizers, agric-chemicals and year round water supplies are relatively expensive and not easily affordable by the majority of producers who are small scale in their enterprises;
- There is limited economies of scale to encourage and attract investment in mechanised farming which will increase productivity and increased production from expansion to meet targeted outputs;
- the support institutions deliver essential services of extension, research, finance (credit), information and timely availability of inputs are not effective and sometimes are not affordable;
- there is relatively low consumption of nutritious and safe foods by the population at large, mainly because they are not affordable;
- there is a general lack of awareness of the implications of food security and commitment to achieving it, or the need for production base to be market oriented, and self reliant.

Policy objectives

- i). Ensuring and monitoring availability of, and accessibility to supplies of each of the major staple foods and other food commodities (rice, cereals, horticultural crops, fish and livestock especially short cycle ruminants) in the country have increased in sufficient levels to national requirements through self reliance, by 2015;

- ii). Ensuring and monitoring accessibility to and consumption of adequate, high quality, affordable safe and nutritious foods have increased measurably, particularly for the vulnerable groups and populations.

Priority Strategies

- Intensified sensitization, advocacy for, and promoting availability of, and accessibility to sufficient supplies and consumption of safe and nutritious foods; nutrition security messages throughout the country, especially mainstreaming food and nutrition security considerations in all food production programmes and projects in the ANR sector, and related sectors in the economy;
- In collaboration with the National Codex Committee (NCC), the National Nutrition Agency, (NaNA), and the Compliance Committee and Food Advisory Board established under the Food Act 2005, advocating and mobilizing resources for, establishing and operating a Special Initiative for National Food and Nutrition Security, which will consolidate ongoing and planned activities in food and nutrition in all sectors of the economy, and in Regional and Global Initiatives. The Special Initiative will be managed under the guidance of a high level Presidential Committee. The Initiative shall include among other actions:-
 - community-managed cereal banks approaches; facilitating producers groups through special policy measures and promotion activities to increase their access to essential inputs especially credit, fertilizers, fuel, food for work; development of markets for products especially horticulture, fisheries and livestock from selected vulnerable groups; promoting diversification of food production and incomes at household level; establishing arrangements to provide school feeding commodities from domestic supplies.
- In collaboration with the National Nutrition Agency (NaNA) strengthen existing, and/or establish and make operational an integrated early warning system, linked to other related national and sub regional information systems to monitor the food and nutrition situation in the country and immediate neighbouring countries of the Gambia
- Support to the implementation of the Food Act 2005, The National Nutrition Policy, Health Policy, Gender, Population and Education Policies

7.1. Food Safety and Quality Control

Protection of human safety in the food market is of major importance in The Gambia. Internationally recognized health and food safety systems are required to ensure that consumers are informed and protected from the risk of food borne illnesses; foods and feeds produced, handled, stored, processed and distributed are safe, wholesome and fit for consumption, and conform to safety and quality requirements; adopt labelling to provide truthful and reliable information on such foods and food products.

Constraints

- Strong evidence of poor hygiene and inappropriate food and livestock feed handling, storage facilities and structures with relatively high levels of spoilage and poor quality foods
- Public awareness about food safety and quality is very limited

- High risk of contamination of vegetable produce in urban and peri-urban areas
- Food is cooked and served in the streets and many premises with no clean water and proper sanitation services
- Inadequate Safety and quality standards, Laws and regulations that deal with safety throughout the food value chain are inadequate and in many ways lack conformity with current international standards and guidelines
- Inadequate human and institutional capacity to ensure food safety and quality and enforce standards is a major problem
- Inadequate laboratory facilities for inspection of food safety and quality
- Limited capacities to handle emerging safety issues such as avian influenza
- With less piped clean water available in many areas where agricultural perishable produce is handled, contaminated water is most often used directly, increasing the risk of water borne diseases

Policy objectives

- i). Constant heightened awareness and understanding of the link between food and health
- ii). Supporting and promoting the availability of safer, healthier and more varied foods involving crops, meat and sea food through a variety of programmes and projects, especially in highly populated areas
- iii). Ensuring efficient competent institutional capacities for compliance with SPS and other international quality control standards.

Strategies

- Develop human and physical capacities in the relevant Ministries and Agencies of government and Private Entities to handle, monitor, regulate and enforce food safety and quality, including compliance with SPS standards
- Promote proper storage and handling to control food-related disease outbreaks
- Support and promote programmes for public awareness on food safety and quality, and appropriate labelling of foods or such measures necessary to indicate their nutritional content and safety
- Support a review/revision and harmonization of existing regulatory, legislation and institutional frameworks or policy instruments in order to establish improved guidelines, ensure effective coordination and enforcement of food safety and quality control in country and at border entry points. The revision will take into account international standards and guidelines, including the Hazard Analysis Critical Control Point (HACCP)
- Promote public-private sector partnerships for improved food safety and quality control
- Promote in collaboration with relevant public and private agents proper storage and handling of foods to control incidences of food-related disease outbreaks
- Develop control strategy to respond to the potential devastation from emergence of pandemic diseases such as devastating strain of bird flu and swine flu
- Support efforts aimed at formalising and regulating activities of producers and vendors for food safety and quality, safe water and sanitation.

H. COORDINATING SUPPORT FROM, AND ESTABLISHING LINKAGES WITH OTHER SECTORS IN THE ECONOMY TO ENHANCE ANR SECTOR DEVELOPMENT

The performance of the ANR sector to meet priorities of poverty reduction and economic growth will not be exclusive of external influences, but rather it will depend heavily on sectors outside the mandates and authority of the sector; those that can create demand such as Trade and Industry, Tourism and Health, and the private sector especially the large investors, and those that can meet demands of the sector, such as Finance, Energy, Transport, Infrastructure (roads, communications), and Education.

Inadequate inter-ministerial coordination and collaboration to ensure complementarity of interests and efforts have limited greatly the advantages the ANR sector could derive from its counterparts, and consequently its performance. This shortcoming is borne out in the following:-

- very few Inter-Ministerial Working Groups or mechanisms set up to determine identification, planning, resource mobilization and determination of responsibilities for macro-economic development priorities or specific ANR sector development Initiative or Programme;
- Inadequate and most times ineffective information sharing on issues under the oversight responsibilities of other sectors but having a direct bearing on the ANR sector;
- There is negligible mainstreaming of ANR sector priorities into the planning process of the other Ministries;
- Dialogues between the ANR Sector Government Authorities and the Private sector are few and far between, hardly regular, and mainly cover specific issues which are urgent to either party.

Policy Objective

The ANR sector will advocate for and be proactive in ensuring Inter-Ministerial coordination and collaboration, consultations and dialogues with the private sector on all matters of multi-sectoral nature regarding the conceptualization, planning and implementation of ANR Sector activities, and will advocate for the mainstreaming of ANR considerations into the planning processes of the other sectors.

Strategies

Strategies will be elaborated to address issues specific to the respective sectors involved, in order to enhance coordination and strengthen collaboration

8.1. Trade and Industry

Facilitating a sustainable enabling environment for opportunities and high returns to investment in ANR sector inputs/outputs goods and services will significantly advance transformation of the sector from subsistence to a commercial and modern one.

Strategies

- Facilitate dialogues with relevant Stakeholders to determine and carry out actions to support the promotion and strengthening small and medium enterprises (SMEs) particularly in the areas of processing and manufacturing for value addition and output marketing, avoiding credit buying and ensuring competitiveness and remunerative prices for their products;
- Support and collaborate with the Ministry of Trade, in the operationalization of the National Export Strategy, particularly to advocate for highest considerations for sub

sectors with export potential such as horticulture, crops (sesame), fisheries and agro- and eco-tourism;

- mobilise support to increase the empowerment of producers and producer organisations through knowledge and skills transfer and adoption on export processes and procedures, as well as standard requirements of the European Market and the US AGOA, drawing from the experiences of actions taken for GAMHOPE members by the Ministry of Trade, Industry and Employment;
- conduct, in collaboration with the Trade sector, studies on comparative advantages of Gambia's agriculture produce and products essentially to determine and pursue strategies for greater productivity and competitiveness of such products, particularly those of small holders, women and youth.

8.2. Tourism and Entertainment

Increase the opportunities of small producers for income, employment and investment to ensure food security and reduce poverty

Strategies

- With the partnership of the Ministry of Trade and collaboration of other stakeholders encourage and facilitate the organization of dialogues and consultations between and among operators of the ANR sector (producers, marketers, processors traders) with operators in the high value markets , essentially to develop partnerships, systems, guidelines and procedures for sustainable linkages, and policy measures that will promote, enhance and sustain such linkages
- Collaborate with the Ministry of Tourism to elaborate actions to implement the Tourism Master Plan which has implications for the ANR sector
- With the collaboration of the Ministry of Tourism promote and encourage eco- and agro-tourism with the specific objective of admiring, studying, and enjoying the scenery, diverse wild plants and animals, existing cultural features found in the reserved areas, local foods and dishes. Mobilise support for Communities in such areas to be supported to derive benefits from tourists visits to those areas;
- Advocate for and collaborate with the relevant Ministries of Government and Development Partners to improve transportation by land, and especially by river to demarcated areas in-country in order to promote and preserve nature parks and bird sanctuaries located throughout the country to encourage eco-tourism.

8.3. Health

Ensuring strong healthy ANR sector labour and creating markets for products from the ANR sector, thereby encouraging a market oriented and led production

Strategies

- Provide support to the Health sector in its concerted efforts directed at fighting the spread and designing related coping strategies for malnutrition, Malaria and HIV/AIDS pandemic and such diseases particularly among rural households who are the ANR sector's clientele;
- encouraging and undertaking joint actions and activities to minimise the incidence of malnutrition, and especially to promote the production of affordable and sufficient foods with high nutritional value for the population in general, and in particular the vulnerable groups, especially (pregnant/lactating women and children) and others;

- collaborate with the Health sector in setting up monitoring and control mechanisms to mitigate and manage the incidence and spread of pandemic animal diseases Avian Flu, African Swine Fever, which may have implications for humans., and other water-borne diseases such as schistosomiasis and elephantiasis.

8.4. Transport and Communication Including Information Technology

To contribute to reducing domestic costs of producing staple foods making them cheaper, competitive and accessible, especially by vulnerable populations

Strategies

- Advocate for, collaborate and mobilise resources in partnerships with the relevant Ministries and Authorities to provide improved and better services and infrastructure such as roads, sea, air and telecommunications, in order to enhance cost effective movement of goods and services in the ANR sector and increased marketing potential. Such collaboration will focus on repairs/maintenance of farm to market roads; construction and repairs of trunk roads; improving river transport (de-silting, maintenance of ferries and construction of bridges), for movement of goods and services in the sector and linking production areas to economic centres. The sum total of this collaboration is a reduction of the domestic costs of production of staple food and cash commodities, which in turn will increase competitiveness of locally produced foods, and reduce importation);
- Advocate for, and collaborate with the relevant Ministry and Agents to design and establish appropriate user managed information and communications systems including internet services in the sector, particularly in the rural areas for easy collection management and use of relevant production and market information for trade, marketing and access to essential resources, particularly markets
- Collaborate with, advocate for, and mobilise resources to design and establish user managed radio and television broadcasting systems and networks country wide particularly in the area of advertising, information exchange and public sensitization (community radio, video halls for greater outreach).

8.5. Energy

The provision of available cheaper farm power will enhance the efficiency of the value chains of high value market commodities, especially agro-processing and agro-industries, thereby increasing opportunities for increased productivity, incomes, employment, investment and a vibrant agribusiness in the country

Strategies

- Provide support to the Rural Electrification Project in order to tap the energy resources the project will provide for agro-processing, manufacturing and storage aimed at enhancing auto-consumption of locally produced foods, household food and income security;
- collaborate with the energy sector in the provision of relatively cheaper hydro-electricity;
- collaborate with the energy sector in its search, management and delivery of more cost-effective alternative sources of power such as solar energy and gas;
- Collaborate with the energy sector also in regulating the nature and scope of exploitation and use of biomass material for energy for domestic purposes, in view

of the fragile ecology of the ANR sector and limitations to the availability of biomass as source of energy in the country

8.6. Education

The provision of quality human resources will strengthen the institutions in the sector for effective delivery of essential services of advice, transfer of knowledge and skills for increased productivity and competitiveness for food security and growth

Strategies

- Collaborate with the Education sector to improve on public and private delivery systems for agricultural education at primary, secondary, vocational and tertiary levels in the Gambia, with respect to the structure, functions, organization and staffing at various levels, and the relevance to the needs for trained manpower resources in the sub sectors
- ensure also the inclusion into programmes and plans of the education sector, the strengthening of vocational training centres, especially those to meet the needs of the ANR sector;
- Collaborate with the relevant Authorities to examine the nature and adequacy of the curricula at the different levels in the various institutions, for continued relevance and validity to the needs of the sector, including introduction of ANR curricula at basic cycle level, and intensifying adult literacy programmes particularly in rural agricultural areas;
- assess the capacity of the various institutions to meet the agricultural manpower needs of the country, and take necessary actions for advocacy and mobilization of resources to meet the requirements through which to address the needs of the institutions;
- seek advice on and adopt strategies for distance learning in agriculture, in view of the small size of the sector and the country's limitations in expansion of the sector
- strengthen the sector in its school feeding programme by the intensifying school farms/gardens and ensure increased auto-consumption of such produce; establish policy measures for purchase of local commodities for school feeding programmes;
- develop a programme to extend the information outreach on diversification of diet and consumption of food commodities, locally produced and imported,

I. STRATEGY FOR IMPLEMENTATION OF THE ANR POLICY

9.1. Framework for Managing the implementation of the ANR policy

The ANR sector is multidisciplinary in nature as it is multifunctional in operation. The successful implementation of the policy therefore will depend on the effective cooperation and response of all the stakeholders – public, private and Development Partners. The Ministries of Agriculture, Forestry and Environment; Fisheries and Water Resources through the ANR Working Group at the National Environment Agency will have oversight responsibility for coordinating the implementation process, and will perform this function through arrangements that will enable all the relevant stakeholders to do the following:-

- Specify their prioritised objectives and intended outcomes and methodologies of achieving them, and strategy of engagement with the sector
- Prioritise common objectives

- Comply with and perform Roles and responsibilities indicated in the policy, avoiding duplication and overlap or conflict in functions and activities
- Share experiences
- Assess/evaluate progress and successes and make adjustments

The arrangements shall be established at national level for inter-ministerial and other stakeholders' coordination through to the regions in the country where various issues will be addressed in a participatory way with all relevant stakeholders.

9.2. General Roles of key Stakeholders in the sector

Government performed too many roles, (setting unilateral ad hoc policies and statements, financier, producer, extension agent, regulator, and at times a competitor in critical activities in the sector). The nature and scope of the current national and sector priorities make it compelling for clarification of roles among the many stakeholders in the sector, essentially to ensure optimum use of comparative advantages in competence and appropriateness of functions, and cost effectiveness of actions and performance.

9.3. The Specific Roles of Government

The Ministries of Agriculture, Forestry and Environment, Fisheries and Water Resources through the ANR Working Group shall:

- i. Have oversight responsibility for policy formulation implementation and monitoring
- ii. Coordination of planning, service delivery aid support to recipients and beneficiaries in the sector; and monitoring of the sector's activities, and management of agricultural statistics, data and information
- iii. Provide advice to Government on the laws and guidelines to regulate the activities of the ANR sector
- iv. Liaise with Environment Agency in order to ensure appropriateness of agricultural activities and practices for environmental protection
- v. Regularly assess the consistency of the policies of other sectors with agriculture sector objectives and strategies and analyse the impact of such policies on the agricultural sector, especially: analyses of impact of macro and trade policies on the competitiveness of key locally produced agricultural food, cash and export commodities, and imports; maintaining an enabling institutional framework that promotes efficiency and effectiveness in service delivery and responsiveness to priorities and needs of the sector
- vi. Promote and facilitate public-private, private-private sectors dialogue and partnerships
- vii. Advocate for various sector interests at national level (inputs from cross-cutting matters from other sectors) and international initiatives and agreements
- viii. Facilitate the promotion and resource mobilization for the development and dissemination of research findings, technology and information
- ix. Advocate for and promote the interests of small producers; provide technical and advisory services to such agents in the sector in order to enhance self reliance in increased productivity
- x. Promote the establishment of formal coordination of planning and establishment of linkages between the agriculture sector and other sectors (especially, health, tourism, commerce, communication, education, etc.) in order to ensure a more integrated and coordinated approach to policy and program development aimed at reducing poverty

- xi. Be responsible for Phyto-sanitary and Zoo-sanitary inspection services for exports and imports of agricultural commodities
- xii. Promote and facilitate the design and adoption of appropriate technologies for the use and management of water and energy resources in the sector

9.4. Other Government Institutions

- (i). **Ministry of Finance** will, in collaboration with the Ministry of Agriculture and the support of the Central Bank of the Gambia coordinate the mobilization of external resources in support of the agriculture sector
- (ii). **The Central Bank of the Gambia** will play a coordinating role in facilitating financial services in support of agriculture sector programs

9.5. Roles of the Private Sector

- (i). Cooperative societies will be supported to ensure they are well managed business entities that will advise, encourage and facilitate their members to exploit market-driven opportunities, establish linkages with sources of support, advocate and play leading roles in inputs supply and outputs markets to overcome market failures in agriculture while avoiding government failures.
- (ii). Commercial banking institutions will introduce lending strategies that target not only Farmers' Organizations and other Civil Society Organizations but individual farmers and private sector businesses investing in agriculture and agribusiness; establish microfinance units and rural banking facilities for the provision of credit to farmers and farmers' organizations
- (iii). Industrial concerns having direct relation to the sector will contribute appropriate funding support to accelerate agribusiness investment in food crops, livestock, fisheries cash crops and value added processing
- (iv). Private investors, farmers' organizations and cooperatives will spearhead agribusiness in the country; provide and facilitate linkages between producers, and local and external markets; participate in policy dialogues to ensure their interests are reflected in policy instruments relating to the ANR sector; participate in research and utilize results from such activities; comply with laws and regulations, partner government in sector development and the provision of extension services in the sector

9.6. Roles of CSOs (including NGOs and INGOs) will include the following:

- (i). Vibrant **CSOs** will strengthen public sector governance by giving political voice to smallholders, rural women, and agricultural labourers; foster participatory development and monitor agricultural policy making, budgeting, and policy implementation. Civil society will hold policy makers and the public administration accountable and create incentives for change.
- (ii). **NGOs and INGOs** will:
Mobilize resources and promote partnerships with external sources of support to the agriculture sector CSOs and NGOs will support capacity building to improve farmers' knowledge, technical skills and capacities

- (iii). CSOs including NGOs will support and promote women and youth empowerment, provide technical assistance in agricultural activities, and ensure adequate, balanced, impartial, in-kind support to the vulnerable farmers
- (iv). CSOs will participate in the delivery of various services, especially at the local government and community levels. ; promote partnerships between grassroots organizations and sources of support
- (v). NGOs will engage in standard setting, such as Fair Trade labelling, support water and sanitation, environment protection and monitoring, campaign against HIV/AIDS and care for HIV/AIDS orphans,

9.7. Roles of Development Partners

Development Partners comprise UN Organizations, Regional Economic Communities such as ECOWAS, Bilateral and Multi-lateral Agencies, Donors, various Regional Agricultural Research Organizations, Funding Agencies such as IFC, World Bank, ADB, USADF, OPEC, OXFAM, ICO, provide opportunities for developing capacities at all levels, (human resources and infrastructure) expanding markets for goods and services.

The main role of Development Partners and Donors is to provide all necessary support to fill gaps that the Government cannot otherwise cover. Specifically they will also:

- i. Facilitate policy dialogue and policy advocacy
- ii. Support the Government in the management of financial and technical assistance
- iii. Participate in the monitoring of activities and performance of the sector
- iv. provide technical and financial assistance
- v. UN Agencies will provide technical assistance in formulating and implementing policies and strategies, and articulating areas and conditions of support to achieve the MDGs, and ensure Sustainable Human Development.
- vi. CGIAR Centres such as WARDA and IITA as well as Regional Agricultural Networks such as CORAF, FARA, NEPAD will provide support in developing and supplying proven and new technologies, best farming practices and in replicating success stories elsewhere.

9.8 Planning, Monitoring and Evaluation in support of the ANR Sector Policy

The planning, monitoring and evaluation of activities to implement the policy will be carried out at two levels:

At Sector Level

- i. The ANR Working Group of NEA chaired by MOA will be established to provide overall policy direction and guidance for planning, monitoring and evaluation of the sector and policy. Such a Body will include but not limited to the following: the Heads of the Ministries of the ANR sector, Ministry of Finance, Environmental Protection Agency, National Farmers Organizations, CBOs, and Cooperatives, Representatives from the Agri-Business Interests in the ANR Sector Representatives of Donors and International NGOs as observers
- ii. A Technical Advisory and Implementation Committee (TAIC) comprised of technical staff of stakeholder institutions shall also be established to provide assistance in technical aspects of coordination, implementation, monitoring & evaluation of the sector and the policy. The Committee shall designate a Unit in one of the constituent Ministries in the ANR Sector as the Technical Secretariat for

the Committee, with functions determined by the TAIC in collaboration with the ANR Working Group

- iii. The Head of **the ANR Working Group** shall prepare annual plans drawing from the policy elements, for resource mobilization, allocation and utilization for the sector, particularly from public and also from private sectors
- iv. The **ANR Working Group** shall also develop, as and when necessary, sector and sub-sector specific Plans of Action, programs and projects, (with short, medium and long term perspectives) in accordance with the ANR Sector Policy, through the involvement and wider participation of the farming and local population, and other stakeholders
- v. A Unit in one of the constituent Ministries of the Sector shall also be designated to play the lead role in co-ordinating and harmonizing the various systems of collecting, processing and management of data, statistics and information on the ANR sector. Appropriate linkages will be established between the ANR sector data base with the National Statistics data base systems. The capacity of the designated Unit will be strengthened with staff and facilities to enable it carry out the functions and responsibilities of the unit
- vi. A Central Data Bank on the ANR sector will be established, and will contain all data relevant to agricultural and natural resource situation, designed to ensure quick and easy retrieval, use and maintenance;
- vii. All monitoring and evaluation units in the various agricultural and natural resources technical departments and projects will be assessed, their needs established, and appropriate support provided, particularly upgrading of knowledge and skills, and availability of facilities;
- viii. Measures will be established to ensure similar action is effected by private agencies and companies that are involved in, or creating conditions that will facilitate collection and dissemination of data and information on the ANR sector. Acceptable ways and means will be established and enforced to ensure compliance by private entities;
- ix. A Comprehensive National Remote Sensing Centre which will, among other things, focus on generating data on agricultural production and natural resource management, will be established, backed by an internal capability in the Departments of State for Agriculture and Natural Resources;
- x. A national system for the continuous monitoring of all agricultural and natural resource outputs, inputs, prices, incomes and production costs will be developed in a participatory way involving all stakeholders.

At the Decentralized level

- xi. At the Regional level, the ANR Technical Advisory Committee in collaboration with the Regional Administrative Authorities will coordinate inputs from the Region to the Annual Plans and programmes prepared by the **ANR Working Group** and monitor their implementation in their locations
- xii. Communities will be assisted through their decentralized structures to organize and hold participatory planning and monitoring forums to feed into the Plans of Actions, programmes and projects and evaluate the performance of the relevant components and sub-sectors of such planning tools in their respective areas.

9.10 Monitoring and Evaluation Mechanisms of the Sector

- i. Monitoring and Evaluation (M&E) reporting will be institutionalized, using a harmonized format and indicators developed for reporting. The monitoring framework will include annual specific data generation activities on annual crops,

- livestock and fisheries surveys in order to update existing database. Data collected will include details on indicators of sub-sector performance, outcomes and impact. .
- ii. The Ministries of the ANR Sector through the **ANR Working Group** will carry out participatory policy analysis, on a periodic basis in order to determine impact of the policy on availability of food commodities, productivity and competitiveness; marketing and value-addition and gaps
 - iii. The Ministries of the ANR Sector through the **ANR Working Group** will establish early warning systems to guide production, marketing, value-additions, emergency response decisions based on pre and post-harvest losses.

J. FINANCING AGRICULTURAL DEVELOPMENT

The scope of actions and activities to be carried out under the ANR Sector Policy to achieve its overall sector and sub sector objectives would require considerable financial inputs. While the Government will carry the primary responsibility for such support to the ANR Sector Policy it does not possess the capacity to meet this responsibility entirely. In view of the importance and urgency to implement the Policy to meet national priorities of poverty Reduction and economic growth, financing will be sought from a number of sources including the following:-

- The Government's multi-year Poverty Reduction Strategy Budgetary Support
- Budgetary Support from Donors
- Technical Assistance from Development Partners: UN and other Support Agencies
- Support from, and Agreements with Multi-lateral and Bi-lateral Funding Institutions, including Loans and grants
- Loans and investments from local financing institutions (Banks and Cooperatives)
- Co-financing Arrangements and Partnerships between Government and other External Investment/Development Agencies and Private Sector Interests
- Internally generated Funds/non-tax revenues
- Beneficiary contributions and Civil Society Organizations

K. RISKS TO SUCCESSFUL IMPLEMENTATION OF THE ANR SECTOR POLICY

- Inadequate references to, and provisions made for the agriculture sector in national resource mobilization exercises such as Donor Conferences on the Gambia; untimely redemption of pledges made on behalf of the sector's activities; release of funds by Ministry of Finance and Economic Planning; inadequate response to create the enabling environment for small producers support and incentives to the private sector
- Inadequate strengthening of the Ministries of Agriculture, Forestry and Environment, Fisheries and Water Resources to provide effective services in policy analysis and planning (for prioritization, budgetary support and programming); agricultural statistics and data (for coordination, investment and monitoring); delivery of agricultural extension and research for pro-poor policy actions
- Inadequate response of financial institutions (Banks) for available and affordable credit to the sector's agents, particularly small producers
- Inadequate response of other Development Agencies to the ANR Sector policy initiatives
- Inadequate response of the private sector to policy initiatives (incentives)
- Inadequate response of producers (farmers, processors, traders) to policy initiatives

Additional risks are associated with international and natural environment at follows:

- Soaring Global Food prices and unstable commodity markets having implications for agricultural inputs
- Increased demands for Bio-fuels and bio-products
- Adverse conditions and terms of international trade regimes for agricultural commodities, especially down-turns in world prices of key agricultural export and import commodities
- Unusual weather patterns and outbreaks of pests and diseases