



The Gambia Agriculture Engagement Note

Fostering agriculture-led inclusive growth.



June 2019

Report No: AUS0000808

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Acknowledgment

The Gambia Agriculture Engagement Note has been prepared to guide the World Bank's future dialogue and collaboration with the Government of The Gambia in the agri-food sector. The Note was prepared by Aifa Fatimata Ndoeye Niane, Remi Kini, Sheu Salau (Senior Agriculture Economists) and Nabil M. Chaherli (Lead Agriculture Economist) with guidance from Marianne Grosclaude (Practice Manager). The Note has benefited very useful comments and suggestions from peer reviewers including Jean-Philippe Tre, Irina Schuman (Senior Agriculture Economists) and Diego Arias Carballo (Lead Agriculture Economist) and from Nicolas Ahouissoussi (Senior Agriculture Economist).

The team is grateful to Louise Cord (Country Director) and Elene Imnadze (Resident Representative) for their guidance and support, Lydia Mesfin Asseres (Operations Officer), Yassin Saine Njie, Muhammed Lang Kinteh and Boury Ndiaye (Program Assistants) for their administrative and logistic support.

The team wishes to thank the officials of the Government of the Gambia, Honorable Ami Faburay, Minister of Agriculture, his Permanent Secretaries and the team of the Central Projects Coordinating Unit for their participation and support during the validation and dissemination workshops in May 2019. Many thanks to the producers' organizations, the technical and financial partners and the representatives of the private sector who participated actively to these workshops.

Foreword

After a change of government in 2017, The Gambia is in the process of rebuilding a democratic country whose citizens enjoy fundamental freedoms and economic prosperity.

The 22-years of repression by the previous regime affected economic growth of the country. The macro-economic situation is challenging with high indebtedness while the country needs more resources to address many binding development constraints and improve the welfare of Gambians. While poverty has stagnated at 48 percent between 2010 and 2016, as indicated in the Integrated Households Survey, rural poverty has increased from 64 to 69 percent widening the gap with the urban areas. Poor Gambians derive their livelihood from the agricultural sector which has experienced a weak performance since 1995. Performance improvement in the agriculture sector is critical in boosting rural incomes, alleviating poverty and contributing to inclusive growth.

Currently, the performance of the Gambia's agricultural sector is lagging behind that of other West African countries. Only half of the Gambia's food consumption needs is covered by the country's agricultural production. The sector is affected by a number of agro-ecological, technical and policy constraints which are exacerbated by climate change. However, many opportunities are yet to be tapped to foster inclusive and sustainable agricultural growth.

The 2018-21 National Development Plan (NDP) envisaged *"a modern, sustainable, and market-oriented agriculture and livestock sector for increased food and nutrition security, income and employment generation, poverty reduction, and economic transformation,"* placing agriculture as a priority sector to achieve the country's development goals.

The World Bank's Gambia Agriculture Engagement Note has been prepared to review the sector's performance, challenges and opportunities and to identify priority areas where the Bank:

- i) could work with the Government to improve the sector's policy framework through key policy reforms for more efficiency in the use of scarce resources, and to improve the enabling environment for the development of the agri-food sector, and
- ii) could support public investments to increase productivity, develop value chains and improve the competitiveness of the agri-food sector.

We hope that the dialogue initiated during the preparation of this Note will pave the way for a strengthened partnership between The Gambia and the World Bank in meeting the goals of the NDP and accelerating the transformation of the agri-food sector. With the right interventions, the agri-food sector can be the engine for inclusive and sustainable growth in the Gambia.

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Executive Summary

A country in transition

1. The 2016 presidential elections in the Gambia—one of Africa’s smallest countries (11,295 square kilometers, with 2 million inhabitants)—were an important inflection point, ending an autocratic regime and establishing a new government committed to democracy, freedom, and inclusive social and economic development.

2. **The new government inherited dire macroeconomic conditions and weak institutions that led to overt popular discontent and heighten the need for rapid improvement.** At US\$483, per capita GDP in 2017 was just one-third of the average for sub-Saharan Africa (US\$1,553 per capita). Average GDP growth of 3 percent per annum is barely keeping pace with population growth of 3.1 percent. High and unsustainable public debt, equal to 88 percent of GDP in 2017, limits fiscal space for development spending, and the Gambia has run a deficit averaging 5.3 percent of GDP between 2013 and 2017. The country’s weak public institutions exhibit poor governance and limited accountability. Progress is urgently needed in governance, economic opportunity, inclusive growth, and poverty alleviation.

3. **The newly adopted National Development Plan (NDP) 2018–21 responds to these imperatives.** Over the medium term, the NDP aims to “improve governance and accountability, social cohesion and national reconciliation” and build “a revitalized and transformed economy for the wellbeing of all Gambians” to move away from the current low-growth, high-poverty, and high-debt environment to an environment that fosters long-term inclusive growth and prosperity. One of eight strategic priorities of the NDP is “a modern, sustainable, and market-oriented agriculture and livestock sector for increased food and nutrition security, income and employment generation, poverty reduction, and economic transformation.”

A vision for the Gambian agri-food sector

4. **The recommendations and proposals presented in this Engagement Note are driven by a vision of a productive, resilient, competitive and market-oriented Gambian agri-food sector anchored in a strong institutional and policy framework allowing the optimization of smallholders’ and private sector investments along value chains to meet the quadruple goals of (i) improved food and nutritional security, (ii) increased income and job creation, (iii) effective poverty reduction, and (iv) an inclusive and sustained economic growth.**

Agriculture is a pillar of the national economy, but its performance has been weak and volatile

5. **Agriculture retains a crucial role in economic growth in the Gambia, even as the share of services in GDP is increasing.** Agriculture and related industries contribute to economic growth, employment, poverty reduction, food security, and nutrition. Agriculture employs nearly half—46 percent—of the labor force and is the source of livelihood for 80 percent of the rural population, according to the 2015/16 Integrated Household Survey (IHS). For about 72 percent of poor households and 91 percent of extremely poor rural households, agriculture is the main source of income. The sector contributes 17 percent of GDP and 30–40 percent of all foreign exchange earnings from exports.

6. **Weak and volatile agricultural performance over the past decade has steadily undermined economic and social welfare.** Agriculture value-added grew at 2.45 percent per year on average over

2008/17 in the Gambia compared to neighboring countries (Guinea at 5.15 percent, and Senegal at 6.44 percent). Agricultural growth has been driven not by increases in productivity but by the expansion of cultivated area (estimated at 2 percent per year, commensurate with the increase in the rural population). One indication of low agricultural productivity is the Gambia's lower and declining crop yields compared to the rest of West Africa. Rice yields in the Gambia, for instance, are only 35.6 percent and 18.7 percent of the average rice yield for West Africa and Senegal over 2014–16 (FAOSTAT). The decline in rice yields since 2010 has widened the rice productivity gap between the Gambia and the rest of West Africa, particularly Senegal, which has achieved remarkable progress.

7. Because the struggling crop sector meets only half of the Gambia's demand for basic staples, food imports continue to rise and food insecurity remains a persistent threat. For instance, the country imports 83 percent of its requirement for rice, the staple for most Gambians. According to the 2015/16 IHS, 55 percent of Gambians are food insecure. Food insecurity is both a household and national concern.

8. Since most rural people pursue livelihoods related to agriculture, weak agricultural performance contributes to higher poverty levels and aggravates income inequality. The IHS shows that rural poverty increased from 64.2 percent in 2010 to 69.5 percent in 2015/16, even as poverty at the national level remained virtually unchanged (moving from 48.1 percent to 48.6 percent).

Higher growth is achievable by closing the productivity gap with neighboring countries and increasing the competitiveness of agri-food value-chains

9. Econometric simulations show that improving productivity and competitiveness of the main agricultural value chains (groundnut, millet, rice, maize, sorghum, vegetable and poultry-meat and eggs) could lead to significant agricultural and economic growth. This potential growth would come mostly from rice followed by chicken meat. If the Gambia succeeded to reach a country average rice yield of 4 metric tons per hectare (like Senegal), the agriculture gross production value would increase by about US\$80 million (moving from US\$24 million to 103 million), which represents an annual average sector growth of 7 percent over a five-year period leading to an annual increase by 1.3 point of the GDP growth. Altogether, controlling for other sources of growth, under realistic scenarios of increased competitiveness and productivity of the main agri-food value chains, cumulative annual growth could reach over 14 percent for agriculture gross production value and about 6 percent for economic GDP growth over a five-year period, by 2024.

Coherent, consistent policies, programs, and budget support are needed to realize national strategic goals for the agricultural sector

10. For some time, national agricultural policy has focused on price and fiscal controls, as well as a fertilizer subsidy, with uncertain success. Although price controls ostensibly have been abolished, the Essential Commodities Act of 2015 enables the government to intervene in the pricing of some imported goods considered essential. In addition, the price fixing policy for groundnuts limits incentives to develop quality standards and reward producers for growing higher-quality groundnuts. Even though the government has liberalized groundnut marketing and exports, it still taxes the commodity.

11. Like other West African countries, the Gambia has attempted to incentivize domestic rice production by imposing tariffs on imported rice. Rice tariffs have not reduced the volume of trade or sufficiently stimulated local production to displace imports. Consumers have not shifted from imported to local rice, partly because of rigid consumption patterns.

12. While a fertilizer subsidy could be relevant in a context of declining soil fertility, the government's direct involvement in importing and distributing fertilizer is likely to crowd out private sector investment. In 2018 alone, 58 percent of the price of fertilizer was subsidized. The government

could use different subsidy modalities to extend farmers' access to quality fertilizers while developing the private fertilizer market. Although fertilizer imports have been liberalized, private sector fertilizer imports and sales must compete with government-subsidized imports and sales.

13. The Gambia is failing to maximize trade benefits in international, regional, and domestic markets. The Gambia participates in many bilateral trade agreements but could do much more to take full advantage of export opportunities by alleviating critical supply-side constraints. Agricultural exports from the Gambia perform under their potential owing to (a) the lack of compliance with World Trade Organization (WTO) sanitary and phytosanitary requirements and Technical Barriers to Trade Agreements, (b) market information gaps, and (c) failure to meet standards and technical requirements in the European Union markets. Road blocks, illegal payments to road agents, and the lack of harmonized border procedures between the Gambia and Senegal also constitute major constraints to the growth of domestic and regional trade.

14. Agricultural growth has always been a key development objective of national economic policy, but this priority is not necessarily reflected in budget allocations. Budgetary commitments to agriculture decreased sharply from 17.30 percent in 1980 to 5.97 percent in 1990. They have fluctuated since then but have always remained far below the Comprehensive African Agricultural Development Program (CAADP) target of 10 percent of total public expenditures. Over 2010–17, public expenditure in agriculture in the Gambia averaged 3.30 percent, compared to 4.34 percent for West Africa and 10.13 percent for Senegal.

15. While the modest level of budget allocations to agriculture remains a concern, it is equally crucial to address the quality of public spending and efficiency of resource allocations. Input subsidies and other types of direct transfers constitute a major component of agricultural expenditures in the Gambia. Public spending on agricultural research and development in the Gambia is lower than the CAADP target of 1 percent of agricultural GDP.

16. Finally, since the early 2000s, major implementation challenges have consistently derailed the achievement of agricultural development objectives highlighted in government strategies. Policy making is not informed by systematic assessments of the implementation and results of earlier policies and programs, and agricultural policy overlooks linkages and synergies with other key sectors. The lack of qualified staff and funding to implement programs is a major implementation challenge. Limited institutional capacity still constrains the performance of the Ministry of Agriculture in formulating new sectoral development strategy, policies, and programs. Even though the NDP 2018–21 identifies the modernization of agriculture as a strategic priority, an updated strategy, policies, and programs to operationalize this goal are yet to be defined.

Unlocking agriculture's growth potential for all

17. The Gambian agriculture has the potential to become a robust engine of inclusive growth and poverty reduction, building on a combination of favorable factors and addressing binding constraints for growth.

18. First, the Gambia has an enormous agricultural resource base that can be further developed: 43 percent of the arable land, spanning four agri-ecological zones, offers significant opportunities for agricultural diversification, especially considering the available surface water resources (estimated at 8 billion cubic meters) and groundwater resources (estimated at 0.5 billion cubic meters). This resource base will not only be critical for economic growth and poverty reduction but for enabling the Gambia to withstand the effects of climate change. Given its size and location in the Sahelian region and on the coast, the Gambia is quite vulnerable to climate change. Aside from the immediate effects of weather shocks, climate change will affect the productivity of land and water resources, unless appropriate adaptation

measures are adopted. Declining soil fertility and increasingly saline soils are major causes of low and diminishing crop yields and response to fertilizer use. The complex land tenure system reduces secure access to land, limits incentives for the private sector to invest in land-related businesses, and also affects producers' incentives for investing in their land. At present, irrigation infrastructure is very limited, exposing agriculture to the vagaries of climate variability, further exacerbated by climate change.

19. Second, existing technologies and practices could yield significant gains in productivity. For example, participants in the Gambian Commercial Agriculture and Value Chain Management (GCAV) Project increased rice yields from 2 to 4–5 metric tons per hectare over 2014–18, with an average increase of 130 percent. Scaling up these results across 30,000 hectares of rehabilitated and newly developed irrigated land (of the 80,000 hectares of potential irrigable land) would lead to annual rice production of 240,000 metric tons (30,000 hectares * 4 metric tons per hectare * 2 cropping seasons a year), enough to meet the country's estimated rice consumption need of 221,661 metric tons. Similar or greater yield improvements could be gained with other cereals and horticultural crops. Attaining these yield gains will require measures and actions to address structural constraints in gaining access to technologies, innovations, and infrastructure.

20. Third, the rapidly increasing domestic demand for food (driven by population growth, urbanization, and the expanding tourism sector) presents a great market opportunity. For instance, domestic demand for rice is projected to increase from 221,661 metric tons in 2018 to 319,746 in 2030 and 443,902 in 2040, creating a huge market opportunity that could be met by increasing domestic rice production (38,000 tons in 2018). Another opportunity is the sustained demand for fresh and quality fruits, vegetables, eggs, meat, and dairy products from the growing tourism industry; this demand is currently met through imports, because the national supply of these products is insufficient and does not meet consumer quality requirements. At the international level, prospects for expanding horticultural exports could be improved by increasing the supply and complying with international quality requirements. Over 2014–16, the value of agricultural exports rose sharply (128 percent). Most of the value chains present profitable business opportunities for private investors and could provide gainful employment to the Gambia's growing and young labor force. Because many value chains are dominated by poor, small-scale producers, most of whom are women, their development would also contribute directly to inclusive growth and poverty reduction. Each value chain requires specific intervention to unlock its development potential. Without being exhaustive, this Note has looked at some of the main agri-food value-chains to develop specific recommendations. However, this focus is not meant to reflect any selection or prioritization of value chains.

21. Fourth, the new political context represents an opportunity to improve the enabling environment for the development of the Gambian agriculture. Political stability, combined with the government's renewed commitment to development, could attract private investment in agribusiness and leverage the untapped potential in the domestic and regional markets—given appropriate agricultural policies and a mix of public and private investments to remove the binding constraints. The constraints include poorly structured and organized value chains, with tenuous connections between actors in production, processing, transformation, storage, commercialization, and exports. Producer organizations and interprofessions could be strengthened, particularly for horticultural crops dominated by women, to meet demand from agro-processors and exporters. Rural feeder roads connecting farming communities to input and output markets are in poor condition and inadequate to support agricultural value chains development. The agri-food sector in general lacks access to financial services, including savings, credit, and insurance products, that would enable investments in production systems and agribusinesses. The share of domestic credit extended to agriculture is still very small and estimated at 4.8 percent on average. According to the 2015/16 IHS, only 23 percent of rural household members have access to credit. With a

Doing Business score of 51.72 and a ranking of 149 of 190 countries in 2019, the Gambia marginally surpasses the regional average score (51.61). It has low rankings for critical key agribusiness indicators such as starting a business (169) and getting electricity (160), although better performance for trading across borders (113) and enforcing contracts (117) may indicate the country's potential as a re-export hub.

Priority areas of intervention to foster transformation in the agri-food sector

22. Four priority areas for intervention to foster the transformation of the agri-food sector by moving from subsistence to market-oriented agriculture emerge from this analysis:

- 1) **Scaling-up climate-smart agriculture to increase the sector's productivity and resilience.** Interventions to promote climate-smart agriculture center on (a) improving water management and increasing irrigated area, (b) strengthening the agricultural innovation system by taking advantage of digital technologies, and (c) enabling access to, and large-scale adoption of, quality inputs, improved technologies, and other innovations.
- 2) **Developing key agricultural value chains and promoting private sector investment in agribusiness for increased access to market and competitiveness.**
- 3) **Supporting key structural reforms to improve agriculture and trade policies including** (i) input subsidy policy reform for better targeting, transparency and efficiency, and for a functioning input market led by the private sector, (ii) groundnut pricing reform with the removal of groundnut price setting and of the export tax to allow more competitiveness, (iii) more resources for agriculture and more efficiency in their allocation and (iv) land policy reform to secure farmers' land property rights while fostering private investments.
- 4) **Strengthening the capacity of institutions responsible for the agri-food sector** by (a) providing short-term technical assistance to address immediate capacity constraints, (b) building human capital through training and capacity building in specialized areas, and (c) improving the logistics systems and facilities of those institutions for more efficient working conditions.

23. Using a multi-sectoral approach and leveraging funding and knowledge from diverse technical and financial partners, under the coordination of the Ministry of Agriculture, engagement in these priority areas could lead to transformational change in the agri-food sector, and progress towards the NDP's objectives for agriculture.

24. This Engagement Note could also inform the preparation of updated, coherent agricultural policies and programs. In the context of this new national democratic transition, improvements in the performance of the agricultural sector will be crucial for fostering and sustaining inclusive economic growth, ending extreme poverty, and improving the welfare of all Gambians, particularly women and the rapidly expanding youth population.

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Acronyms and Abbreviations

ANRP	Agriculture and Natural Resource Policy
AOI	Agricultural Orientation Index
ASTI	Agricultural Science and Technology Indicators
AU	African Union
CAADP	Comprehensive African Agricultural Development Program
CET	Common External Tariff
ECOWAS	Economic Community of West African States
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
GBOS	Gambia Bureau of Statistics
GCAV	Gambia Commercial Agriculture and Value Chain Development Project
GDP	Gross domestic product
GGC	Gambia Groundnut Corporation
GNAIP	Gambia National Agricultural Investment Plan
GMD	Gambian Dalasi
IHS	Integrated Household Survey
MA	Ministry of Agriculture
MFD	Maximizing Financing for Development
NARI	National Agricultural Research Institute
NDP	National Development Plan
NEPAD	New Partnership for Africa's Development of the African Union
OECD	Organization for Economic Co-operation and Development
PAGE	Program for Accelerated Growth and Employment
PRSP	Poverty Reduction Strategy Paper
R&D	Research and development
ReSAKSS	Regional Strategic Analysis and Knowledge Support System
SME	Small and medium enterprises
SSR	Self-sufficiency ratio
TFP	Total factor productivity
USDA	United States Department of Agriculture
WAAPP	West Africa Agricultural Productivity Program
WDI	World Development Indicators
WTO	World Trade Organization

1. Introduction

1.1 A country in transition

1. The Gambia—one of the smallest countries in sub-Saharan Africa (11,295 square kilometers, with 2 million inhabitants)—is undergoing an important transition in its political history following a tumultuous landmark presidential election in 2016. With the mobilization of the international community under the leadership of the Economic Community of West African States (ECOWAS), the 22-year (1994–2016) authoritarian political regime that had quelled dissent and political opposition ended peacefully. The political change of 2016 denoted a breaking point in Gambian history as an autocratic regime was superseded by a new government committed to democracy, freedom, and inclusive social and economic development.

2. The dire macroeconomic conditions inherited by the new government sparked overt popular discontent for many years, however. Unsustainable macro-fiscal management and the misuse and embezzlement of public assets exacerbated the poor performance of the economy. The Gambia’s high, unsustainable, and expensive public debt amounted to 88 percent of gross domestic product (GDP) in 2017, with interest payments and amortization respectively reaching 42 percent and 20 percent of revenues (excluding grants). The deficit averaged 5.3 percent of GDP between 2013 and 2017, and fiscal space for spending on development priorities was quite limited. Weak public institutions with poor governance and limited accountability for results added to these problems. Per capita GDP at US\$483 in 2017 was just one-third of the average for sub-Saharan Africa (US\$1,553). The average GDP growth of 3 percent per annum has barely kept up with population growth of 3.1 percent.

3. The Gambia is one of the poorest countries in sub-Saharan Africa, and the gap in rural and urban welfare is widening. In 2015/16, 48.6 percent of Gambians lived below the poverty line of US\$1.25 per day, compared to 48.1 percent in 2010. In absolute terms, the number of people living in poverty increased from 0.79 million to 0.94 million during the same period, an increase of approximately 150,000 people. The incidence of rural poverty rose to 69.5 percent, widening with respect to urban areas, where the estimated poverty rate was 31.6 percent (Gambia Bureau of Statistics - GBOS 2017). Rural areas account for 42.2 percent of the country’s population and 64 percent of the poor (Table 1). A Gini coefficient of 0.356 places the Gambia among the most unequal ECOWAS countries. In 2018, the Gambia was the 42nd most fragile state of 178 countries, with a high score of 87.1 on the Fragile States Index (FSI) (Fund for Peace 2018). The 2018 score represents a slight improvement over the score of 89.4 in 2017, as public institutions remain weak and levels of human capital are low (Box 1). The 2017 Human Capital Index score for the Gambia is 0.40, which corresponds to the average for sub-Saharan Africa and indicates that a child born in the Gambia will be only 40 percent as productive in adulthood as a child who had enjoyed a complete education and full health. With a 2017 Human Development Index score of 0.460, the Gambia ranks 174th of 189 countries, in the low human development category.

Table 1: Poverty trends in the Gambia

	2010	2015/16	% increase
Poverty rate (%)			
National	48.1	48.6	1.03
Rural	64.2	69.5	8.16
Urban	33.4	31.6	-5.43
Number of poor (millions)			
National	0.79	0.94	18.15
Rural	0.51	0.60	19.03
Urban	0.29	0.33	16.60
Share of poor to total (%)			
National	100.0	100.0	100.0
Rural	63.8	64.3	0.75
Urban	36.2	35.7	-1.32

Source: Integrated Household Survey (IHS), 2015/16.

4. These challenging macroeconomic and social conditions, combined with citizens' increasing expectations following the change in government, highlight the urgent need for the new government to make progress in improved governance, wider economic opportunities, inclusive growth, and poverty alleviation. In response to such expectations, the newly adopted 2018–21 National Development Plan (NDP) aims “to improve governance and accountability, social cohesion and national reconciliation and a revitalized and transformed economy for the wellbeing of all Gambians.” The NDP focuses on eight strategic priorities to enable the country to emerge over the medium term from a low-growth, high-poverty, and high-debt environment and embark upon long-term inclusive growth and prosperity. The strategic priority for agriculture is to develop “a modern, sustainable, and market-oriented agriculture and livestock sector for increased food and nutrition security, income and employment generation, poverty reduction, and economic transformation.”

Box 1: The Gambia, a Fragile State

“For The Gambia, 2017 was a transitional year which saw significant successes despite numerous challenges. In the 2018 Fragile State Index (FSI), The Gambia showed signs of slow improvement across indicators related to human rights, state legitimacy and group grievance, although these scores remained high. The Gambian economy, after decades of mismanagement and high levels of youth unemployment, continued to perform poorly. Other indicators, such as Human Flight, may be more of a long-term project, likely to take years to demonstrate any reversal in negative trends. Attracting skilled and educated Gambians to return back to the country should be a priority going forward.”

Source: Fund for Peace 2018.

1.2 A Vision for the Gambia agri-food sector

5. The recommendations and proposals presented in this Engagement Note are driven by a vision of a productive, resilient, competitive and market-oriented Gambian agri-food sector anchored in a strong institutional and policy framework allowing the optimization of smallholders' and private sector investments along values chains to meet the quadruple goals of (i) improved food and nutritional security, (ii) increased income and job creation, (iii) effective poverty reduction, and (iv) an inclusive and sustained economic growth.

1.3 Objective of the Agriculture Engagement Note

6. This Agriculture Engagement Note aims to support the government's efforts to transform the agri-food sector of the Gambia. It briefly summarizes the sector's recent performance, challenges, and untapped potential to foster inclusive growth and contribute more effectively to poverty reduction. It then identifies key areas where targeted interventions may unlock this potential, including the priority areas where engagement with the World Bank could support the government's objective of modernizing and improving the performance of the agri-food sector, as defined in the NDP.

7. This note relies on analytical work and a literature review to update the 2012 Agricultural Policy Note. The data analyzed to produce this note come from the World Bank World Development Indicators (WDI), FAOSTAT, the United States Department of Agriculture (USDA), the Regional Strategic Analysis and Knowledge Support System (ReSAKSS), as well as other resources (see references). Comparisons with neighboring countries and the West Africa region are used to benchmark Gambian performance trends. The note also builds on the lessons from past and ongoing programs supporting the transformation of the country's agri-food sector.

8. This note consists of five sections. Section 2 describes the recent performance of the agricultural sector, and Section 3 reviews current agricultural policies. Section 4 identifies the opportunities and the constraints for the development of the sector. Drawing from these previous sections, Section 5 discusses a menu of priority areas and effective interventions for focusing renewed World Bank engagement.

2. Performance of the Agricultural Sector

9. The Gambia remains an agriculture-based economy despite an increased share of services in GDP in recent years. Agriculture and related industries play a crucial role in expanding the growth of the economy, reducing poverty, and enhancing food security and nutrition. Agricultural exports generate 30–40 percent of all foreign exchange earnings. The sector employs 46 percent of the country’s labor force and is the primary source of livelihood for 80 percent of the rural population, according to the 2015/16 Integrated Household Survey (IHS) conducted by the Gambia Bureau of Statistics (GBOS 2017). Agriculture employs an estimated 72 percent of the poor and 91 percent of the extreme poor.

10. Agriculture in the Gambia is dominated by subsistence-oriented rainfed crop and livestock production systems. The main food crops consist of cereals, including rice, millet, sorghum and maize. The main cash crop is groundnuts, although horticulture and cashews are showing interesting development prospects. About 80 percent of farm households are engaged in groundnut farming which generate 60–80 percent of their income. Both in terms of harvested area and gross production value, groundnut is the dominant crop followed by millet, rice, maize and sorghum (Figure 1 and 2). In 2017, the total harvested area was estimated at 405,200 hectares and the gross production value at US\$110.80 million¹.

11. The performance of the agri-food sector has been weak, despite the favorable natural conditions for agriculture in the Gambia. Agricultural growth has declined over time in the Gambia, averaging 8.5 percent per year during 1995–2003 and –1.1 percent per year during 2003–08 (ReSAKSS 2019). Consequently, the Gambia has lagged other West African countries in terms of agricultural growth (Figure 3). Between 2008

Figure 1: Structure of Gambia harvested areas in 2017

(Total harvested area 405,238 ha)

Source: FAOSTAT, 2019

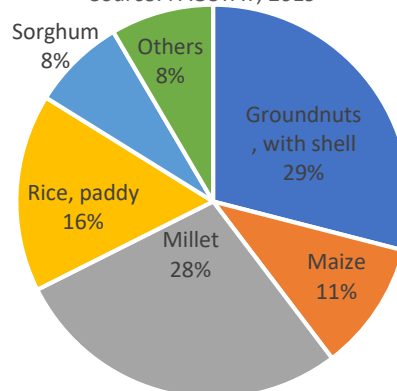
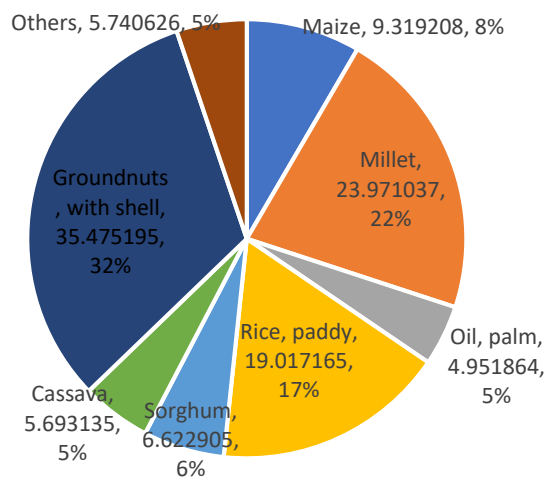
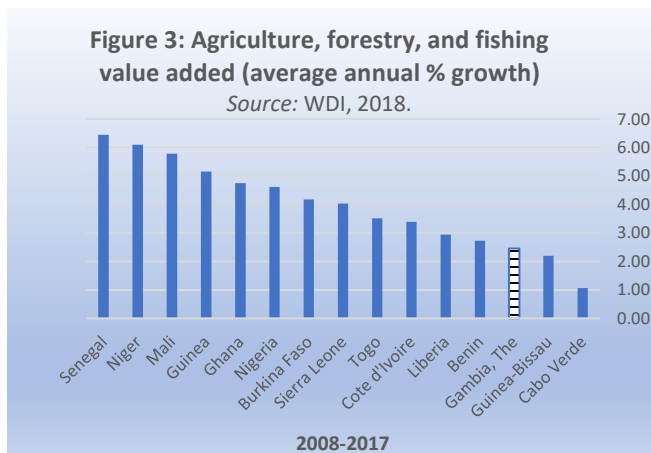


Figure 2: Gambia, Gross Production Value (current million US\$) in 2016
(Total value: US\$110.80 million)

Source: FAOSTAT, 2019



¹ FAOSTAT, 2019



and 2017, average annual growth in agriculture value added was 2.45 percent in the Gambia, lower than in neighboring countries (6.44 percent in Senegal and 5.15 percent in Guinea).

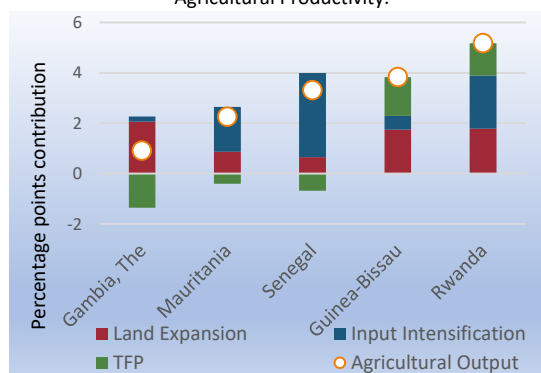
12. A retrospective analysis shows that the performance of agriculture has been erratic and declining. The agricultural sector performed relatively well in the years following independence in 1965. Total factor productivity (TFP) growth in Gambian agriculture was estimated at 84 percent, higher than TFP growth in Senegal (73 percent) and Mali and Guinea Bissau (77 percent) following independence

(1965–69). Since the 1970s, however, TFP growth in the Gambia has shown an overall decrease of 45 percent, and it was the lowest of all Sahelian countries from the 1970s to 2000s.²

13. Agricultural growth has been driven by the expansion of cultivated land at an estimated 2 percent per year, commensurate with the increase in the rural population. The performance of agriculture in the Gambia has been relatively much lower than in neighboring Guinea Bissau, Mauritania, and Senegal. Input intensification (an increase in inputs used per hectare) is contributing only marginally and TFP is contributing negatively to agricultural growth (Figure 4). Agricultural production consists largely of subsistence-oriented and rainfed cropping, along with traditional livestock production. The private sector’s contribution to the development of agribusiness is still very low.

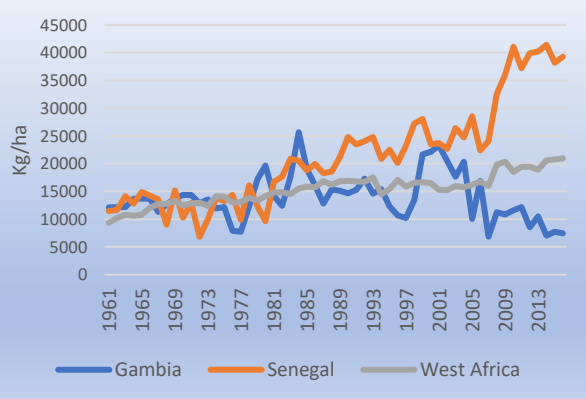
Figure 4: Decomposition of agricultural growth, 2001–14

Source: World Bank staff calculations based on data from the United States Department of Agriculture (USDA) dataset on International Agricultural Productivity.



14. Low agricultural productivity is also reflected by declining crop yields. Yields of all crops except groundnuts are lower in the Gambia compared to other West African countries, and yields have declined to such an extent that crop production in the Gambia has contracted significantly. Between 2010 and 2016 in the Gambia, yields declined in rice (36 percent), maize (26 percent), millet (17.7 percent), and groundnuts (8.7 percent), although yields of cassava and cashews rose over the same period. The continued decline in rice yields since 2010 has deepened the gap with the rest of the region and especially with Senegal, where great progress has been achieved (Figure 5). FAOSTAT data show that in 2014–16, rice yields in the Gambia were only 35.6 percent of the

Figure 5: Yields of paddy rice, 1961-2015



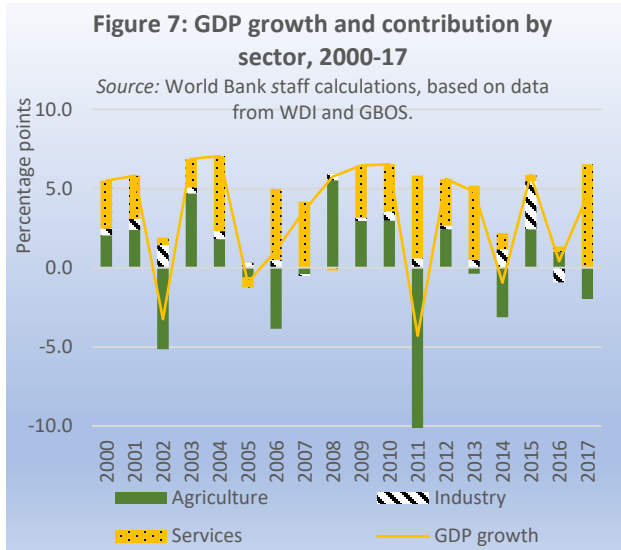
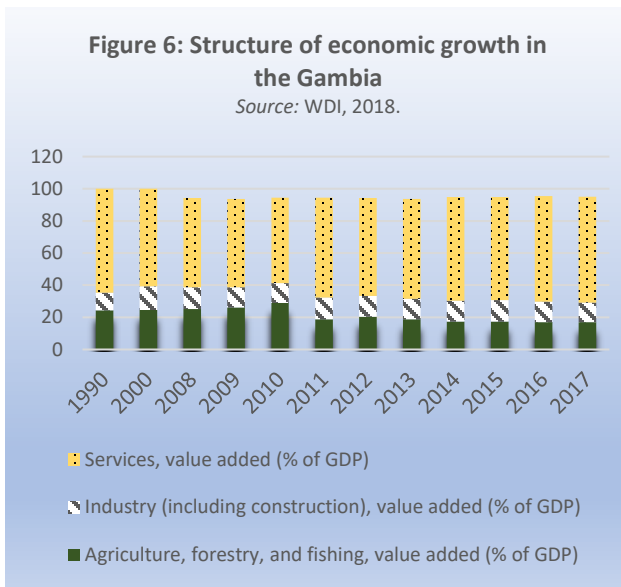
² Based on data from FAOSTAT and USDA, as well as Benin et al. (2010) and AGRA (2017).

average rice yield for West Africa and 18.7 percent of the average rice yield for Senegal. The data available also indicate that average yields of coarse grains in the Gambia declined from 0.95 to 0.87 metric tons per hectare between 2008 and 2017, whereas in West Africa as a whole they declined from 1.14 to 1.03 metric tons per hectare. This decline in yield in the Gambia is related to a number of factors including erratic and insufficient rainfall, low use of mineral and organic fertilizers in a context of decreasing soil fertility combined with soil salinization due to seawater intrusion in the lowlands and in the River Gambia, poor cropping practices, and low yielding and inappropriate seed varieties (late-maturing, intolerant to salt). The amount of rice and maize harvested in the Gambia in 2016 was 40 percent lower than in 2010.

15. Altogether, the weak performance of the agricultural sector has multiple adverse effects on the economy and the welfare of the Gambian population. The contribution of agriculture to GDP declined from 29 percent in 2010 to 17 percent in 2017 (Figure 6), although part of that decline may be attributed to the net increase in the share of services in GDP (66 percent). It is noteworthy that agriculture’s share of GDP was only 17 percent, given that 46 percent of the national labor force works in the agricultural sector. Agricultural GDP consists of livestock (30 percent), groundnuts (20 percent, and a main source of foreign exchange), other crops (40 percent, with horticulture growing in importance), and a small share of fisheries and forestry.

16. Economic growth is highly correlated to agricultural growth, which can fluctuate greatly from year to year because the sector depends heavily on weather conditions (Figure 7). Agriculture and indeed the entire economy is therefore very vulnerable to climate shocks. The sharpest decreases in economic growth resulted from similar declines in agricultural growth following bad weather (Figure 7). This vulnerability is especially exacerbated by the extreme weather conditions that accompany climate change, particularly the droughts of 2002 and 2011 and erratic rainfall in 2014 and 2016.

17. Agricultural output covers only half of the country’s domestic consumption needs and decreased domestic production has led to increased food imports. For instance, 83 percent of the country’s rice consumption requirement is met through imports. In 2016, the value of imported milled rice amounted to US\$35.7 million, corresponding to 3.7 percent of GDP (FAOSTAT 2019). According to the results of the 2015/16 IHS, 55 percent of Gambians are food insecure. About 62 percent of farm households grow crops only for subsistence, yet 73 percent of villages report that the food that they produce is depleted three to seven



months after the harvest.³ In fact, like other Sahelian countries, the Gambia is severely and regularly affected by adverse climatic conditions that cause big losses in agricultural production, with serious impacts on household food security. The Food and Agriculture Organization of the United Nations (FAO) classifies the Gambia as “a Low-Income Food Deficit Country facing severe food security issues at both household and national levels.”

18. Because most of the rural population draws its livelihood from agriculture, the weak performance of the sector has contributed to a higher poverty rate and has aggravated income inequality in recent years. As described above, IHS data reveal that rural poverty increased from 64.2 percent in 2010 to 69.5 percent in 2015/16, although the national poverty rate remained almost stable during this period, moving from 48.1 percent to 48.6 percent.

19. However, simulations show that improving productivity and competitiveness of the main agricultural value-chains could lead to significant agricultural and economic growth. This potential growth would come mostly from rice followed by chicken meat. If the Gambia managed to reach an average rice yield of 4 metric tons per hectare (like Senegal), the agriculture gross production value would increase by about US\$ 80 million (moving from US\$ 24 million to 103 million), which represents an annual average sector growth of 7.04 percent over a five-years period leading to an annual increase by 1.27 points of the GDP growth. For chicken meat, by increasing ten times current production levels, with obviously the implication of the private sector to meet the domestic demand in quantity while complying with export quality requirements, the Gambia could gain 4.86 and 0.85 points in agriculture and economic growth, respectively. Under realistic scenarios of improved competitiveness and productivity increase, other important crops like groundnut, millet, maize and sorghum as well as vegetables and egg production could lead to growth but at a lower level compared to rice and chicken meat (Table 2 and Figure 8). Altogether, controlling for other sources of growth, under these scenarios, cumulative annual growth could reach over 14 percent for agriculture gross production value and about 6 percent for economic GDP growth, by 2024 (Figure 9).

³ Calculated using data from the 2012 Agricultural Census.

Table 2: Simulations of potential sources of growth from agriculture sector

Sources of growth	Hypothesis (Over 5 years: 2019/24)	Increase in Crop Gross Production Value (in current US\$)	Annual Percent Increase in Agriculture Gross Production Value	Annual Percent Increase in GDP
Groundnut	Gambia Yield = Nigeria Yield =1.5 metric tons/ha	15,965,199	1.57	0.26
Rice	Gambia Rice Paddy Yield = Senegal Yield = 4 metric tons/ha	79,469,535	7.04	1.27
Millet	Gambia Yield = 1.5 metric tons/ha = Yield of new varieties generated in Senegal	12,884,348	1.28	0.21
Maize	Gambia Yield = Yield in Mali = 2.5 metric tons/ha = Half world average yield	10,950,928	1.09	0.18
Sorghum	Gambia Yield = Nigeria Yield = 1.5 metric tons/ha = Yield of new variety generated in Senegal	4,127,732	0.42	0.06
Vegetables	Gambia Yield = Yield in Nigeria = 9 metric tons/ha	678,193	0.07	0.01
Chicken eggs	Gambia eggs production meets country needs like in Senegal = Actual Production *4 =349*4= 3980 metric tons	5,031,650	0.50	0.08
Chicken meat	Gambia chicken meat meets country needs like in Senegal = Actual Production *10 =1513*10=15,130 metric tons	52,552,813	4.86	0.85
Cumulative growth		181,660,398	14.39	5.73

Source: World Bank staff calculations based on data from WDI and FAOSTAT, 2019

Figure 8: Simulations of potential sources of growth from agriculture sector

Source: World Bank staff calculations, based on data from WDI and FAOSTAT, 2019

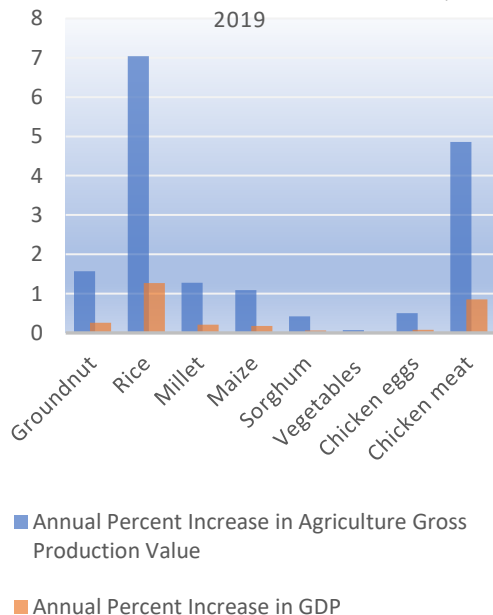
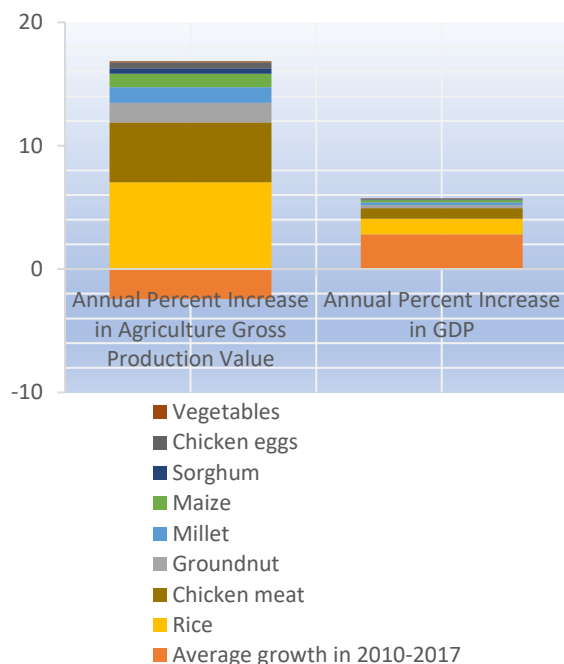


Figure 9: Simulations of cumulative sources of growth from agriculture sector by 2024

Source: World Bank staff calculations, based on data from WDI and FAOSTAT, 2019



3. Review of Agricultural Policies

3.1 Agricultural policies and lessons from implementation

20. The large share of agriculture in GDP and in total employment from the early years of independence to the present have placed the sector at the center of the government’s development policies. Although the relative share of agriculture in GDP has decreased since the 1990s, the sector has remained a key area of policy attention, considering its role in employment and export earnings. Starting in the early 2000s, this attention has been articulated in strategy documents of two types. The first type consists of general economic development documents, including (but not limited to) the Poverty Reduction Strategy Papers (PRSPs)—PRSP-1 (2003–05) and PRSP-2 (2007–11)—and the Program for Accelerated Growth and Employment (PAGE) 2013–15. The second type is sector-specific; it includes the Agriculture and Natural Resource Policy 2009–15 and the Gambia National Agricultural Investment Plan (GNAIP) 2011–15. The GNAIP is a product of the Comprehensive African Agricultural Development Program (CAADP) process under the New Partnership for Africa’s Development (NEPAD) of the African Union (AU).

21. Sector stakeholders agree that those strategy documents underlined the government’s commitment to agricultural development and ensured greater visibility of the sector on the national agenda, and in government relations with development partners. The regionalization of agricultural policy in West Africa, led by ECOWAS and CAADP, enabled collaboration between the government’s technical teams and ECOWAS in the formulation of the GNAIP. The learning and exchange processes associated with this ongoing collaboration offer an opportunity to strengthen policy formulation and implementation for the sector in the Gambia, based on agreed regional benchmarks.

22. Stakeholders also agree that several implementation challenges hampered satisfactory achievement of the agricultural development objectives highlighted in those strategy and policy documents. For example, no systematic assessment of the implementation and results of those strategies has been undertaken to inform the formulation of subsequent policy, as was the case for the PRSP-1, PRSP-2, and PAGE sequence. In addition, the relatively large number of objectives, intervention areas, and activities created a mismatch between objectives and resources. A cursory evaluation of the implementation of PRSP-1 and PRSP-2 concluded, for example, that insufficient domestic and external funding was one of the main causes for limited achievements (Republic of The Gambia 2018a). The funding shortfall was also a major reason for the failure to complete some GNAIP activities.⁴ In fact, the funding gap for the GNAIP (90 percent) was one of the greatest among ECOWAS countries (compared to 31 percent for Niger, 48 percent for Senegal, 81.5 percent for Liberia, and 89 percent for Côte d’Ivoire).⁵ In

Box 2: Lessons from the GNAIP policy framework

“In support of the so-called ‘Vision 2016’ food self-sufficiency goal that was adopted with little planning and dedicated mobilization of resources, most public funds and staff time were diverted to rice production activities. No specific actions were taken to address the two major constraints to increasing rice production, i.e. access to irrigated land and shortages of inputs (seeds, fertilizer).”

Source: Republic of the Gambia 2018a.

addition to the above-mentioned challenges, a major shortcoming is the lack of good sector strategy along with a concrete action plan addressing the key development constraints. Without a strong development strategy that states the government’s objectives in the agricultural sector and articulates the core programs and investment priorities that will achieve those objectives (with achievement based on well-defined indicators), it will be difficult to put the agricultural sector on a sustainable and monitorable

⁴ Ceessay, Galleh Jallow, and Camara (2016).

⁵ Hollinger and Staatz (2015).

growth path. Lessons from implementing the GNAIP illustrate this point (Box 2).

23. In addition to low budget allocations, the scarcity of qualified staff created a major implementation challenge. Heavy-handed management of civil servants under the previous regime involved arbitrary dismissal, imprisonment, reassignment, and other repressive measures. The Ministry of Agriculture was affected markedly by these methods, due to the former president's personal interest in farming and involvement in day-to-day management of the ministry. High rates of attrition and staff turnover have reduced the ministry's capacity. The lack of effective coordination between the Ministry of Agriculture and relevant line ministries responsible for providing crucial public or quasi-public goods and services indispensable for agricultural growth (roads, energy, telecommunications, environment and natural resources, and so on) has also contributed to poor implementation of previous strategies and development plans.

24. Limited institutional capacity still constrains the performance of the Ministry of Agriculture in formulating new sectoral policies, development strategy, and programs. The third strategic priority of the NDP (2018–21) is to build *“a modern, sustainable, and market-oriented agriculture and livestock sector for increased food and nutrition security, income and employment generation, poverty reduction, and economic transformation.”* The three expected outcomes of this priority area are:

- 1) ***Consolidated agriculture sector policy with appropriate subsector policies to create an enabling environment for modern, market-led agriculture in place.*** For this purpose, the government will launch a comprehensive consultative process to (i) develop and validate the new/ revised policy and subsector policies; (ii) adopt the requisite legislative framework with laws and decrees allowing the application of the new policy, as well as extension and communication strategies; and (iii) adopt multi-year financial programming, especially a medium-term expenditure framework, to bring greater predictability in the allocation of budgetary resources to the sector.
- 2) ***Value chains enhanced for agriculture and livestock transformation.*** The priority value chains for crops are rice, maize, and horticulture, including vegetables and fruits such as mangos and oranges. The potential for import substitution, exports, and marketing in these value chains will be harnessed and promoted. The non-crop priority value chains are livestock, poultry, and small ruminants, especially those with short production cycles and potential to promote gender inclusion and youth engagement in production and processing. The NDP intends to strengthen both the technical and institutional capacity of value chain actors (producers, processors, traders/dealers, transporters, feed vendors, and others) through training, exchange visits, access to information, and other means that will promote agribusiness, agro-processing, and access to finance. The NDP will also support development of the food system by promoting and diversifying agro-based industries, including animal feed production as well as food preparation (for example, production of coarse grain flour, processed foods, and canned fruits and juices), to further stimulate growth in the manufacturing sector. Access to finance is a crucial factor for smallholders as well as for the development of small and medium enterprises (SMEs). Under the NDP, the government will assess the need to create an Agricultural Development Bank focusing on investments in agriculture to address challenges related to cumbersome bureaucratic procedures, high interest rates, and requirements for collateral, all of which hinder access to finance (especially for farmers, but also for SMEs). The NDP also intends to promote a viable agricultural marketing system by exploiting the potential for commodity-based cooperatives and the development of contract farming, focusing on poultry and horticulture (fruits and vegetables) to overcome marketing constraints related to price instability, uncertainty, and perishability. At the same time, the NDP will support the adoption and implementation of a quality assurance framework in line with national, regional, and international standards. More specifically, the

Gambia Standards Bureau and the Food Safety and Quality Authority will collaborate and design activities that will be implemented to ensure quality assurance in line with established international food safety and quality standards.

- 3) ***Increased production of basic agricultural commodities (crops and livestock) for enhanced food and nutrition security.*** This NDP outcome will be achieved through 10 activity areas: (i) promoting sustainable land and water management for increased production and productivity; (ii) enhancing livestock production, markets, and infrastructure; (iii) adopting appropriate agricultural mechanization and irrigation systems; (iv) promoting rangeland development, provision of livestock drinking points, and use of alternative feed resources; (v) strengthening agricultural research and extension services support; (vi) reducing post-harvest losses; (vii) ensuring timely availability of adequate and affordable agricultural inputs; (viii) promoting climate-smart agriculture; (ix) ensuring the conservation of indigenous genetic resources; and (x) working on pest and disease prevention and control.

25. Although the NDP sets clear goals and expected outcomes for the agricultural sector, the corresponding agricultural policies, strategies, and programs must be updated and developed to put the elements of the NDP into operation. Effective implementation of the NDP depends on strengthening the institutional capacity of the Ministry of Agriculture to formulate strong policy documents that capitalize on lessons from the past and can serve as a reference for interventions by the government and development partners. The Ministry of Agriculture has requested support from FAO to begin updating and developing agricultural policy, strategy, and programs to achieve the NDP outcomes for agriculture. An additional consideration is that most ECOWAS countries have completed the second phase of their National Agriculture, Food, and Nutrition Security Investment Plan, yet the Gambia has not completed this process.

3.2 Price policies

26. The Gambian agriculture suffers from the lack of agricultural policies that are coherent and consistent over time. Agricultural policy has also tended to ignore linkages with other key sectors. More specifically, inappropriate price and fiscal policies, as well as an inefficient fertilizer subsidy policy, have undermined the effectiveness of public actions in agriculture.

3.2.1 Import price control

27. Although the Gambia has abolished price controls, the Essential Commodities Act of 2015 empowers the government to intervene in the pricing of some imported goods that are considered essential. The motivation for the act is the highly concentrated rice import market, which could potentially lead importers to set higher prices that could hurt consumers. A study of rice and sugar imports by the Competition Commission finds that the price charged by traders for rice was 47 percent higher than the economic total cost, with a difference of 267 Gambian dalasi (GMD) (US\$5.4) between the total cost and the wholesale price of rice.

3.2.2 Groundnut pricing

28. The price fixing policy for groundnuts provides limited incentives to introduce quality standards that reward producers for growing higher quality groundnuts. Minimum reference producer prices for unshelled groundnuts are determined by an interprofessional association comprising all stakeholders, including the Gambia Groundnut Corporation (GGC), in relation to the five-year average of the world market (f.o.b.) price. This timeframe is too long and inappropriate, given high fluctuations in the world

market price for groundnut. In the 2017/18 groundnut season, the National Food Security Processing and Marketing Corporation (NFSC, formerly the GGC) announced both farm-gate and export prices.

29. Along with the minimum reference price, a risk sharing mechanism (the Price Stabilization Fund) further insulates groundnut farmers against downside risk relative to a given threshold. The Fund acts as a form of minimum guaranteed price. The objective is to guarantee payment of the announced farm-gate price throughout the season and to operate as a mechanism for sharing risks and benefits, based on the difference between the reference producer price and the actual producer price. The Fund is designed to reduce annual fluctuations in producer prices, not to eliminate them or to modify the trend. Unfortunately, periodic government interventions in the form of price subsidies have distorted the mechanism, especially in recent years, when the decline in the world price for groundnuts has sometimes prevented groundnut products from being sold at a profit on the international market. As a result, the government provided an output price subsidy to bridge the gap between the reference producer price and market price. The subsidy has not only created distortions in the market but has huge fiscal implications—the NFSC has entered a financial crisis with accumulated arrears to Gambian farmers amounting to GMD200 million (US\$4 million)—and a potentially negative impact on rural incomes.

3.2.3 Groundnut export and import taxes

30. While the government has liberalized groundnut marketing and exports, it still taxes the commodity and struggles to meet high standards for exported groundnuts. Groundnuts account for the bulk of the Gambia's agricultural exports and made up nearly half of its merchandise exports in 2015 (WTO 2017). Under the ECOWAS Common External Tariff (CET), groundnuts benefit from tariff protection of 5 percent (in shell or shelled, for processing into oil) or 10 percent (in shell or shelled, for other purposes). A 5 percent import duty is imposed on groundnut seed. The Gambia continues to face severe difficulties in meeting export quality requirements for food-grade groundnuts. In the European Union (EU), the main export market, Gambian groundnuts have been downgraded to the bird-feed market segment due to noncompliance with sanitary and phytosanitary standards (on aflatoxin). The export tax imposed on groundnuts has not addressed issues limiting the competitiveness of the value chain, as the tax revenue is not reinvested in the groundnut value chain to increase productivity and quality.

3.2.4 Rice policy and import tariff

31. In the Gambia, rice policy—particularly in the form of rice import tariffs—is at the center of the broader agricultural program to achieve self-sufficiency by stimulating domestic production (WTO 2004). The import tariff rates applied to rice and other agricultural products have changed under general tariff reforms, most recently through the adoption of the ECOWAS CET and changes to the Customs and Excise Act of 2010.⁶ Over the past two decades, the import tariff on rice has oscillated between zero and 5 percent, making Gambia an attractive destination for imports. Lower tariffs reduce the price of imported products relative to domestic prices, which ultimately increases both imports and exports. For example, an estimated 30 percent of all rice imported into the Gambia is re-exported to Senegal, where the tariff is higher. The objective of keeping the rice import price low benefits urban consumer the most. Data from the Department of Planning Services show the 2017 price of imported rice in urban Banjul to be GMD24 (US\$0.48) per kilogram, compared to GMD26 (US\$0.52) in rural Basse.

⁶ In addition to the use of tariffs, border closures have also been part of the policy to restrict cross-border trade or re-exportation to Senegal.

32. The ECOWAS tariff harmonization in the subregion appeared poised to change those dynamics, but tariffs alone cannot change Gambia's rice import dependency. With the entry into force of the ECOWAS CET in January 2017, the new rice tariffs ranged from 5 percent for paddy to 10 percent for husked rice, semi-milled or wholly milled rice, and broken rice (WTO 2017). In 2018, however, the Government of the Gambia restored a 10 percent import tax exemption on rice to bring the price down. In terms of impact, as shown in Figure 10, the volume of trade has increased regardless of whether rice was not taxed or taxed at 5 or 10 percent, perhaps because the Gambian tariff is generally low compared to tariffs in other countries of the subregion. Between 2007 and 2018, the volume of rice trade in the Gambia more than doubled, showing the increasing reliance on rice imports to meet demand. Even though this rice import expansion did not cause domestic production to fall, rice production is not growing at a pace commensurate with consumption growth (Figure 11). The volume of imports has grown consistently from 2006 onward. The implication is that imported rice will continue to dominate the rice market in the Gambia. Tariffs alone cannot change the import dependency dynamics. Instead, government interventions should focus on how to improve the overall competitiveness of the domestic rice value chain.

Figure 10: Trends in volume of rice trade and import tariffs, 2007-18

Source: FAOSTAT, 2018.

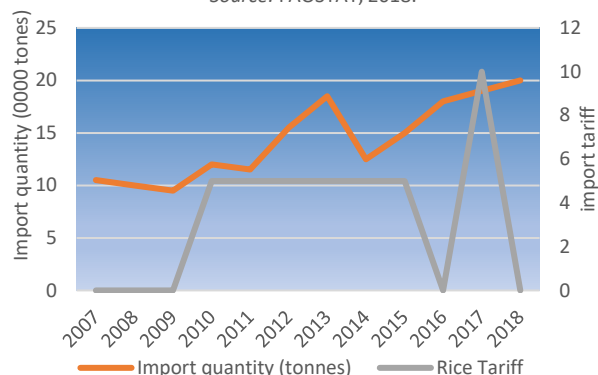
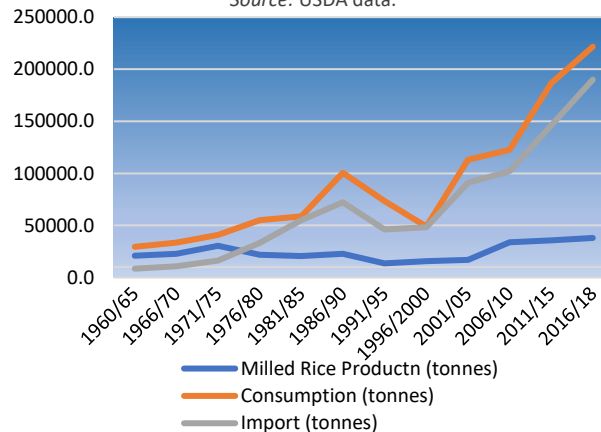


Figure 11: Trends in average rice production, consumption, and imports, 1960-2018

Source: USDA data.



33. Rice tariff policies have not stimulated local production sufficiently to displace imports. Consumers have not shifted from imported to local rice,⁷ in part because of rigidity in consumption patterns. The low price response by rice consumers and producers observed in the Gambia confirms findings in other African countries and casts doubt on the effectiveness of price policy (Lancon and Erenstein 2002). One of the immediate impacts of the rice price policy is that households have little incentive to invest in rice production, owing to stiff competition with low-cost imports of 100 percent broken rice. Given that rice demand and supply are price inelastic, adjustments in prices through trade restrictions such as tariffs are unlikely to make the Gambia self-sufficient in rice. For example, Jeon and Ahn (2017) estimate the effect of a tariff reduction on grain self-sufficiency for 150 countries over 17 years; their sample included the Gambia. A derived elasticity of 0.26 percent was estimated for the rice model, which suggests the inelasticity of rice self-sufficiency ratios with respect to tariff rate. The positive correlation between tariff rates and self-sufficiency ratios implies that an increasing tariff leads to more domestic grain production. Similarly, Coulibaly (2013) found that rice import demand in Côte d'Ivoire is

⁷ In coastal countries, the fast growth recorded during the same period resulted from faster urbanization and a significant increase in per-capita income, which also triggered a rapid shift toward rice consumption.

inelastic. Therefore, the government needs an integrated approach to nudge farmers to move from self-sufficiency to more market-oriented production.

3.2.5 Fertilizer subsidies

34. While the use of subsidies is a subject of ongoing debate, it is argued that the use of subsidies is desirable to boost production and help poor farmers. Fertilizer subsidies have stimulated increased use of fertilizer in countries such as Malawi and Nigeria. As noted in Sheahan and Barret (2014), fertilizer use is higher than currently estimated. Different approaches were used to target the subsidies. In Malawi, subsidies targeted a specific category of farmers, and fertilizer was supplied in smaller quantities to respond to resource constraints faced by poor farmers. In Nigeria, fertilizer subsidies have moved from a targeted subsidy implemented through an e-wallet to the subsidization of fertilizer at the point of production.

35. Fertilizer subsidies were part of the price policy in the Gambia until the implementation of input market reforms in the 1990s.⁸ Subsidies on fertilizers have not been completely eliminated, however. The government still, from time to time, provides fertilizer subsidies to farmers, particularly during weather-related shocks or emergencies. Fertilizer subsidies in the Gambia range from 30 percent to 35 percent of the price.⁹ In 2018 alone, the subsidy on fertilizer was 58 percent of the price.

36. Most subsidy programs feature the active participation of the private sector, and governments have used subsidies to develop the private provision of fertilizer, yet the Gambian government still distributes fertilizer directly to farmers. This approach encourages rent seeking and undermines the incentives for the private sector to play a role. The government's direct involvement in the importation and distribution of fertilizers is likely to crowd out private sector investment. The government could use different modalities of fertilizer subsidies to achieve the twin goals of extending farmers' access to quality fertilizers, while at the same time developing the private sector fertilizer market.

37. Although fertilizer imports have been liberalized, fertilizer imports and sales by the private sector must compete with government-subsidized imports and sales. Analysis of the 2015/16 IHS shows that in 2016 the majority of households that used fertilizer purchased it from private vendors (78 percent), while only a few got it from government sources (14 percent). Overall, about 42 percent of agricultural households used fertilizer. The increase in fertilizer purchases could be linked to an increased availability of fertilizer in small packs from some private vendors, or it could mean that everybody is subsidized, including the private vendors. Government-subsidized fertilizers may also have found their way into the open market.

38. In the Gambia, imports of fertilizers, though an essential input, are not entirely duty-free under the ECOWAS CET. While imports of certain fertilizers—15 tariff lines under the Harmonized System (HS) 32—are classified as "essential social commodities" (duty-free), 8 (HS 32) tariff lines are subject to 5 percent import duty. Even though this tariff is small relative to the final retail price, it adds unnecessary administrative burdens and could provide opportunities for rent-seeking, which can lead to delays in unloading and transporting fertilizer.

⁸ The termination of fertilizer subsidies resulted in a four-fold increase in the price of fertilizer by the end of the decade. Fertilizer imports, which stood at 5,500 tons with government subsidies in 1984, had declined to 600 tons by 1990, and the majority of Gambian farmers could no longer afford fertilizer.

⁹ International Monetary Fund PRSP.

3.2.6 Compliance with trade agreements and border procedures

39. Although the Gambia is part of many bilateral trade agreements, supply-side constraints prevent it from taking full advantage of these export opportunities. The key constraints include (i) lack of compliance with World Trade Organization (WTO) sanitary and phytosanitary requirements and Technical Barriers to Trade Agreements, (ii) market information gaps, and (iii) standards and technical requirements in the EU export markets. Because of these constraints, the Gambia's agricultural exports perform under their potential. According to the International Trade Center,¹⁰ the unrealized export potential varies across commodities as follows: crude groundnut oil, with 14 percent of export potential for countries of the Organization for Economic Co-operation and Development (OECD) and 100 percent of export potential for non-OECD countries; unroasted groundnuts, with 35 percent of export potential for OECD countries and 60 percent of export potential for non-OECD countries; frozen fish, with 85 percent of export potential for OECD countries and 87 percent of export potential for non-OECD countries; cashews, with 98 percent of export potential for OECD countries and 17 percent of export potential for non-OECD countries; and fruits and vegetables, with 36–42 percent of export potential for OECD countries.

40. The Gambia is also failing to maximize trade benefits in the domestic and ECOWAS markets. Road blocks, illegal payments to road agents, and the lack of harmonized border procedures between the Gambia and Senegal also constitute major constraints to the growth of domestic and regional trade. Slow progress in implementing the ECOWAS trade integration instruments, namely the Trade Liberalization Scheme and Inter-State Road Transit Scheme, prevents the Gambia from reaping the benefits of the growing regional market.

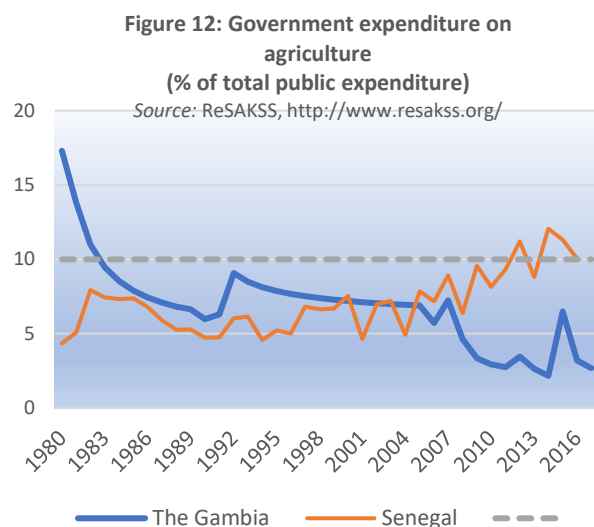
3.3 Public expenditures on agriculture

41. Although agricultural growth has always been a key development objective of the government's economic policies, this priority is not necessarily reflected in budget allocations. Budgetary commitments to agriculture decreased sharply from 17.30 percent in 1980 to 5.97 percent in 1990.¹¹ They fluctuated in subsequent decades but remained far below the CAADP target of 10 percent of total public expenditure established in the 2003 NEPAD-AU Maputo Declaration (Figure 12). In fact, during 2010–17, the average share of agriculture in total spending was 3.30 percent, compared to 4.34 percent for West Africa. Some countries, like Mali, Niger, and Senegal,¹² outperformed the Gambia, however. Senegal, where agricultural expenditures averaged 10.13 percent of total spending in 2010–17, is particularly outdistancing the Gambia (Figure 12).

¹⁰ See <http://www.intracen.org/country/general-trade-performance>.

¹¹ Data on agricultural expenditures are from ReSAKSS and reflect expenditures from the different subsector ministries (crops, livestock, fisheries, forestry).

¹² Benin (2015).



42. The ratio of agricultural expenditures to agriculture’s share of GDP, known as the Agricultural Orientation Index (AOI), is also low. The estimated AOI for the Gambia over 2011–15 is only 0.27.¹³ This finding is consistent with the findings in Goyal and Nash (2016) that most African countries spend much smaller proportions of their public budget on agriculture than the sector’s share in the economy. Compounding the low level of budgetary allocations, there is evidence that the budget execution rate of agricultural expenditures has been low in recent years.

43. While the modest budget allocations to agriculture remain a concern, addressing the quality of public spending and efficiency of

resource allocation are crucial related issues. Input subsidies and other types of direct transfers constitute a major component of agricultural expenditures in the Gambia like in neighboring countries such as Senegal. For example, an expenditure review conducted by the World Bank in 2011 showed that the share of subsidies and transfers in expenditures averaged 33.4 percent during 2006–09. The share of subsidies has moved from 40 to 60 percent between 2011 and 2013 and to less than 20 percent in 2015. While fertilizer and seed subsidies helped to increase rice production in the aftermath of the 2008 food crisis, their overall impact in terms of productivity has remained limited considering that rice yields in the Gambia are still below the ECOWAS average.

44. With regard to agricultural research and development (R&D), public spending in the Gambia is lower than the NEPAD-CAADP target of 1 percent of agricultural GDP. The fact that external resources from donors play a key role in funding agricultural R&D explains the high degree of funding volatility. Despite this volatility, R&D spending in agriculture increased by 25 percent during 2008–11 in the Gambia, compared to increases of 21 percent in Liberia and only 4 percent in Senegal. The increase in spending from 2010 in the Gambia was due to a surge in donor funding, including (among other sources) funds from the World Bank under the regional West Africa Agricultural Productivity Program (WAAPP).

45. Data for 2009–14 show that while the government budget finances recurrent costs of the National Agricultural Research Institute (NARI)—salaries amount to 52 percent of total expenditures—NARI’s capital budget is highly donor dependent. In fact, the national budget finances only 6 percent of NARI’s modest capital expenditures. Those investments have increased substantially since 2014 due to the rehabilitation of offices, laboratories, and staff quarters through external funding from development partners. NARI also generates some revenue through the provision of laboratory services.¹⁴ The Agricultural Science and Technology Indicators (ASTI) show that the average number of full-time equivalent researchers for the Gambia during 2010–14 is 50.34, compared to 410.6 for Ghana, 61.38 for Senegal, and 20.8 for Cape Verde.

46. In addition to inefficiency, equity issues are associated with the composition of agricultural expenditures. Because fertilizer and seed are private goods that can be easily appropriated by or directed to specific individuals or groups of individuals, political incentives to subsidize their use continue to be

¹³ An AOI of 1.0 means that the share of agricultural expenditures equals the share of agriculture in GDP.

¹⁴ ASTI (2016).

high. Yet the results of the 2015/16 IHS show that 78 percent of the farmers who use fertilizer buy it from private dealers, while only 14 percent benefit from subsidized fertilizer. The resources allocated to the subsidy could finance the provision of crucial public goods capable of generating greater positive impact on agricultural productivity, such as agricultural R&D, agricultural extension, and feeder roads. Rebalancing the composition of expenditures would increase the efficiency of agricultural public spending.

4. Opportunities and Constraints

47. The actors in Gambian agricultural value chains operate in an environment affected by a wide range of factors that determine the performance of their farms or agribusiness operations, including biophysical resources, asset endowments, markets, and institutions. While value chain actors such as small-scale producers make most of the investments in their enterprises themselves, public and private sector investments play a crucial complementary role that enhances the likelihood that small-scale producers will meet their household production and consumption objectives. Moving forward, several opportunities associated with the performance factors listed here could improve the performance of agriculture in the Gambia and unlock considerable potential for growth.

48. Gambian agriculture could become a robust engine of inclusive growth and poverty reduction. In addition to the potential presented by the country's natural resource endowments, huge potential gains could be achieved in terms of productivity and market share. To make the most of these opportunities, the Gambia will need to address several constraints that prevent small-scale producers from leaving low-performing subsistence agriculture and prevent the private sector from developing agribusinesses.

4.1 Agricultural resources endowments

49. The Gambia still has enormous agricultural land and water resources to develop. Agricultural land is estimated at 655,000 hectares and arable land at 588,000 hectares (Census 2013); of this, 334,000 hectares are under cultivation (Table 3). In other words, 43 percent of the country's arable land, spanning four agro-ecological zones and offering great crop diversification opportunities, remains to be developed.

50. Water resources offer an important agricultural growth opportunity. The Gambia has one of the highest levels of annual rainfall among Sahelian countries (830 millimeters per year). Its surface water resources (estimated at 8 billion cubic meters) are plentiful, and so are its groundwater resources (estimated at 0.5 billion cubic meters).¹⁵ Better management of those resources would allow agricultural intensification, and at the same time it would help to reduce production risks associated with the highly changeable weather patterns characteristic of the Sahelian environment, particularly in the challenging context of climate change and its adverse effects.

51. By virtue of its size and location in the Sahelian region and on the coast, the Gambia is highly vulnerable to climate change. The Gambian agri-food sector has had to cope with harsh and variable

Table 3: The Gambia's land and water resource endowments

Total national area (000 ha)	1 130
Arable land (000 ha)	588
Cultivated area (arable land + permanent crops, 000 ha)	334
Area cultivated (% of total national area)	30
Total renewable surface water (10 ⁹ m ³ per year)	8
Total renewable groundwater (10 ⁹ m ³ per year)	0.5
Irrigation potential (000 ha)	80
% of potential irrigated area equipped for irrigation	6
% of cultivated area equipped for irrigation	1

Source: FAO/AQUASTAT, 2014 data.

¹⁵ FAO/AQUASTAT, 2014.

environmental conditions. Decades of moderate to severe drought, along with cycles of above-average rainfall, have affected agricultural production noticeably.¹⁶ The variability, frequency, and intensity of droughts and storms have increased in recent years (Government of the Gambia 2017),¹⁷ while the late onset and early cessation of seasonal rainfall and a reduction in the length of the growing period have contributed to crop failure. All of these adverse environmental conditions increase the volatility of agricultural output and add to the erratic performance of the sector. As mentioned, the Gambia experienced five weather shocks between 2011 and 2016—the droughts of 2011, 2014, and 2015 (to a lesser extent) and devastating floods and winds storms in 2012 and 2016. These shocks caused agricultural output to plunge by 24 percent and led national GDP to contract by 4 percent during 2010–15.

52. In addition to the immediate effects of weather shocks, climate change will also affect the productivity of land and water resources, unless appropriate adaptation measures are adopted. Some Gambian farmers already use a wide range of climate-smart agricultural practices, including intercropping, crop rotation, agroforestry, and early-maturing varieties. Although these practices are not new in the Gambia, having been used in Sahelian countries at least since the 1980s, scaling-up their adoption remains a challenge. Barriers to scaling up adoption include lack of knowledge, information, and unavailability of adapted improved technologies (such as salt-tolerant rice varieties), access to finance, infrastructure (such as irrigation), and effective institutions, including property rights to land. Without dedicated policies and investments aimed at removing these barriers, the adoption rate of climate-smart agriculture technologies will remain low.

53. Irrigation infrastructure is very limited, leaving the country's agriculture almost entirely dependent on rainfall, despite the availability of important inland water resources. About 90 percent of agricultural production is highly dependent on rainfall, meaning that any sudden change in weather conditions can erode agricultural output and food security. Only 6 percent of the potential irrigable land (estimated at 80,000 hectares, based on FAOSTAT 2014) is under irrigation (Table 2). As a result, much of the agricultural land is cultivated only during the rainy season, which leaves significant production opportunities untapped for the remaining eight months of the year.

54. The decrease in soil fertility and vulnerability to increased salinity are major causes of declining crop yields and crop response to fertilizer. Farming practices should aim at conserving or enhancing the resource base while ensuring adequate food production. Since the 1960s, yields have declined by as much as 30 percent owing to erratic rainfall, declining soil fertility from widespread land degradation,¹⁸ and the failure to adopt sustainable resource management practices for land and water. Unsustainable farming practices, such as deforestation and poor management of irrigation schemes, have contributed to the loss of soil fertility. The 2011 Agricultural Census shows that 42 percent of Gambian villages report soil salinity, 41 percent report soil acidity, and 75 percent report soil erosion and degradation issues. In addition to poor agricultural practices, saline intrusion (resulting from rising sea levels induced by climate change) contributes to land degradation. Salinity is causing considerable disruption to rice cropping under tidal irrigation in the lower stretches of the Gambia River (Government of The Gambia 2017).

55. Declining farm size and the fragmentation of landholdings are challenging the modernization of production systems. Average farm size decreased from about 3 hectares in 2005 to 1.3 hectares in 2015 due to demographic trends and the inheritance system. According to the 2011 Agricultural Census, about 37 percent of farm households are operating six or more agricultural plots, an indication of land fragmentation. Fragmented production makes it more difficult to generate a marketable surplus and could

¹⁶ ECOWAS-SWAC, OECD, and CILSS (2008); Sarr (2012).

¹⁷ Government of The Gambia (2017).

¹⁸ Government of The Gambia (2003).

threaten the economic and social viability of farming, raising serious challenges for mechanization, technology adoption, input intensification, and productivity growth.

56. The main tenure systems are customary, private property, lease, and commons. Most land is held under customary land tenure systems (some 5,084 square kilometers),¹⁹ equivalent to 45 percent of national land area. Customary lands are administered under district authorities and local chiefs in the regions. The customary system of land rights varies greatly from district to district and is determined through membership in lineage groups. Locally selected individuals preside over district tribunals to manage land disputes. Because of the diversity and evolution of customary practices, very few precepts of these traditional tenure systems have been codified.

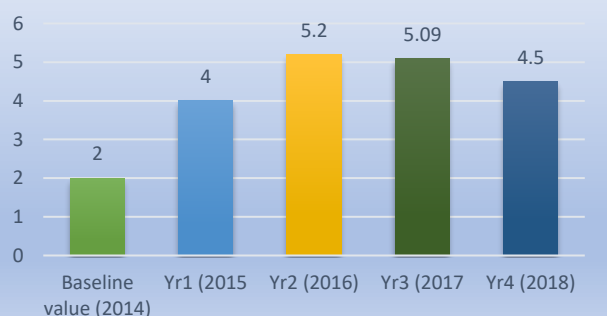
57. Land tenure is too complex and insecure. In particular, uncertainties regarding land acquisition and leasing for commercial purposes affect private sector incentives to invest in land-related businesses. These uncertainties also affect farmers' behavior, especially in the case of borrowed or leased farm land. Customary land right systems are also highly inequitable from a gender perspective, and women's rights to land, although mandated by the Land Act, are not sufficiently implemented in rural areas. As recommended in the Gambia Land Governance Assessment Framework (Bensouda 2013), a top priority is to develop a clearly articulated and integrated national land policy, which should include proposals on strengthening women's land rights, along with implementing legislation.

4.2 Potential for productivity gains

58. The potential for yield gains in all crops is high. Productivity gains can be achieved through more intensive production systems enabled by improved water management, better access to inputs (including improved varieties and fertilizer), and the use of good agricultural practices, proven technologies, and other knowledge and innovations generated and disseminated by well-functioning agricultural research and advisory services. Empirical evidence from GCAV shows that the project interventions enabled rice yields to increase from 2 to 4–5 metric tons per hectare (Figure 13)—with an average increase of 130 percent over 2014–18. Calculations based on these achievements suggest that scaling up the rehabilitation and development of irrigation schemes to 30,000 hectares (out of 80,000 hectares of potentially irrigable land) would lead to annual rice production of 240,000 metric tons,²⁰ enough to meet the Gambia's rice consumption needs, which are estimated at 221,661 metric tons. For groundnut, while the Gambian yield is equal to Africa's average and is less than 1 metric ton per hectare, it is lower than the world average and much lower than some high performing country like Israel (Figure 14). The potential yield gain is high. Similar or greater yield improvements could be gained with other cereals, and horticultural crops. To unlock this potential yield gain, the Gambia will require measures and actions to address structural constraints related to access to technologies, innovations, and infrastructure.

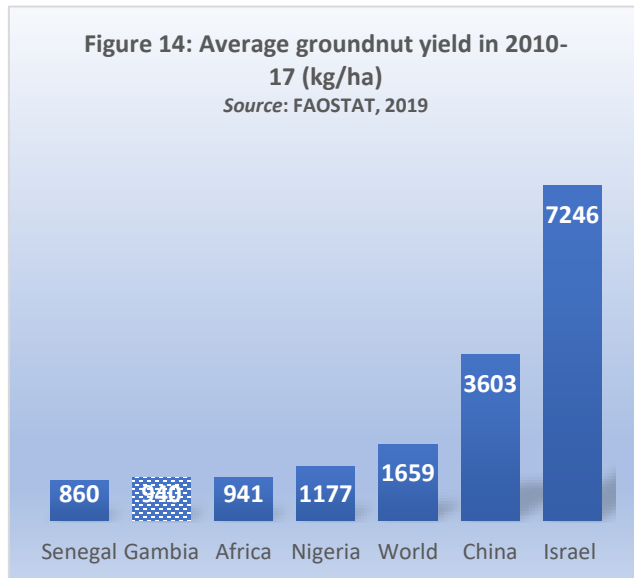
Figure 13: Changes in average yields under the Gambia Commercial Agriculture and Value Chain Development Project (GCAV)

Source: GCAV 2018.

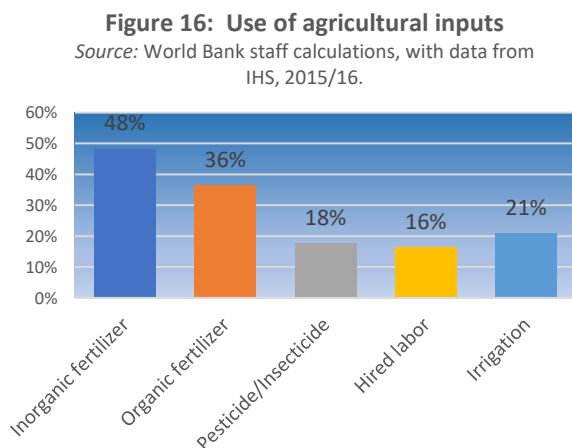


¹⁹ Bensouda (2013).

²⁰ 30,000 hectares * 4 metric tons per hectare * 2 cropping seasons a year.



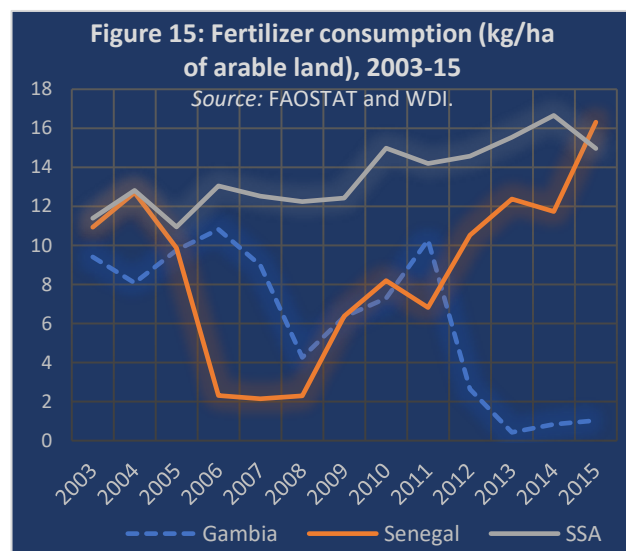
fertilizer every year. Based on the major types of crops grown, the total fertilizer requirement for the country is estimated at 52,000 tons²² per year.



agribusinesses. The low adoption of productivity-enhancing technologies and inputs (Figure 16) also results from a lack of access to credit, the unavailability of such technologies and inputs on the market, their lack of affordability, as well as farmers' aversion to risk.

61. A further reason for the persistence of suboptimal farming practices is the weakness of the agricultural innovation system, including institutional capacity and funding for research, extension, veterinary services and producer organizations. The national research system is still very weak and is not generating technologies to increase agricultural productivity, such as improved varieties. The system has little funding to implement proper research programs and rehabilitate facilities, and it lacks human resources. The budget for NARI finances wages and allowances, leaving little to cover research costs. The

59. The low adoption of modern inputs, improved technologies, and other innovations is a big challenge. The evidence suggests that fertilizer use has collapsed since 2011, falling steeply from an average of 10 kilograms per hectare (kg/ha) in 2011 to 1 kg/ha in 2015 (Figure 15). During the same period, fertilizer use increased from 10 kg/ha to 16 kg/ha in Burkina Faso; from 22 kg/ha to 29 kg/ha in Mali; from 6 kg/ha to 16 kg/ha in Senegal; and from 14 kg/ha to 15 kg/ha for all of sub-Saharan Africa.²¹ It is estimated that in the Gambia the government and private sector are importing and marketing approximately 15,000–17,000 metric tons of



60. The Gambia lacks adequate delivery mechanisms to ensure the provision of good quality farm inputs such as certified seed, fertilizer, and other agricultural goods and services needed by smallholder producers and

²¹ Data from WDI.

²² These estimates are based on a five-year average of the area planted to the main crops, and the minimum recommended fertilizer application rates for each of these crops.

provision of agricultural extension and animal health services faces similar constraints, as budget allocations are not sufficient to deliver adequate extension and advisory services to rural producers and their organizations. As a result, no more than 12 percent of farmers have access to extension services (Republic of The Gambia 2018a).

62. Producers have limited access to productivity-enhancing technology that would help them to escape subsistence farming and poverty. Producers lack the skills necessary to adapt (i) their production techniques to the evolving production environment, including climate change, and (ii) the quality of their produce to the needs of the market. With one extension agent for over 3,500 farmers (World Bank 2006, 2012), the current agricultural advisory system is collapsing. The resulting absence of an integrated agricultural technology transfer and information system is preventing smallholders and other value chain actors from taking advantage of scientific and technological progress in agri-food systems across the region and world. Under the NDP, the Gambia is renewing efforts to increase the effectiveness of the extension service by expanding its coverage and strengthening research-extension linkages. Securing sufficient budget to implement ongoing extension service reforms remains a challenge, however.

63. The critical labor shortages in rural areas are exacerbated by low levels of mechanization in Gambian production systems. In theory, Gambia's growing population should provide additional labor for farming, especially with the average size of rural households exceeding eight members, but that is not the case. According to 2015/16 IHS data, the median age in the Gambia is 18 years. More than 70 percent of the population is under the age of 30, and 21 percent is in the 15–25-year age bracket. Most of these young people regard agriculture as a less attractive livelihood and are migrating in search of alternative occupations in urban areas or other countries. Youth migration and rural exodus further reduce the share of the active population in the countryside and place pressure on the supply of farm labor. Aside from creating rural labor shortages, migration is changing the demographic composition in rural areas; pressure on female labor is rising along with the feminization of agriculture. Dedicated policies that increase agricultural incentives and facilitate the transition from subsistence-oriented agriculture to commercial farming will help to draw labor into the sector and create jobs for youth.

64. For several decades, foreign workers ("strange farmers") supplemented Gambian family labor, but they are no longer a reliable source of labor, being drawn to better income-earning opportunities in their home countries or in urban areas of the Gambia. According to the 2015/16 IHS, 19 percent of farmers hired farm labor during the farming season. Over 45 percent of households found hired labor unobtainable at any time that they needed it. The limited labor supply has raised the cost of labor to the extent that labor costs account for more than half (52 percent) of farmers' reasons for growing crops on fewer plots than in previous years.

65. Post-harvest losses are substantial and seriously affect agricultural productivity and production. For rice and other dry cereals, post-harvest losses are estimated at 10 percent; they are estimated at 30–50 percent for fruits and vegetables. Post-harvest losses are high in irrigated rice because limited access to agricultural machinery (power tillers, harvesters, mills, and so on) prevents farmers from completing the harvest before the first rains set in. Post-harvest losses are exacerbated by low value addition and weak storage, processing, and marketing capabilities arising from highly fragmented supply chains and weak linkages between producers and suppliers. Smallholders have few skills and limited knowledge of best harvest and post-harvest practices, such as harvesting vegetables or fruits before they reach full maturity and using preservation techniques that extend product shelf-life and reduce losses. Smallholders and other value chain actors interested in processing have no access to improved artisanal agricultural processing technologies that could allow them to process and add value to their produce as well as reduce post-harvest losses. Furthermore, the Gambia has yet to develop an agribusiness environment that can enable vibrant private sector investment in agro-processing to build sustainable food industries.

4.3 Market opportunities with the rising demand for food

66. The Gambia could take advantage of many market opportunities. At the domestic as well as the regional and international levels, the country could gain important agricultural market shares, especially considering that it has the agroclimatic conditions to grow a wide range of produce and geographic proximity to Europe and the USA.

67. The growing population and resulting rising domestic demand for food offer a great market opportunity for the agri-food system. At the current annual growth rate of 3.1 percent, the Gambian population of about two million would double every 22 years; more than half of this population (55 percent) now lives in urban areas. For instance, demand for rice is projected to increase from 221,661 metric tons in 2018 to 319,746 in 2030 and 443,902 in 2040. In other words, the Gambia will need 7 times its current level of domestic rice production (38,000 metric tons in 2018) by 2030 and 10 times by 2040, which represents a huge market opportunity. The 2015/16 IHS shows that urban poverty has declined since 2010, confirming the increased purchasing power of the Gambia's growing middle class. The IHS also indicates that 87 percent of the food consumed in the country is purchased, with the share of rural and urban areas estimated at 81 percent and 92 percent, respectively. Only half of the growing demand for food emanating from this fast-growing population is met through domestic production. The other half could be met by increasing the supply of domestically produced food and responding more effectively to consumers' quality requirements. For instance, an increased supply of well-processed rice could help substitute for the 190,000 metric tons of milled rice imported yearly on average in 2016–18. A similar situation prevails for livestock and horticultural products. The tourism industry in particular has generated sustained demand for fresh and quality fruits, vegetables, eggs, meat, dairy, and other products. The shortage of domestic supplies and failure to meet consumers' quality requirements are heightening the tourism industry's dependence on imports, as hotels and restaurants source rice, vegetables, fruit, eggs, and chickens outside of the country (in Senegal), while the potential for local production is yet to be exploited. Hotels and restaurants are an important market opportunity that can be satisfied by improving conditioning, processing, marketing, and packaging. Production of day-old chicks with modern and large-scale incubators and production of poultry feed are interesting business opportunities for SMEs. Chicks and feed are mostly imported from Senegal. Poultry farming will increase the production of manure to be used as organic fertilizer to improve soil fertility and the productivity of horticultural crops, and will strengthen the integration of agriculture and livestock production.

68. Potential for agricultural growth and import substitution exists. In particular, the Gambia has great potential to increase the production of commodities such as livestock (poultry, small ruminants, and cattle), fish, maize, rice, horticultural crops (fruits and vegetables), and cashews. The data show a positive evolution of self-sufficiency ratios (SSRs) for some of these products during the 1990–2010 period.²³ Overall, the SSR increased from 94 to 120.5 for maize; from 103 to 107 for millet; from 100 to 110 for sorghum; and from 21 to 21.4 for rice (although the SSR increased noticeably from 13 in 2000 to 21.4 in 2010 following massive investment in the aftermath of the 2007–08 food crisis). The SSR for all cereals is 62, up from 53 in 1990. The SSRs for selected non-cereal commodities decreased during the same period: beef and veal decreased slightly from 100 to 99; eggs from 78 to 34; milk equivalent from 33 to 14; and poultry meat from 100 to 19. The yield gaps and growth potential described earlier show great prospects for the Gambia to increase the supply of these commodities, provided that the current constraints are successfully addressed, and appropriate policies are adopted and implemented.

69. Overall, the domestic market remains underserved, while, for selected agricultural products, export potential can also be explored. Over 2014 and 2016, a sharp increase of 128 percent in the value

²³ Hollinger and Staatz (2015).

of agricultural exports was recorded (moving from US\$21,746 to US\$49,641) and much more could be achieved (Figure 17). The horticulture market could absorb significant growth in production, considering the export potential, the fact that an estimated 50 percent of vegetables are imported, and the growing requirements of the tourism industry. As seen in Figure 18, the value of horticultural exports rose by 378 percent between 2014 and 2015, moving from US\$6.35 million to US\$30.38 million. This period coincided with the Gambia Growth and Competitiveness Project (GGCP) and GCAV interventions, with substantial matching grant investments for SMEs to support their agribusiness growth as well as technical assistance in quality standards, among others. In 2016, the political transition with the difficult elections dampened the trend, which may turn positive again. Experience from GCAV shows that by supporting the modernization of women’s vegetable production and leveraging private sector investment in agribusiness through matching grants, horticultural exports and processing can be boosted (Box 3).

Figure 17: Export value of agricultural products, the Gambia (US\$ 000s)

Source: FAOSTAT.

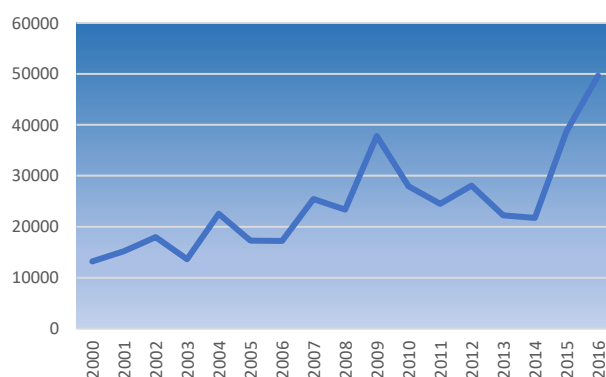
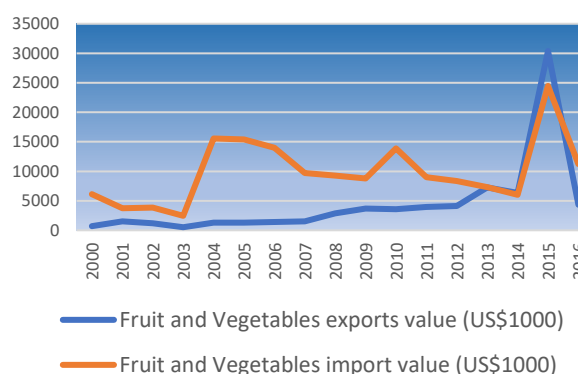


Figure 18: Value of fruit and vegetable exports and imports, the Gambia (US\$ 000s)

Source: FAOSTAT.



Box 3: Leveraging private sector investment to boost horticultural exports and processing: Experience from GCAV

GCAV successfully helped the Gambia Horticultural Enterprise to expand its agribusiness through a matching grant to set up a multi-purpose mango processing plant. The results include:

- 72 metric tons per day of mango juice/pulp processing capacity, against 5 before the project.
- 13,000 liters of mango juice processed yearly.
- 2,000 jars of mango jam (0.5 kg/jar) processed.
- 19.7 metric tons of dehydrated mango processed and exported to the United Kingdom.
- 1.7 metric tons of peeled mango processed.
- 231 metric tons of fresh mango exported to Belgium against 40 metric tons before the project.
- 245 youths employed, of whom 220 were women, against 161 jobs before the project.
- 175 mango out-growers against 18 before the project.
- Global Gap Certification.

70. The regional agri-food markets of ECOWAS have also grown noticeably in recent years due to rapid urbanization and the emergence of a growing middle class²⁴ in the member states. In 2010, food

²⁴ Hollinger and Staatz (2015).

demand in West Africa was worth US\$178 billion, representing 16 percent of regional GDP. Over two-thirds of this demand was traded in markets currently captured by imports.²⁵

71. The Gambia is missing out on the trade gains associated with its Least Developed Country (LDC) status. The country could exploit benefits from preferential trade access granted by key trading partners, including the largest industrialized countries (under the generalized system of preference), the EU countries (under the “Everything But Arms” Initiative), and the US (under the African Growth and Opportunity Act). The Gambia is also part of many bilateral trade agreements. It has potential with dried mangoes, exotic juices (hibiscus, ginger, baobab, tamarind), and other unique niche products (hot sauce, exotic jams) that may have prospective markets abroad like Europe and North America.²⁶

72. The large body of empirical evidence found across Africa is consistent with the Gambian experience of urbanization and income growth as drivers of expanding consumer demand for food and the shifting composition of diets. In addition to the sheer size of consumer demand, this evidence shows that food consumption itself is changing rapidly as consumers shift beyond grains to other foods such as dairy, fish, meat, vegetables, fruits, tubers, and especially processed foods. While the increased size of the middle class remains the key driver of this transformation of the food system, the evidence shows that the poor’s food consumption patterns have changed deeply.²⁷ These changes create unprecedented opportunities for Gambian farmers and for private sector actors in the post-harvest segments of the food value chains (truckers, processors, warehouse and cold storage owners, wholesalers, and trade logistics service providers, among others) to increase production and to capture a share of the domestic and regional food markets currently dominated by increased food imports.

73. The favorable new political context—especially the political stability and renewed commitment by the government to development—could serve to attract private sector investment in agribusiness and to leverage the untapped potential in domestic and regional markets. However, several structural binding constraints need to be addressed.

74. Rural feeder roads connecting farming communities to input and output markets are in poor condition and inadequate to support the development of agricultural value chains. They consist of 2,556 kilometers of gravel/earth roads (65 percent of the classified network) constructed mostly in the 1980s and 1990s. Due to lack of maintenance, some segments of the feeder road network have deteriorated noticeably. An estimated 82 percent of the classified road network requires rehabilitation.²⁸ The average budget allocation to road maintenance during 2006–11 represented 30 percent of all funds required to assure adequate maintenance of the road network.²⁹ The persistent financing gap means that most rehabilitation and maintenance have been deferred, creating a backlog of maintenance work and further deterioration in road conditions. The country also lacks road construction firms. Local firms execute less than 5 percent of the road construction and maintenance contracts.

75. The agri-food sector suffers from low access to financial services, including savings, credit, and insurance services and products. Because farmers as well as private investors struggle to access short- and long-term credit, they cannot invest in modernizing their production systems and agribusinesses. The share of domestic credit supplied to agriculture is very small, estimated on average at 4.8 percent (Republic of The Gambia 2018a). Much more progress is needed. According to the 2015/16 IHS, only 23

²⁵ Hollinger and Staatz (2015).

²⁶ GDS (2009).

²⁷ Reardon et al. (2015); Badiana and Makombe (2015).

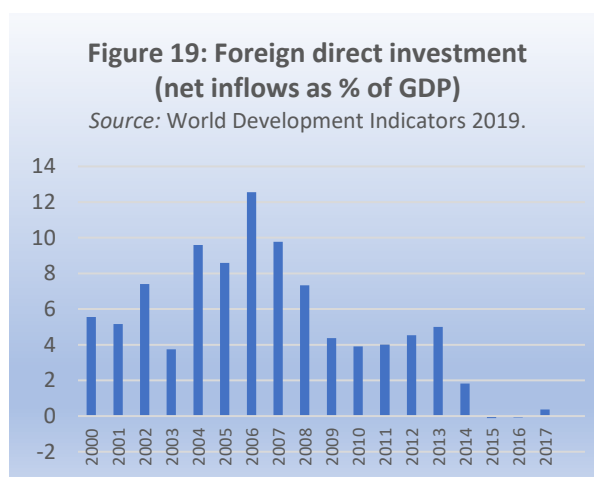
²⁸ Republic of The Gambia (2018a).

²⁹ African Development Bank (2013).

percent of rural household members have access to credit, and the situation is even worse in urban areas, where 9 percent have access to credit; the national rate is 14 percent. Despite the high production and market risks inherent in agriculture (which are certain to be exacerbated by climate change), the Gambia has no institution to provide insurance services and mitigate risks for smallholders and agribusiness investors. Mechanisms to catalyze rural saving have not been developed, although traditional informal saving systems (tontines or Osusu,³⁰ organized by women’s groups, in particular) show the potential and importance of such systems. Only 27 percent of rural households have a savings account, while 56 percent have an Osusu account.

76. Private sector investment in the agri-food sector is very low. Foreign direct investment is low and decreased sharply from 1.8 to 0.4 percent of GDP from 2014 to 2017 (Figure 19). The agribusiness environment is still challenging because of numerous constraints: difficulty in obtaining secure access to

land; inadequate price; high energy costs and irregular supplies; fiscal and subsidy policies, import protection measures, and ad hoc policies such as the frequent and unpredictable use of bans and tariff measures, which create market distortions (see Section 3); limited access to finance; poor logistics and infrastructure; arduous and ineffective regulatory procedures related to exports and imports; and inadequate food safety controls with the absence of national accredited laboratories, among others. According to the 2018 World Bank Enterprise Survey, over half of Gambian SMEs (53 percent) cite poor access to finance as the biggest constraint in the business environment. This



response is consistent with findings from other studies on firm growth stating that financing obstacles are more binding than other growth constraints³¹ and more problematic for smaller firms in shallow financial markets.³² Domestic credit provided to the private sector in the Gambia was estimated at 6.2 percent of GDP. The provision of credit has continued to decline, partly because of the high interest rate (mostly above 20 percent). Substantial investments generally require long-term credit, whereas the majority of credit offered is for short terms, with unfavorable payment terms and high collateral requirements. That type of credit is ill adapted to agriculture, which is typically a risky business with erratic output. The absence of a strong guarantee mechanism increases the challenge.

77. Interviews with some agribusiness firms highlight that infrastructure gaps and deficiencies in logistics also impose a severe burden on agribusiness firms. Exports of fresh farm products are particularly plagued by high transport costs. The time required to ship produce by sea makes it difficult for firms to guarantee supplies of fresh products of good quality to EU markets (shipping to the United Kingdom may take more than one month rather than the usual two weeks), and air freight capacity is limited to what is available on passenger flights (about 25–30 tons per week). Some exporters resort to shipping their fresh product through the port of Dakar, despite the additional costs. Another consideration

³⁰ Osusu is an informal arrangement under which people, especially women, individually contribute the same amount of money on a weekly or monthly basis and draw lots for each person to receive the money in turn.

³¹ Ayyagari, Demirguc-Kunt, and Maksimovic (2008).

³² Beck, Demirguc-Kunt, and Maksimovic (2005).

is that the extremely high cost of electricity impedes the development of functioning and cost-efficient cold-chains, which reduces the competitiveness of Gambian fresh exports (World Bank 2012).

78. Despite some progress, much more effort is required to make the agribusiness environment more attractive for private sector investment. With a Doing Business score of 51.72 and a ranking of 149 out of 190 countries,³³ the Gambia marginally surpasses the regional average score of 51.61. Its rank of 113 on trading across borders and 117 on enforcing contracts supports its potential as a re-export hub. Yet for critical key agribusiness indicators, the country performs much lower, with a rank of 169 for starting a business and 160 for getting electricity.

79. Agricultural value chains are poorly structured and organized. The connection between actors in production, processing, transformation, storage, commercialization, and exports are tenuous. Although there are some great initiatives, more support is required to develop commercial partnerships between farmer organizations and private agribusiness enterprises to foster the integration of a greater number of smallholder producers in performing and remunerative value-chains, by developing and implementing public-private alliances to improve market linkages. The downstream segment of agricultural value chains is especially weak. Marketing of locally grown agricultural products is very limited in contrast with imported products, particularly for local rice, which has low quality as a result of bad processing. Industrial agro-processing infrastructure is missing or very rare, particularly for horticulture and rice. The only industrial rice milling facility, which was set up through a public-private partnership, has never started operations. There are not enough strong producer organizations and interprofessions (particularly for horticultural crops, in which women dominate) to organize supplies and meet the demand of agro-processors and exporters. Nevertheless, some emerging agro-processing and export companies like the Gambia Horticultural Enterprise (fresh and dried mangos, fruit juice, vegetables), Tropingo (dried mangos), Rad Ville Farm (baby corn), and Gai Global Trading (tomatoes) are developing outgrowing contracts that are helping to connect producers to markets.

5. Priority areas of intervention

80. Findings from the diagnostic of the Gambian agri-food sector reveal multiple opportunities to transform the sector provided binding constraints can be addressed. From these findings, in line with the NDP, and considering the vision for the future development of the agri-food sector, four priority areas to foster the transformation from subsistence to market-oriented agriculture arise: (i) scaling-up climate-smart agriculture to increase productivity and resilience; (ii) developing key agri-food value chains and promoting private sector investment in agribusiness for increased access to markets and competitiveness; (iii) supporting key structural policy reforms and (iv) strengthening the capacity of institutions responsible for the agri-food sector. Interventions in these priority areas are expected to generate results over the short to medium term, with positive impacts on food security, import substitution, income generation, job creation, and poverty reduction.

5.1 *Priority 1: Building a climate-smart agri-food system to increase productivity and resilience*

81. As shown, the productivity of agriculture in the Gambia has lagged behind the rest of West Africa, including neighboring countries like Senegal. These lags are an indication that the potential gains in productivity are huge. For example, increasing rice yields from 2 to 4 metric tons per hectare as achieved by GCAV and scaling up irrigation to 30,000 hectares would enable meeting country consumption needs, with annual production of 240,000 metric tons. When considering these potential gains in agricultural productivity, it is also essential to consider the effects of climate change. The Gambia will need to build,

³³ World Bank Group (2019).

through a holistic approach, a climate-smart agri-food system for agriculture to remain resilient and capable of sustaining increases in productivity. Building a climate-smart agri-food system will require interventions centered on: (i) improving water management and increasing irrigated area; (ii) strengthening the agricultural innovation system by taking advantage of digital technologies; and (iii) enabling access to, and large-scale adoption of, quality inputs, improved technologies, and other innovations. Each of these interventions is discussed next.

(i) Expanded and improved water management systems

82. In the Gambia, as in all Sahelian countries, agriculture is highly dependent on rainfall, which means that it is very vulnerable to weather shocks. Agronomically, water is critical for improved varieties to grow and use inorganic fertilizer efficiently. Because more variable and uncertain rainfall under climate change contributes to higher production risks, expanding irrigated area is a sure pathway to improving productivity and resilience and reducing the local food deficit. The flat topography of the Gambia River Basin offers the possibility to develop more tidal irrigation schemes in lowlands, which is an advantage for the country with reduced irrigation costs as no pumping system and energy are needed. With less than six percent of irrigable land under irrigation, the Gambia has broad scope to gain more irrigated area through investments in rehabilitating and developing new irrigation infrastructure. As noted, the experience of GCAV confirms the value of this approach, which helped to raise yields of irrigated rice by 2–4 metric tons per hectare. An even more impressive example comes from Senegal, where the average yield for irrigated rice (7 metric tons per hectare) exceeds yields in India and Thailand, which are major rice exporters.

83. It is not enough to expand irrigation infrastructure; it is equally essential for this infrastructure to be operated efficiently and maintained well through strong, well-organized water user associations. These associations will need more capacity building and institutional support to carry out their functions sustainably.

84. The adoption of simple, efficient, and labor-saving water management technologies will also be valuable for increasing horticultural productivity and responding to demand from domestic, regional, and international markets. Learning from the GCAV experience, the use of solar pumping systems and efficient irrigation technologies that conserve water and save time (drip irrigation, for instance) could be promoted further to increase horticultural productivity, including activities led by women. Modern and time-saving irrigation technologies could also help to attract young producers to the horticultural sector.

(ii) Strengthening the agricultural innovation system through the use of digital technologies

85. Agricultural innovation is essential to reverse the declining productivity, resilience, and competitiveness of Gambian agricultural systems. NARI's lack of infrastructure (including modern laboratories), research funds, and human resources needs to be addressed. Similarly, extensions services and veterinary services are collapsing and need be strengthened. Experience from programs supporting agricultural innovation systems in West Africa (such as WAAPP) shows that it is possible to rebuild African national research systems by upgrading core research facilities and equipment, building the capacity of researchers, and funding priority research programs. NARI needs such support and to be connected with the Regional Centers of Excellence that have been established in West Africa to take advantage of regional research capacities.

86. Improving the links between agricultural research, extension, and producers is critical for generating, disseminating, and adopting improved technologies and other innovations. An e-extension platform would benefit from digital technology to provide agricultural advice to large numbers of farmers and promote large-scale adoption of improved technologies and best practices. Private extension services

from producers' organizations and Non-Governmental Organizations could be supported to complement public extension services. Lessons from experience with e-extension in Côte d'Ivoire, Ghana, Niger, and elsewhere should help the Gambia to make good progress in training and in improving technology transfer and adoption. Expanding the digitization of agricultural research and extension systems will require a coherent human capital development program and capacity building (on-the-job and academic training at the MSc and PhD level) to promote the development of young researchers and counteract the loss and aging of research staff. The national agricultural innovation system needs to reconnect with regional and international research institutions to profit from new technology through partnerships and networking with ECOWAS Regional Research Centers of Excellence and the research centers of the Consultative Group on International Agricultural Research, including the International Institute of Tropical Agriculture, Africa Rice Center, International Livestock Research Institute, International Rice Research Institute, and International Crops Research Institute for the Semi-Arid Tropics.

(iii) Supporting better access to and large-scale adoption of quality inputs and innovations

87. To boost agricultural productivity and resilience, it is critical to support wider access to and adoption of quality inputs, including improved certified seed and mineral and organic fertilizers for integrated soil fertility management. Unless producers have better access to innovations to improve productivity—certified seed of improved varieties, fertilizer and other complementary inputs, integrated pest-management practices, improved technologies, and best agricultural practices—they will not be able to increase their level of food security and reduce import dependency. Several improved varieties of rice, maize, millet, sorghum, groundnut, cassava etc. that are high-yielding, early-maturing, pest-resistant, and drought-tolerant are available in the region, along with other technologies and innovations, and they could be transferred to the Gambia. Strong and professional seed cooperatives and other private sector actors could be supported to multiply seed of the new varieties and develop the domestic seed market. Investments in soil health, including addressing salinization, will help optimize fertilizer use. Several salt-tolerant varieties and technologies have been developed across the region (Senegal, Mali) and elsewhere (China, for instance) and could be transferred to the Gambia for wider dissemination.

88. Priority actions for the livestock subsector focus on better access to innovations for improved feed, and vaccines for better disease control. The relatively high cost of imported feed (maize, supplements, and mineral premixes) as well as imported drugs limits the implementation of good husbandry practices. For small ruminants and poultry, a number of improved feed formulations based on local products, including crop residues and byproducts (cereals, molasses from sugarcane, and others) and fish, have been developed across the region and could be transferred to the Gambia. Animal diseases—especially trypanosomiasis and plague of small ruminants and Newcastle disease in poultry—limit livestock profitability and can be a major threat for households and traders, increasing animal mortality and reducing livelihoods. Key vaccines to prevent some critical diseases and parasitic infestations have been developed in the region, particularly in Ghana, Niger, and Senegal under the WAAPP. The Gambia could benefit from using these products to prevent or eradicate endemic, emerging and re-emerging livestock diseases through large vaccination campaign, as done under the WAAPP and the Regional Sahel Pastoralism Support Project (PRAPS).

89. An input credit guarantee scheme or risk-sharing program to facilitate access to agricultural inputs could be pursued. While there is evidence of repayment problems in the Gambia, they are often linked to factors outside the control of farmers, such as crop failure and falling prices, which could be addressed with a good agricultural insurance mechanism. A feasibility study could be conducted along with a new agricultural operation. In all of these efforts, horizontal and vertical coordination would be key and would require support.

5.2 Priority 2: Developing agricultural value chains with the private sector

90. The competitiveness of agricultural value chains can be improved by focusing on enhancing upstream and downstream linkages. Moving from subsistence to market-oriented agriculture requires smallholders and the private sector not only to increase agricultural productivity and produce more marketable surplus but to connect more effectively to upstream and downstream services and markets so that they can meet consumers' quality and price expectations.

91. The development of the value chains could contribute to food and nutrition security, income generation, and job creation. Market opportunities are available and productivity gains can be achieved in the short-run. Some value chains could contribute directly to inclusive growth and poverty reduction, as they are dominated by poor and predominantly female small-scale producers. Other value chains present profitable business opportunities that could attract private investors and provide gainful employment to the growing young labor force. Each value chain requires specific intervention to unlock its development potential. As it is difficult to be exhaustive given the number of value chains, a deeper focus has been placed on the main ones. However, this focus is not meant to reflect any selection or prioritization of value chains.

92. For groundnut, much improvement could be made to increase productivity and competitiveness for the benefit of smallholders and for better participation of the private sector. This could be achieved by:

- i) fostering the adoption of high-yielding and early-maturing varieties more adapted to climate change. The Gambia could take advantage of new varieties released by agricultural research in Senegal with a potential yield of 2-3 metric tons per hectare for groundnut. A suitable program of technologies transfer including research and the extension services in partnership with producers' organizations and particularly seed cooperatives, and other private sector actors interested in the seed sector would allow a smooth transfer, multiplication, diffusion and large adoption of these new varieties.
- ii) controlling aflatoxin³⁴ using tolerant varieties, applying proven efficient aflatoxin control products like "Aflasave" and best post-harvest practices to improve the quality of groundnut. This would help to expand market opportunities related to edible groundnut export and the confectionery industry in addition to the oil industry. A new technology helping to control aflatoxin through a process using clay called attapulgitite has been developed in Senegal by the *Institut de Technologie Alimentaire* (Food Processing Technology Institute -ITA) and could be transferred and disseminated to women farmers groups doing artisanal groundnut oil processing. Training women in the use of this processing technology, providing them with the processing facilities along with capacity building in packaging, marketing and management, could not only increase their income but most importantly help to improve the quality of the artisanal oil consumed and reduce the related health risks.

93. Similarly, for dry cereals like millet, maize and sorghum, interventions should focus on improving productivity and agro-processing. Improved high-yielding varieties generated in Senegal could be transferred, multiplied and disseminated to producers. Downstream of those value chains, priority has to be given to processing of dry cereals to enable easy use by urban population. As experimented in Senegal, new interventions could promote the incorporation of dry cereals in bread-making by connecting producers with agro-processors and bakeries to create more market opportunities for smallholders and

³⁴ Toxins produced by a fungi called *Aspergillus flavus* on agricultural crops such as groundnut, maize (corn), cottonseed, tree nuts etc.

the private sector. The development of these value chains would require strengthening producers' organizations.

94. For the rice value chain, organize and develop the domestic market and reduce the rice import bill by providing producers and private investors with more incentives. On an import parity basis, local rice is currently uncompetitive with a price of U\$550-610 per metric ton (World Bank Group, 2019) which is higher than the imported rice price ranging from \$507-565 per metric ton (a difference of US\$ 47-45 per metric ton). This low competitiveness of local rice could be addressed by reducing substantially the production unit cost by increasing the yield per hectare and improving quality through better processing learning from experience in neighboring countries. More specifically, support:

- (i) **Rice producers, to become better organized to pursue collective action.** Organization and collective action will reduce producers' transaction costs and increase their market power.
- (ii) **Private sector investment, to develop mechanization services and modern rice milling firms.** Mechanization services enable more efficient land preparation and harvesting, particularly if digital technologies are used (the "Hello Tractor" model is an example from Nigeria). Modern rice milling firms enable better processing, labelling, and packaging (specifying the variety) of local rice to comply with quality requirements, meet consumer preferences, and compete with imported rice in the domestic market. The importance of simultaneously improving the quality and marketing of domestic rice has been shown to be even greater to begin with than increasing paddy production. Simply increasing paddy production will not guarantee a reduction in imports as long as processors cannot absorb the increase and improve product quality to a level that can compete with imports (Johnson et al. 2013). The downstream value chain presents many opportunities that could be tapped through a Maximizing Financing for Development (MFD) approach, consisting of (a) investing in public goods to organize producers and the domestic market and to improve production and marketing infrastructure (like irrigation schemes, feeder roads, and ferry crossings to lower production and transport costs) and (b) leveraging and encouraging private sector investment in processing facilities in an economically efficient way and through a matching grant mechanism.
- (iii) **Contract farming between rice producers and small and medium milling firms, to improve access to markets, quality, and perhaps to financing.** A contractual relationship has the advantages of (a) securing markets for rice producers, (b) ensuring good quality of paddy and processed rice, and (c) potentially financing quality inputs directly for farmers, depending on the specifications of the contract, or indirectly by facilitating access to financial institutions. The ongoing school feeding program financing by the World Food Program and FAO represents another market opportunity that could be tapped.
- (iv) **A warehouse receipt initiative, to improve storage (and preserve quality) and access to finance.** In implementing such a system, the Gambia could learn from the experience of other West African countries, including Côte d'Ivoire and Senegal, to improve storage infrastructure and facilitate producers' access to finance.

95. Horticultural value chains present major prospects for growth, given the Gambia's land and water resources as well as domestic, regional, and international market opportunities. Horticultural products could yield significant returns to farmers, particularly if markets offering the highest prices are targeted. Priority areas for new interventions to develop these value chains are:

- (i) **Working on the diversification of horticultural crops and spreading production across the year** (both the rainy and dry seasons) by using improved and adapted varieties and cropping practices to meet domestic and regional demand.

- (ii) **Reducing post-harvest losses and improving quality to meet consumer requirements** by using improved post-harvest technologies, processing practices, and storage facilities.
- (iii) **Fostering private sector investment in horticulture by promoting a new land use model based on partnerships with local communities for secure access to land**, learning from the experience in Senegal³⁵ and elsewhere. Horticultural production is profitable but is still predominantly done on a very small scale by women organized into groups (on average, a group of 30 women operates 5 hectares). Large-scale production and growth in the horticultural subsector can be promoted by involving the private sector, learning from the experience in Senegal.
- (iv) **Facilitating private sector investment in processing fruits and vegetables.** Domestic processing of horticultural products could be an option to upgrade the value chain through differentiation. Implemented through an MFD approach, improved access to credit, the development of a guarantee mechanism, or by scaling up the GCAV experience with matching-grants to leverage private investment, better alternatives for processing fruits and vegetables could achieve much in terms of adding value to horticultural produce, reducing post-harvest losses, and creating jobs for youth and women.
- (v) **Encouraging private sector-led horticultural export diversification and growth.** For example, technical and financial support could increase the number of emerging SMEs involved in exports of fresh and processed vegetables and fruits. Facilities and services could be leveraged from other sectors, including transport and trade, to improve the agribusiness environment and logistics systems to facilitate maritime and air transport.
- (vi) **Supporting the development of productive partnerships or contract farming between producers and buyers such as SMEs involved in processing and export.** Examples of outgrowing arrangements between women vegetable producers and exporters like Rad Ville (baby corn), the Gambia Horticultural Enterprises (mangos and vegetables), and Gai Global Trading (tomatoes) should be assessed to determine the potential for their replication or scaling up. Other small and medium exporters are also showing interest in contract farming arrangements, including providing quality inputs to producers.

96. For poultry, a short-cycle economic activity and fast-growing value chain, interventions targeting women, youth, and the private sector more generally could lead to substantial results, including improving food and nutrition security, creating jobs, and increasing incomes. A transformative increase in the domestic supply of poultry and eggs to meet market demand could be achieved through interventions combining (a) improved animal health advisory services for better disease control; (b) capacity building in poultry farming, including a vaccination calendar, business plan design and management, procurement, financial management, and marketing; and (c) improved access to finance in partnership with financial institutions.

97. Finally, digital technologies can improve market information to address information asymmetry along value chains. The development of e-market platforms based on mobile phone applications and using text or voice recordings could be valuable for informing value chain actors about market prices, linking producers to buyers and other market actors, and fostering more efficient market transactions.

³⁵ The Sustainable and Inclusive Agribusiness Development Project (PDIDAS) is being implemented with a new land model designed to attract private investment in horticulture.

5.3 Priority 3: Supporting key structural reforms to improve agriculture and trade policies

98. Policy reforms to address the constraints affecting both productivity and value-chain competitiveness include those related to the input subsidy policy, groundnut price setting, public expenditure and land policy.

(i) Input subsidy reform for more efficiency and a functioning input market

99. Policy reforms are needed to correct market failures and distortions induced by inefficient subsidies and trade policies. These interventions have stifled development of delivery mechanisms for good quality farm inputs (seed, fertilizer) and other agricultural goods and services needed by producers and agribusinesses. Most of all, the inefficiency of the current fertilizer subsidy policy calls for a structural reform to respond to good principles (Box 4) and in order (i) to end the government's direct involvement in the import and distribution of fertilizers and enable the development of a functioning fertilizer market; (ii) to remove the 5 percent import duty although it is relatively small to avoid unnecessary administrative

Box 4: Principles in designing a good subsidy program

- 1) **Targeting:** to best reach those who need the subsidy, as opposed to those who want the subsidy (likely all);
- 2) **Effectiveness:** to ensure positive impact, reduce wastage, and maximize efficiency (fully accounting for all benefit and costs, as well as detrimental impacts);
- 3) **Sustainability:** to reduce the environmental footprint, ensure sustained productivity growth, and promote robust market development.

Source: Madhur Gautam. 2015. Agricultural Subsidies: Resurging Interest in a Perennial Debate, in *Ind. Jn. of Agri. Econ. Vol.70, No.1, Jan.-March 2015.*

burdens and related delays in delivering fertilizer; (iii) to make the input subsidy distribution mechanism more transparent starting from the right procurement procedure for the selection of the providers; (iv) to target quality inputs, technologies and innovations able to increase productivity; (v) to target in priority smallholders including women; (vi) to use new mechanisms such as digital platforms (e-voucher) to register farmers and deliver subsidies transparently, and (vii) to develop a clear exit strategy by supporting the development of financial services to improve access to credit, insurance and saving for producers and other value chains actors. As analyzed by Madhur Gautam (2015), the biggest challenges are to keep the subsidy focused, for a defined period along with a clear exit strategy, and make sure complementary investments to tackle the market failure are undertaken.

(ii) Groundnut pricing reform for more competitiveness

100. The groundnut price setting done by the Government and the NFSC needs to be reconsidered given the huge fiscal implication with the output price subsidy provided by the Government to close the gap between the reference producer price and market price. Also, the export tax imposed on groundnuts needs to be reconsidered to allow more competitiveness. Rather, Government efforts could focus on: (i) supporting quality improvement and productivity increases in order to decrease groundnut production unit cost and to make producers more competitive in the market and more resilient with respect to world market price fluctuation; and (ii) creating enabling business conditions to bring diversified market players including oil industries, confectioneries and grain exporters, to stimulate competitiveness.

(iii) More public budget for agriculture and better quality of spending

101. To achieve agriculture transformation as targeted by the 2018/21 NDP, more budget allocation is required for the sector to reach at least the regional target of 10 percent of public expenditures of CAADP/NEPAD. Most importantly, the quality of spending and efficiency of resource allocation need to be addressed. Rather than spending mostly on subsidies with limited impact in terms of productivity, public expenditures need to focus more on investment with higher economic return and to address

market failures and key challenges of agriculture development including (i) water control for more irrigated areas, (ii) agricultural innovation system (R&D) to support technology generation, transfer, large scale dissemination and adoption, and (iii) market connection and rural mobility. Furthermore, the adoption of multi-year financial programming, especially a medium-term expenditure framework as planned in the NDP needs to be effective to bring greater predictability in the allocation of budgetary resources to the sector. A strong mechanism led by the Ministry of Agriculture for better coordination of development partners interventions would be important to leverage public resources for more development impact.

(iv) Land policy reform to secure farmers' land property rights and to foster private investment

102. Land policy reform is needed to remove the complexity and insecurity related to land ownership and acquisition and to support the transformation of the agri-food sector. Such reform would have as objectives to: (i) provide farmers with secured land property rights; (ii) address gender inequality and improve women's land rights in terms of secured access, control and property; and (iii) facilitate private investment in land in a legal and transparent way and in consensus with the individual or community landowners. They could include the development of a rural land cadaster using digital technologies to map, geo-reference and register landowner in an electronic platform; and develop a land market with transparent transactions registered in a digital platform to avoid land speculation. A new national land policy document articulating clearly these objectives and defining the strategies to achieve them, needs to be developed and in a consensual way with large consultations with different actors to allow its ownership and successful application.

5.4 Priority 4: Strengthening the capacity of sector institutions

103. **The Ministry of Agriculture has yet to elaborate strategy documents, supported by detailed policies and programs, that can effectively implement the strategic priority of the NDP (2018–21) related to agriculture:** “Modernizing our agriculture and fisheries for sustained economic growth, food and nutritional security and poverty reduction.” While most ECOWAS member countries have completed their second National Agricultural, Food and Nutrition Security Investment Plan since 2017-18, the Gambia's is yet to be finalized. To accomplish these tasks successfully, there is a fundamental need to strengthen the ministry's institutional and human capacity, which was deeply affected by the political instability that accompanied the previous regime. For these reasons, the priorities for new interventions include:

- (i) **Providing short-term technical assistance for the preparation of strategy documents** such as a sector policy development letter defining a clear vision and strategies for the transformation of the agricultural sector in line with the NDP, and the formulation of a sound development program identifying key priorities, resources to mobilize, and expected outcomes over a targeted timeframe. These documents will serve as a reference to guide, align, and coordinate donor-funded programs.
- (ii) **Building human capital through training and capacity building in specialized areas** to strengthen the staff of the Ministry of Agriculture and other relevant public institutions. Capacity building would focus on updating staff knowledge, closing some knowledge gaps, strengthening and providing new instruments for a strong, efficient, and results-oriented service delivery system. Special attention will be paid to the Central Projects Coordination Unit (CPCU), the body coordinating agricultural interventions, to further strengthen the unit's capacity to coordinate, monitor, and evaluate the implementation of projects. The agricultural statistics system will be also an area of focus for more reliable data to inform policy development and program evaluation.

(iii) **Improving the logistics systems and facilities of those agencies for more efficient working conditions.**

104. Altogether, it is expected that engagement in these priority focus areas could pave the way for transformational change in the agricultural sector in line with the NDP objective for agriculture. Tangible results expected from these interventions include stronger institutional capacity, increased productivity and competitiveness (coupled with reduced post-harvest losses), improved product diversity and quality, more efficient processing, and improved marketing and connections to markets, generating additional incomes for producers and other private sector and value chain actors. At the same time, success in these priority areas will increase the food supply and reduce the high dependence on imported rice, horticultural produce, and poultry products.

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Annex 1: Profile of the Agricultural Sector

1. **³⁶Agriculture in the Gambia is dominated by subsistence-oriented rainfed crop and livestock production systems.** The main food crops consist of cereals, including rice, millet, sorghum and maize. The main cash crop is groundnuts, although horticulture and cashews are showing interesting development prospects. Both in terms of harvested area and gross production value, groundnut is the dominant crop followed by millet, rice, maize and sorghum. Data from yearly national agricultural sample surveys show that Gambian farmers cultivated on average 331,000 hectares between 2010 and 2015 (up from an average 225,000 hectares during the previous decade). In 2017, total harvested area was estimated at 405,200 hectares and the gross production value at US\$110.80 million³⁷. The 2011–12 Agricultural Census recorded 82,459 agricultural households with a total of 861,738 members (an increase of 19 percent and 17 percent, respectively, in household number and population from the 2001–02 census). The 2011–12 census also registered 424,839 farms, representing an increase of 49 percent over the previous census. The noticeable increase in the number of farm households reflects the relatively high rate of population growth. In fact, the country's population increased by 3.1 percent yearly between 2003 and 2013 (up from 2.7 percent during the previous decade).³⁸

2. **Demographic pressure and land inheritance rules have translated into two specific features of the landscape and structure of Gambian agriculture.** The first feature is the rising fragmentation of farms due to rapid population growth and the subdivision of land through inheritance practices. In fact, the census shows that 31 percent of agricultural households operate 1–2 farms, 32 percent operate 3–5 farms, and 24 percent cultivate 6–10 farms. Eleven or more farms are operated by 13 percent of agricultural households. The second feature is the small size of the holdings. The lack of historical data makes it impossible to describe changes in average farm size, but the above-mentioned statistics suggest that in theory each farm household cultivates a total of 4 hectares. This area is comparable to the average farm size in Senegal (4 hectares) and Ghana (3.9 hectares).³⁹

3. **The average size of a farm is 1.3 hectares, with female-headed households cultivating a smaller area (0.8 hectares) compared to male-headed households (1.4 hectares).** This average varies across regions. Farms tend to be smaller in the West Coast and North Bank Regions due to higher population density, whereas farms in the Central Region North and the Upper River Regions tend to be bigger on average. Although there are no data on the number of commercial medium-scale farms (5–20 hectares) and large-scale-farms (at least 100 hectares), there is evidence that their number has increased in recent years, especially in the West Coast Region.⁴⁰ Their share of total cultivated area would explain the difference between the theoretical average farm size (of 4 hectares per household) and the actual size of the individual farm (1.3 hectares).

4. **Women play a crucial and evolving role in Gambian agriculture.** The 2011–12 Agricultural Census shows that women represent 49 percent of agricultural household members and manage 47 percent of farm units. Women contribute 42 percent of farm labor and about 40 percent of total agricultural output.⁴¹ They produce 60 percent of all rice, the main staple. Traditionally, men have been responsible for the production of all crops except rice and vegetables, whereas women have been responsible for the

³⁶ Others include: sesame seed, cotton seed, pulses, oil palm fruit, mangoes, guavas, fruit fresh, cereals, and cassava, cashew nuts with shell

³⁷ FAOSTAT, 2019

³⁸ Government of The Gambia (2013). The Gambia's population density of 176 inhabitants per square kilometre is among the highest in sub-Saharan Africa.

³⁹ Dagbegnon et al. (2017).

⁴⁰ Republic of the Gambia (2018a).

⁴¹ Lamin (2016).

production of food crops (mainly rice). The 2015/16 IHS shows that this division of labor based on crops has changed in recent years and that men and women grow all crops.

Annex 2: Trade Policy Affecting Agriculture

1. **Trade has always been an important economic activity in the Gambia, and the country has a long-held reputation as an efficient and high performance “trader.”** The measure by which the Gambia performs best compared to neighboring countries is “trading across borders.” The Gambia also performs comparatively well on measures related to contract enforcement, delivery of construction permits, and facilitating the start of a business. These favorable conditions helped to foster domestic as well as cross-border trade. By adopting relatively low import taxes, well-functioning port and customs services, and few administrative barriers, the Gambia has served as a regional warehouse for decades, re-exporting imported goods to neighboring countries. In fact, re-exports constitute a major source of public revenue. Although the role of the re-export economy has declined of late (the port has become less competitive, and policy initiatives have deepened regional trade integration), it is estimated that as much as 30 percent of Gambian imports (mainly wood and textiles) are destined to be re-exported.⁴²

2. **The Gambia’s narrow export base relies heavily on two sectors, namely agriculture and tourism.** The country’s trading operations are characterized by declining or stagnant domestic exports and increasing growth in imports, leading to a continuous trade imbalance during the last three decades (except for 2003 and 2007). In 2015, the country’s main exports were groundnuts (32.7 percent), followed by cashew nuts (20.6 percent), wood and articles of wood (mainly logs, 20.1 percent), and fish and fisheries products (13.6 percent). These four products accounted for 87 percent of domestic exports. Cashews and sesame show promise, although both currently account for approximately 5 percent of export revenue. The main destinations for Gambian exports are Asia (over 50 percent in 2015), the EU (about 42 percent in 2015), and the ECOWAS market.

3. **Imports are dominated by petroleum products, food items (mainly rice), and manufactured goods (textiles, vehicles, electronics, pharmaceuticals, and so on).** About one-third of the Gambia’s imports come from the ECOWAS region, one-quarter come from the EU, and another one-quarter come from Asia. During 2010–16, the ratio of agricultural exports to agricultural imports was 0.25 for the Gambia, compared to 1.5 for Ghana, 2.12 for Guinea Bissau, 1.27 for Mauritania, and 0.64 for Senegal.⁴³ The large share of rice in imports points to the potential for import substitution.

Annex 3: Transport Policy for Rural Roads and Market Connectivity

1. **The poor condition of the feeder road network leads to high vehicle maintenance costs and late delivery of agricultural inputs to villages and farmer organizations.** These conditions also negatively affect access to social infrastructure by rural households, including rural clinics and markets during the rainy season. The government’s updated 2017–27 national transport policy includes a five-year priority program for expanding the classified road network, including 514 kilometers of feeder roads to be constructed during implementation of the NDP. The policy also envisages reforms aimed at creating a sustainable financial mechanism for road maintenance.

⁴² Republic of The Gambia (2018a).

⁴³ ResAKSS database, <http://www.resakss.org>.