

# ENDING RURAL HUNGER

The case of Nigeria

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## Abbreviations and acronyms

|        |   |
|--------|---|
| AfDB   | African Development Bank  |
| APP    | Agricultural Promotion Policy   |
| ATA    | Agricultural Transformation Agenda                                    |
| CMAN   | Community Management of Acute Nutrition                               |
| ERH    | Ending Rural Hunger   |
| FAO    | Food and Agriculture Organization                                     |
| FDI    | Foreign direct investment   |
| FGN    | Federal Government of Nigeria   |
| FMoH   | Federal Ministry of Health  |
| FNS    | Food and nutrition security   |
| GESS   | Growth Enhancement Support Scheme                                     |
| IFAD   | International Fund for Agricultural Development                       |
| IFPRI  | International Food Policy Research Institute                          |
| IITA   | International Institute for Tropical Agriculture                      |
| MDA    | Ministries, departments, and agencies                                 |
| MDG    | Millennium Development Goal   |
| NGO    | Non-governmental organization   |
| NIRSAL | Nigerian Incentive-based Risk Sharing System for Agricultural Lending |
| NPAN   | National Strategic Plan of Action for Nutrition                       |
| NPAFN  | National Plan of Action for Food and Nutrition                        |
| NPFN   | National Policy on Food and Nutrition                                 |
| ODA    | Official development assistance                                       |
| OOF    | Other official flows  |
| SDG    | Sustainable Development Goal  |
| TFP    | Total factor productivity   |
| UNICEF | United Nations Children Emergency Fund                                |
| USAID  | United States Agency for International Development                    |
| WFP    | World Food Program  |

## Executive summary

This study undertakes an assessment of the food and nutrition security (FNS) needs in Nigeria, its policies and strategies to address those needs, and the resources available to implement the policies. The assessment is based largely on data from the Brookings Institution's Ending Rural Hunger (ERH) project with additional data from a survey of national ministries, departments, and agencies (MDAs), bilateral and multilateral donors, non-profit/non-governmental organizations (NGOs), and think tanks in Nigeria. The needs assessment employs a framework that characterizes the situation of malnutrition, access to food, agricultural productivity, and vulnerability in Nigeria. The policy assessment is presented in two broad categories: agricultural economic policy and political prioritization. The former includes measurements of the rural investment climate; pricing and trade distortions that affect national agricultural markets; and the level of expertise in science, technology, and extension services. The latter includes measurements of the government's prioritization of agriculture, nutrition, and rural social assistance, as well as the enabling environment for women farmers. To assess resource flows, the report examines indicators that measure investment from the public and private sectors. The assessment follows a comparative analytical approach in which the scorecards for needs, policies, and resources are compared with the situation in Africa and other parts of the world.

The study reveals that Nigeria's overall needs are less severe than the average African country, although Nigeria is still ranked 81 out of 116 developing countries globally in the ERH database. In terms of access to food, Nigeria performs better than the regional average on indicators such as undernourishment and average dietary energy supply adequacy whereas its performance on poverty indicators is worse. Malnutrition, especially anemia in children, is severe in Nigeria and higher than the regional average. Nigeria's agricultural productivity gap is lower than the regional average although technology and infrastructure gaps are still evident. The scores relating to environmental shocks suggest that Nigeria's vulnerability is somewhat higher than the regional average. Even though some of the individual vulnerability indicators reveal needs that are much higher or lower than the regional average, the aggregate vulnerability score is substantially lower than the regional average. Food shortages are driven mainly by production and consumption shocks, which vary widely from rural to urban areas. The policy environment is generally weak as evidenced by the overall policy score, which falls below the regional average with the country ranking 97 out of 116 developing countries. All indicators capturing resource flows to FNS are



very low and fall below the regional average, indicating that FNS intervention programs have been grossly underfunded, thus partly accounting for the slow progress in achieving desired results.

The country is intensifying efforts to end hunger by 2030 if not earlier. Success will depend on prompt actions by the government to prepare investment plans for FNS intervention programs; improve the rural investment climate through provision of modern infrastructure; expand the operations of the women empowerment fund; reconfigure agricultural subsidies for improved FNS and rural investment; increase local ownership of intervention projects; establish a budget line for nutrition in the relevant MDAs; and target assistance to the most vulnerable groups (such as women of childbearing age (15–49 years), children 6-59 months, school-age children, and internally displaced people, especially in the northeast of the country). At the same time, local NGOs and international agencies must forge effective partnerships with the government and strengthen executive capacity to deliver the outcomes of food security and nutrition interventions.

# 1. Introduction

Nigeria has given considerable policy attention to food and nutrition security over the years. Achievement of desired FNS outcomes, however, does not seem to have matched the emphasis on policies. The translation of policy intentions to realities and achievement of desired outcomes depend on the efficient management of available resources and continuity of policy implementation. However, the extent of instability in resource flows and FNS program managers are major sources of discontinuities in resource mobilization efforts and policy implementation, which together have affected the FNS status in the country over the years. Exacerbating the FNS situation is the proliferation of needs—due to conflicts and insurgency, which have worsened rural poverty and heightened food insecurity—at the same time that resources are dwindling.

Volatility in resources flows arise from the fact that the country depends largely on oil for its revenue while the huge potentials in other natural resources such as agriculture and solid minerals remain untapped. The over-dependence on the oil and gas sector for export earnings (over 90 percent) and government revenue (about 75 percent) subjects all sectors of the economy to the vicissitudes in the international oil market with deleterious consequences on economic growth. The Nigerian economy is currently struggling with the recession that set in since 2016 when its GDP trended negatively at -0.36, -2.06 and -2.24 percent during the first, second, and third quarters of the year, respectively. At the same time, rates of unemployment and inflation rose considerably, complicating the efforts aimed at revamping the ailing economy. The rate of inflation rose from 8 percent in 2014 to 9.6 percent in 2015 and assumed double digits in 2016, during which time it rose from 17.9 percent in September to 18.03 percent in October and to an all-time high of 18.55 percent by December. To date, this inflationary pressure has not diminished remarkably since the rate stood at 16.05 percent as of August 2017.

The persistent oil price reduction and declining revenues have affected the budget process, causing a re-ordering of priorities and delays in implementation. These changes over the budget are major challenges to the funding of FNS programs since most of them do not even have clear-cut budget lines. External funding has also been adversely affected as it depends on the ability of the government to pay counterpart funding—a major criterion for ensuring regular external financial contributions to intervention programs jointly financed by government and development partners. By and large, public spending has been adversely affected by the revenue shortfall experienced since 2014 when international oil prices witnessed a sharp decline, almost reversing the gains in economic growth over the last one decade. By 2015, there was a sharp decline in

growth to about 2.7 percent from 6.3 percent in 2014 and at the same time the oil revenue fell by 56 percent from its 2014 level precipitating significant fiscal and foreign exchange pressures in 2016 and making it increasingly difficult to finance development projects including the funding of FNS projects.

In spite of its oil wealth, a recent report indicates that 68 percent of Nigerians live below the international poverty line of \$1.25, and the poorest 20 percent of children are three times more likely to be underweight than the richest 20 percent (FGN, 2014). Child malnutrition is also high in Nigeria with 41 percent of under-five children adversely affected. The country is ranked 152 out of 188 countries by the United Nations Development Program's 2015 Human Development Report and 125 out of 133 countries by the Social Progress Imperative's 2015 Social Progress Index. The foregoing implies that even at the best of times, it has been difficult to achieve the desired FNS outcomes—a difficulty that stems from other factors including rising incidence of militancy in the Niger Delta where oil is being produced and insurgency in the northeast. Whereas militancy and vandalism have been disrupting oil production and reducing export revenue, insurgency has been disrupting food production, impoverishing masses of people, and degrading the FNS of that region.

Eradicating extreme poverty and hunger occupied a priority position in Nigeria under the Millennium Development Goals (MDGs), the defining paradigm of the global development agenda from 2000 to 2015. During the MDGs era, the country laid a solid policy foundation in the agricultural sector to address the challenges of chronic hunger, food insecurity, and inadequate nutrition—especially the constraint of inadequate public agriculture expenditure. Far more progress was made in Nigeria to meet the hunger reduction targets than was the case with poverty reduction. Poverty incidence declined from 65.6 percent in 1996 to 45.5 percent in 2010—24.1 percent short of the target. The country continues to make progress though: The World Bank's most recent estimate of poverty incidence in Nigeria put it at 33.1 percent in 2012/2013. One major challenge has been that the economic growth recorded over the period was jobless and non-inclusive. Though during the MDGs era, reducing poverty by half proved to be difficult, remarkable progress was made in the fight against hunger.

The country earned the commendation of the Food and Agriculture Organization (FAO) in 2013 following its success in reducing hunger by 66 percent in 2012 (three years in advance of the MDGs 2015 deadline). Despite this promising performance, there are still considerable disparities across geopolitical zones, among states, and between rural and urban areas. To date, the

prevalence of hunger is much higher in the northern states than southern states and more endemic in rural than in urban areas (FGN, 2015). Efforts are being intensified in the country to address the issue of hunger in accordance with the global concern as enunciated in the sustainable development goals (SDGs). Sustainable Development Goal 2 (SDG2) in particular reflects the global nature of the concern about food and nutrition security and international efforts to achieve the zero-hunger target by 2030. SDG2 seeks to end hunger, achieve food security and adequate nutrition for all, and promote sustainable agriculture. As leaders all over the world grapple with the challenges of feeding the rapidly rising population, especially in the developing world, concern is growing about the commitment to meet agreed targets to end hunger among vulnerable groups and regions. This concern is heightened in developing countries (e.g., in the Middle East and Africa) where population displacement is exacerbated by conflict, insurgency, and climate change, while the challenges of FNS needs, policies, and resources remain critical.

The Brookings Institution is contributing to efforts to achieve SDG2 through its project on Ending Rural Hunger (ERH), which provides a rigorous mapping of FNS needs, policies, and resources to enhance the capacity of policymakers to meet the SDG2 targets. This case study seeks to analyze the country's food and nutrition security needs, identify Nigeria's country strategy to achieve SDG2, examine the performance of the policies intended to address those needs, and assess patterns of resource allocation to finance FNS interventions in the country. Furthermore, a qualitative component of the study involves data collection from stakeholders (such as government agencies, bilateral and multilateral donors, non-profit/NGOs and think tanks) to ensure that key actors were consulted in articulating effective ways of achieving SDG2.

The study reveals that Nigeria has a lower rate of undernourishment and more adequate average dietary energy supply than the regional average, whereas it has higher rates of rural poverty (at \$1.25 per day, PPP) and rural multidimensional poverty than the regional average. The vulnerability scores relating to environmental shocks indicate that Nigeria has more pronounced exposure to environmental shocks than the average African country, with the exception of land degradation risk and projected change in annual runoff, for which the risk appears to be lower than the regional average. Production and environmental shocks are more prevalent in rural than urban areas while the prevalence of consumption shocks is greater in urban than rural areas. Food shortages are driven mainly by production and consumption shocks that vary widely from rural to urban areas. These findings suggest that FNS interventions strategies must address both production and consumption challenges, and they cannot be pan-territorial. FNS stakeholders need to address the peculiarities of urban and rural areas.

Food and nutrition strategies in Nigeria involve multiple stakeholders and several implementation agencies, which often lead to overlapping responsibilities and weak coordination. The key ministries, departments, and agencies (MDAs) associated with FNS are agriculture, health, and education, as well as budget and national planning, each with its own strategies and challenges. Such fragmentation in strategies also indicates that financing arrangements can be cumbersome, and sometimes resources are spread too thinly, thus making it difficult to have a meaningful impact. Furthermore, development partners have, in some cases, also modified the conditions for joint financing of FNS activities so that their disbursements are contingent on the payment of counterpart funds by the government. Nonpayment of counterpart funds has been a major problem in the country and has caused delays in implementing many FNS-related projects.

The policy environment in Nigeria is generally weak, as evidenced by the overall ERH policy score, falling below the regional average and ranked 97 out of 116 developing countries. Nigeria scores worse than the regional average in terms of corruption, political stability, and the rule of law, due in large part to insurgency and militancy over the past five years and the massive looting of public funds. Specifically, the policy environment is not conducive for progress in FNS and the political commitment to prioritize FNS programs is dampened by inadequate provision of requisite resources. Moreover, the market infrastructure is in such a deplorable condition that farmers cannot operate effectively, and economic policies discourage investment, especially in rural areas.

In general, the strengths of the policies vary. Nutrition policies and policies relating to agricultural pricing and trade distortions are well above regional average. In contrast, policies relating to rural investment climate and agriculture, in particular policies relating to research skills and extension, rural social assistance, and women's enabling environment, and resource allocation to rural development, are weak and below regional average. This suggests that agricultural economic policy design needs to be one in which the policy environment should be stronger with higher level of malnutrition and agricultural productivity gap. On the other hand, the good scores in nutrition policy in combination with the poor malnutrition and agricultural productivity gap scores suggest a need for better targeting and participation of stakeholders in implementing those policies. With regard to resource flows, we find that domestic public investment is far higher than external flows. Nonetheless, all the indicators capturing resource flows to FNS turn out to be very low and fall below the regional average. Beyond 2013, however, and in the face of dwindling government revenue and rising budget deficits, it is becoming increasingly difficult for the government to meet the budgetary requirements for financing FNS programs. This is an indication

that FNS intervention programs have been grossly underfunded, partly accounting for the slow progress being made in achieving the targets of the action plans.

If the progress towards ending hunger is to be sustained in Nigeria, efforts aimed at achieving the targets of the global goals must be intensified. In this regard the most pressing intervention areas must include the preparation of investment plans for FNS intervention programs which should be captured in the annual budgets of the relevant MDAs; improvement in the rural investment climate through provision of modern infrastructure; and expansion of the women empowerment fund to all states of the federation. Also to be accorded priority is the establishment of a budget line for nutrition in the relevant MDAs, ensuring that the target of assistance in FNS programs are the most vulnerable groups (such as women of childbearing age (15–49 years), children 6-59 months, school-age children, and internally displaced people, especially in the northeast of the country). Government must also endeavor to strengthen executive capacity in all the FNS-related agencies to enable them deliver the outcomes of food security and nutrition interventions expeditiously. Above all, prudent management of resources and a reform of the policy and business environments to attract domestic and external resources will be necessary to improving FNS outcomes under conditions of economic recession.

The remaining part of this paper is structured as follows. Section 2 examines the strategy being adopted in Nigeria to achieve SDG2. In Section 3, Nigeria's FNS needs are analyzed, and Section 4 assesses the policies put in place to address these needs. The resources available to implement the policies are examined in Section 5, and Section 6 offers recommendations and conclusions.

## 2. Country strategy to achieve SDG2

Over the past few decades, Nigeria has enacted several strategies to combat food and nutrition insecurity. One of the country's first strategic documents related to FNS was the 2002 National Policy on Food and Nutrition (NPFN) developed by the National Planning Commission's National Committee on Food and Nutrition.<sup>1</sup> It aimed to address food and nutrition issues across different sectors and different strata of society and specifically reduce by half the incidence of vitamin and mineral deficiencies such as iodine deficiency disorder by 2010. The delays in taking actions and implementing interventions to tackle food and nutrition insecurity, however, posed a major problem for the country strategy. While the NPFN was formulated in 1995 and approved in 1998, it was not ready for implementation until its launch in 2002. Even then, actual program implementation could not commence across the country until 2004, when a National Plan of Action for Food and Nutrition (NPAFN) was produced to translate the goals of the NPFN into actionable short-, medium-, and long-term activities and projects. According to the Ministry of Budget and National Planning, the NPFN ultimately "...had little or no effect in bringing about improvement in the nutrition situation in Nigeria due to the fact that the policy and the plan of action arising from it were not adequately implemented" (FGN, 2016a). Implementation challenges included inadequate funding, weak coordination among implementing agencies, and a lack of monitoring during the implementation process.

FNS programs emanating from the Federal Ministry of Agriculture have included the National Program on Food Security (NPFS) (2008-2015), the Food Security Strategy and Program of 2009, and the Agricultural Transformation Agenda (ATA), which was designed and implemented from 2011 to 2015. The issues of food security and agricultural productivity received great emphasis under the ATA in particular. The ATA's major components were: the Growth Enhancement Support Scheme, Value Chain Development, Staple Crops Processing Zone, Agricultural Extension Transformation Agenda, Agricultural Marketing Transformation, and Nigerian Incentive-based Risk Sharing System for Agricultural Lending (NIRSAL). The ATA notably provided an estimated 12 million-14 million farmers with targeted means-based input subsidies between 2011 and 2014, boosted lending to agriculture from 1 to 6 percent of all formal credit by 2015, and reestablished select commodity marketing boards, among other achievements. Despite these signs of progress, the Ministry of Agriculture and Rural Development has noted that the ATA did not deliver on all of its identified targets, and major gaps still exist between the

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<sup>1</sup> The National Planning Commission is now known as the Ministry of Budget and National Planning.

demand and supply of inputs, leading to underperformance in food production and importation of between \$3 billion to \$5 billion of food annually in Nigeria (FGN, 2016b).

As the end of the MDGs was drawing near, and it was becoming apparent that some of the targets might not be met by 2015, efforts in Nigeria were geared towards revising FNS policy objectives, recasting the strategies, and resetting the targets. Post-2015 (post-MDGs) concerns about nutrition security started to receive pronounced attention starting in 2014 with the articulation of a National Strategic Plan of Action for Nutrition (NPAN) to cover the period from 2014 to 2019. The plan built upon the 2002 NPFN and prior health-related nutrition strategies to implement priority nutrition interventions in the health sector. By May 2014, the NPAN was released, featuring new targets for the next five years (2015 to 2019). A remarkable aspect of the policy is its clear and dominant focus on nutrition as it includes specific nutrition-based objectives and well-defined nutrition indicators. The objectives are to:

1. Promote the delivery of effective interventions that will ensure adequate nutrition to all Nigerians, especially vulnerable groups;
2. Enhance the capacity to deliver effective and appropriate nutrition interventions;
3. Contribute to the control of diet-related noncommunicable diseases;
4. Promote and strengthen research, monitoring, and evaluation;
5. Promote and facilitate community participation for nutrition interventions; and
6. Promote and strengthen nutrition coordination and collaboration.

The nutrition-related targets are to:

1. Reduce the number of under-five children who are stunted by 20 percent by 2018;
2. Reduce low birth weight by 15 percent by 2018;
3. Ensure no increase in the rate of overweight children by 2018;
4. Reduce and maintain childhood wasting to less than 10 percent by 2018;
5. Reduce anemia in women of reproductive age by 50 percent by 2018; and
6. Increase exclusive breastfeeding rates in the first six months to at least 50 percent by 2018 (FGN, 2014).

What is more, the policy is far more explicit in the specification of stakeholders and definition of their roles and responsibilities than previous policies. They are:

1. Development partners who are to provide support from planning to implementation and monitoring;



2. Educational institutions that help in the provision of professionally competent and versatile practitioners to provide high quality nutrition and health care to children and expectant mothers in homes, communities, clinics, health centers, and hospitals nationwide;
3. Research institutes that conduct research on food-based nutrition interventions and develop local process capacity for the production of nutritious infant food products;
4. Professional associations that are responsible for advocacy to all levels of government and private sector as well as awareness creation, dissemination of documents on nutrition education and participation in research, training, and conduct of nutrition surveys; and
5. NGOs that collaborate with government at all levels to identify nutrition needs of communities, initiate pilot schemes that can be scaled up, and partner with communities to establish community-based nutrition centers, which will be affordable, accessible, acceptable, and sustainable. This collaboration is important because emphasizing such a participatory approach in the design and implementation of intervention programs is crucial for the attainment of the policy objectives and targets.

Other relevant post-2015 FNS policies are the Agricultural Promotion Policy (APP) (2016-2020) and the revised NPFN, which were launched in June and September 2016, respectively by the Federal Government. A variety of MDAs in Nigeria are tasked with implementing these policies, such as the Agricultural Research Council of Nigeria (ARCN), Bank of Agriculture (BOA), Central Bank of Nigeria (CBN), Federal Ministry of Agriculture and Rural Development (FMARD), Nigerian Agricultural Insurance Corporation (NAIC), River Basin Development Authorities (RBDAs), and the Nigerian Incentive-based Risk-Sharing System for Agricultural Lending (NIRSAL).

Whereas the NPFN reflects multi-stakeholder nature of FNS in the design of the policies, the APP was designed and is being implemented by the Federal Ministry of Agriculture and Rural Development. The FNS component of the APP seeks to (i) ensure national food security by expanding strategic food reserves to enhance food availability; (ii) make nutritious food available at the local level through school-feeding programs and fortification of food through breeding and post-harvest handling; (iii) raise awareness about nutritious foods; (iv) enhance the quality of food through the control and use of agrochemicals; (v) encourage continued expansion of organic farming and the sale of fresh foods in and outside the country; and (vi) create a standard system for food safety through inspections, origin tracking, and labeling. The 2016 NPFN (a revised version of the 2002 NPFN) seeks, inter alia, to (i) reduce undernutrition and micronutrient deficiency disorders among infants, children, adolescents, and women of reproductive age; (ii) promote nutrition education; (iii) prevent chronic nutrition-related diseases; and (iv) incorporate

food and nutrition considerations into the federal, state, and local government sectoral development plans.

Aside from NPAN, APP, and the revised NPFN, Nigeria is also taking part in the Zero Hunger Initiative (ZHI) that seeks to address FNS issues and articulate a clear strategy for achieving SDG2 in the country. To this end, it emphasizes a multi-stakeholder and multi-dimensional approach in which all key ministries—health, education, agriculture, and relevant parastatals—have target-specific goals that must be achieved through renewed commitment and leveraging established guidelines of international agencies committed to zero hunger programs globally. The zero hunger strategic review, which was a flagship program of the ZHI, was convened and led by the former President Olusegun Obasanjo with the support of the federal government and partners, including the International Institute of Tropical Agriculture, World Food Program, and the African Development Bank. The review was to clearly articulate what Nigeria needs to do to achieve SDG2, while contributing to shared prosperity and wealth creation in the country. The review was not an attempt to change any government policies. It was to support and encourage government to implement the policies, strategies, plans, and programs that have been formulated over many years, and to do so with a focus on achieving SDG2 by 2030, if not earlier (IITA, 2017).

In a recent publication, the review made recommendations for successful attainment of SDG2 targets, including the completion and adoption of the draft National Social Protection Policy prepared by the National Planning Commission; implementation of plans to establish home-grown school-feeding programs across all 36 states of the federation; and the commencement of the Nigerian National Social Investment Program (IITA, 2017). Implementation of the homegrown school-feeding program and the social investment program has commenced since November 2016 but the National Social Protection Policy is yet to be finalized. Stakeholders participating in the strategic review also recommended the creation of the Nigeria Zero Hunger Forum, based at the International Institute for Tropical Agriculture (IITA), which launched in 2017. The specific roles of the forum are to: (i) follow up and monitor implementation of actions identified in the Nigeria Zero Hunger road map; (ii) promote the alignment policies, plans, and programs of the government and development partners with the priorities and recommendations of the Nigeria Zero Hunger Strategic Review; (iii) establish and oversee a platform for sharing information and knowledge related to topics in zero hunger; (iv) advocate appropriate policy and related changes to enable progress towards zero hunger; (v) assist with land availability and preparation as well as resource mobilization to support state-level zero hunger implementation; and (vi) create public awareness of the importance of food and nutrition security as a national security and survival

imperatives. Technical partners supporting the work of the forum are the IITA, AfDB, WFP, FAO, UNICEF, USAID, Delegation of the European Union, and IFAD. This is an innovative approach towards strengthening policy implementation in the country; it remains to be seen, however, whether adequate resources will be available for effective performance of the functions assigned to this forum.

## 3. Country needs scorecard

The Ending Rural Hunger (ERH) project provides a rigorous mapping of FNS needs, policies, and resources to enhance the capacity of policymakers to meet the SDG2 targets. Needs are defined as the four primary SDG targets related to FNS. The needs are broken down into access to food, malnutrition, productivity gaps, and vulnerability. ERH's needs analysis explores how far the country lies from the defined SDG2 targets and investigating the most pressing underlying challenges to reaching the set targets. Aggregate FNS needs scores are calculated as an average of four sub-index scores: access to food, malnutrition, the agricultural productivity gap, and vulnerability scores. For each category of needs, scores are also calculated using the relevant indicators, which allows for a regional comparison of needs gaps and comparison of severity of needs across indicators. Data for the computation of the scores are the values of indicators for each dimension of needs obtained from the ERH database. The results of the FNS needs analysis are presented below.

### 3.1 Access to food

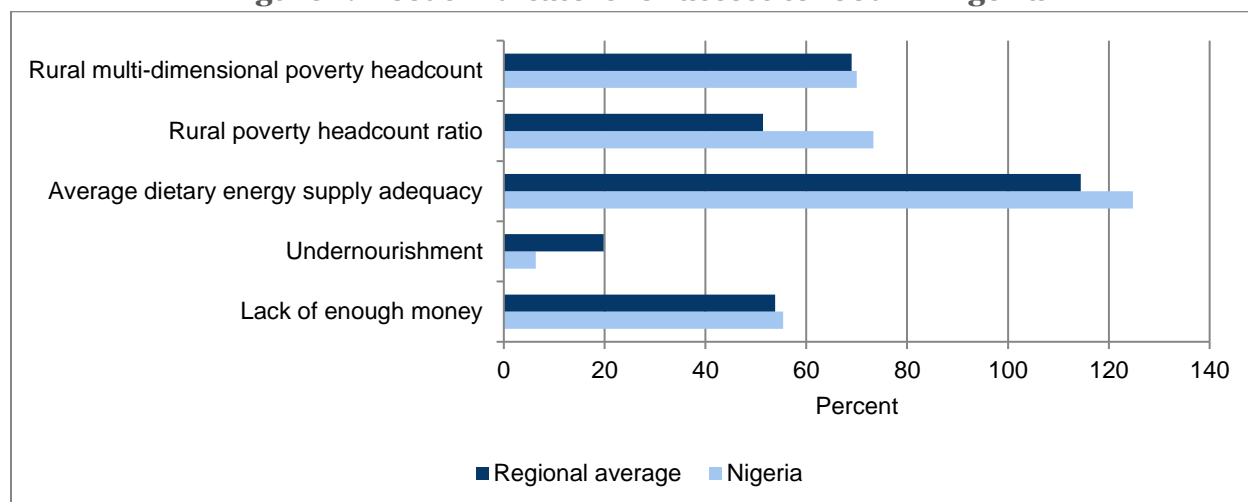
This dimension of needs includes measurements of undernourishment as well as estimates of rural poverty rates from both an income and multidimensional perspective. Nigeria's performance is better than the regional average<sup>2</sup> in only two of the five indicators of access to food: average dietary energy supply adequacy and undernourishment (Figure 1).<sup>3</sup> On the other hand, poverty rates in Nigeria are higher than regional average, with approximately 70 percent of the rural population experiencing poverty (in terms of income or along multiple dimensions) and more than half of survey respondents lacking enough money to buy food.

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<sup>2</sup> Regional average includes 46 countries in sub-Saharan Africa defined by the ERH database.

<sup>3</sup> The average dietary energy indicator measures fewer needs, i.e., the higher the score the better the performance in FNS, whereas the reverse is true for the other indicators shown in the graph, in which case the higher the score, the greater the need (or the worse the performance).

**Figure 1: Needs indicators for access to food in Nigeria**

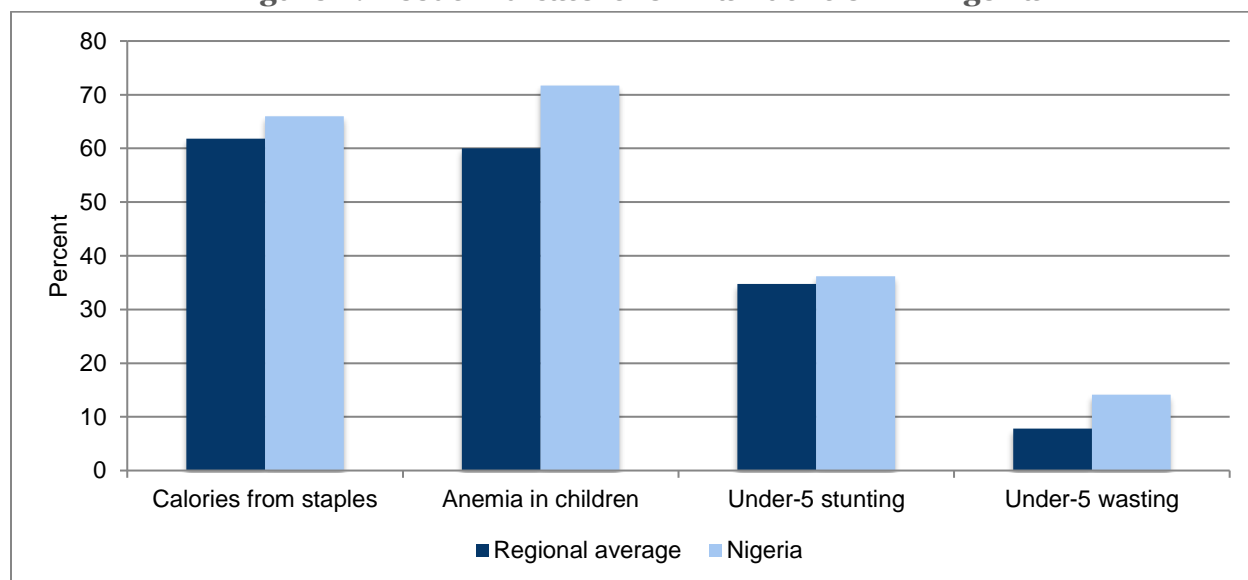


Source: Author's illustration using data from Brookings ERH database.

### 3.2 Malnutrition

Malnutrition includes measurements indicating a lack of dietary diversity and prevalence of stunting, wasting, and anemia for children under the age of five years. As shown in Figure 2, the most challenging manifestation of malnutrition in Nigeria is anemia in children. This is followed by the proportion of the calories derived from staples, then by stunting, and then by wasting of children under the age of five years, with above average prevalence rates for all of these indicators.

**Figure 2: Needs indicators for malnutrition in Nigeria**

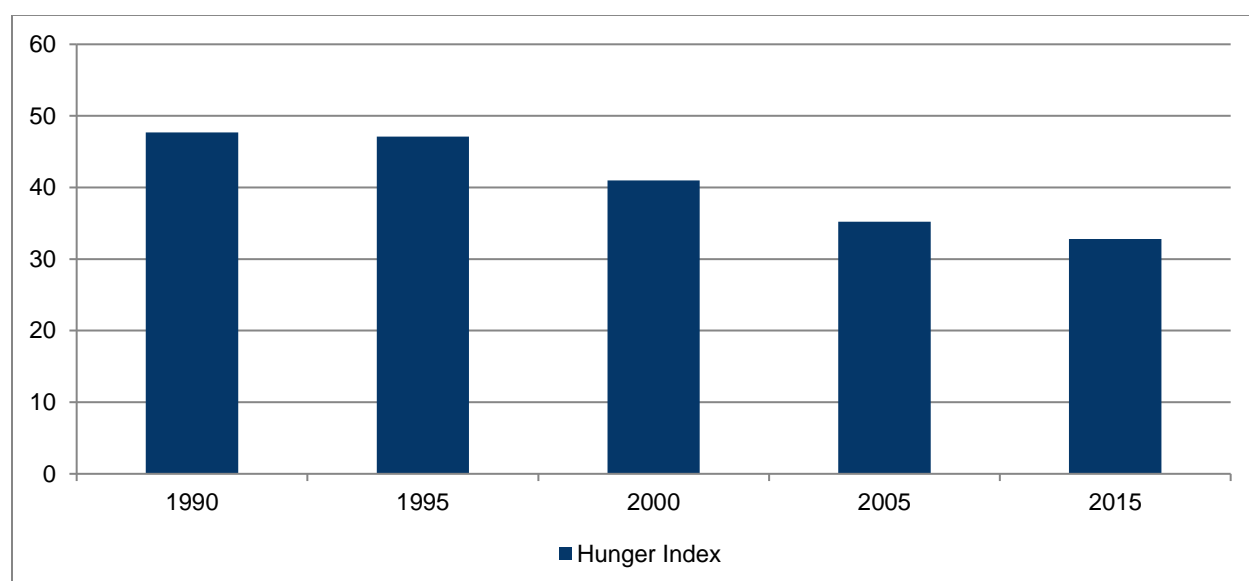


Source: Author's illustration using data from Brookings ERH database.

### 3.3 Trends in hunger and malnutrition in Nigeria

By definition, hunger is a condition synonymous with chronic undernourishment; where undernourishment itself is defined as a state, lasting for at least one year, of the inability to acquire enough food to meet dietary energy requirements (FAO, IFAD, WFP; 2014). The result of the ERH analysis, which indicates that the problem of undernourishment is not as severe in Nigeria as in the region on average, is consistent with the reality on the ground. Efforts aimed at increasing access to food in the country have resulted in considerable reduction in hunger over the years. Figure 3 shows the decline in hunger during the MDGs era from 1990 to 2015. The Hunger Index Score declined from 47.7 in 1990 to 41 in 2000 and further to 32.8 in 2015.

**Figure 3: Trends in Hunger Index Score in Nigeria**



Source: Author's graph using data from IFPRI GHI Report, 2015.

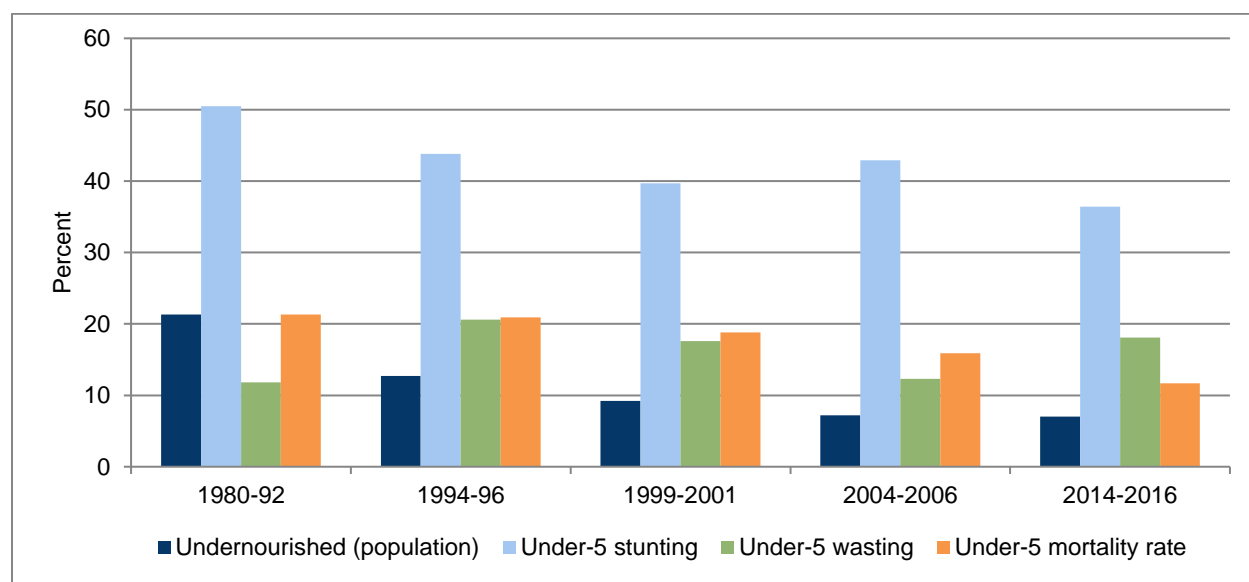
Note: GHI scores are calculated using of four indicators: undernourishment, child wasting, child stunting, and child mortality. These indicators are standardized based on thresholds set slightly above the highest country-level values observed worldwide for that indicator between 1988 and 2013 and then aggregated giving a weight of one-third to undernourishment and child mortality and a weight of one-sixth to child wasting and child stunting to produce the final GHI country score. The GHI scores on a 100-point scale where 0 is the best score (no hunger) and 100 the worst.

Indeed, the proportion of undernourished individuals in the population has been falling consistently, from 21.3 percent in the 1980s to single digits (9.2 percent) in 2000 and to only 7 percent by 2014/2016 (Figure 4).

The ERH findings on malnutrition in Nigeria are also consistent with the situation on the ground. The problem of malnutrition in Nigeria has been more intractable than that of access to food, and it varies over time and by type of indicator. Prevalence of stunting has remained the most severe

manifestation of the problem, followed by the under-five mortality rate and prevalence of wasting in children less than 5 years of age. Nonetheless, these indicators have improved between 1980 to 2016 with the exception of wasting, which is more serious in 2016 than it was in the 1980s and late 1990s (Figure 4). Nonetheless, these trends do not mean that remedial measures are yielding the same effects in different parts of the country or among different socio-demographic groups, neither is it a reflection of the different magnitudes of the various indicators of malnutrition across the country.

**Figure 4: Trends in malnutrition in Nigeria, 1980-2016**



Source: Author's graph using data from IFPRI GHI Report, 2015.

### 3.4 Socio-demographic distribution of child malnutrition in Nigeria

Analysis of the main indicators of child malnutrition on the basis of some important socio-demographic characteristics can provide a better understanding of the magnitude of the challenge and the nature of policy actions required to address it. It is also capable of providing a justification for a nuanced approach in addressing the problem in different locations and administrative jurisdictions in terms of programming of remedial measures and allocation of resources. The most recent data available for such analyses are from the Nigeria 2013 demographic and health survey. As shown in Table 1, there is disparity in the distribution of malnutrition in children under 5 years of age in Nigeria on the basis of age, gender, location, education, and wealth status.

**Table 1: Distribution of child malnutrition in Nigeria by socio-demographic characteristics**

| Characteristics               | Stunting<br>(Height-for-age)<br>(% < -2SD) | Wasting<br>(Weight-for-height)<br>(% < -2SD) | Underweight<br>(Weight-for-age)<br>(% < -2SD) |
|-------------------------------|--|--|---|
| <b>Age (months)</b>           |  |  |   |
| < 6                           | 15.7                                       | 24.8   | 17.0  |
| 6-8                           | 22.6                                       | 25.3   | 29.2  |
| 9-11                          | 28.7                                       | 27.3   | 31.1  |
| 12-17                         | 35.3                                       | 25.7   | 32.1  |
| 18-23                         | 41.0                                       | 18.9   | 29.2  |
| 24-35                         | 45.7                                       | 15.7   | 32.4  |
| 36-47                         | 42.8                                       | 14.2   | 29.4  |
| 48-59                         | 37.3                                       | 11.8   | 27.1  |
| <b>Gender</b>                 |  |  |   |
| Male                          | 38.6                                       | 18.9   | 30.2  |
| Female                        | 35.0                                       | 17.2   | 27.3  |
| <b>Residence</b>              |  |  |   |
| Rural                         | 43.2                                       | 18.3   | 32.2  |
| Urban                         | 26.0                                       | 17.6   | 22.9  |
| <b>Zone</b>                   |  |  |   |
| Northwest                     | 54.8                                       | 27.1   | 30.8  |
| Northeast                     | 42.3                                       | 19.5   | 47.4  |
| North-central                 | 29.3                                       | 11.7   | 18.5  |
| Southwest                     | 22.2                                       | 10.0   | 14.9  |
| Southeast                     | 16.0                                       | 11.9   | 11.4  |
| South-south                   | 18.3                                       | 11.1   | 12.8  |
| <b>Wealth quintile</b>        |  |  |   |
| Lowest                        | 53.8                                       | 21.9   | 41.9  |
| Second                        | 46.1                                       | 19.7   | 34.8  |
| Middle                        | 35.1                                       | 16.8   | 25.7  |
| Fourth                        | 26.3                                       | 16.7   | 22.1  |
| Highest                       | 18.0                                       | 13.9   | 15.6  |
| <b>Mother's education</b>     |  |  |   |
| No education                  | 49.7                                       | 22.7   | 39.7  |
| Primary education             | 33.1                                       | 16.0   | 24.4  |
| Secondary education           | 22.6                                       | 14.3   | 17.7  |
| More than secondary education | 13.3                                       | 11.0   | 10.0  |

Source: Author's compilation from NPC and ICF International 2014.

With regard to stunting, evidence suggests that 37 percent of children under age five are stunted in Nigeria, with a higher prevalence in the north. The northwest and northeast zones have proportions that are much higher than this national figure, at 55 percent and 42 percent, respectively. Analysis by age groups shows that stunting increases with age, being most prevalent



among children age 24-35 months (46 percent). Stunting is higher among male children (39 percent) than female (35 percent) and in rural areas (43 percent) than urban (26 percent). Mother's level of education generally has an inverse relationship with stunting.

Stunting ranges from a low of 13 percent among children whose mothers have more education to 50 percent among those whose mothers have no education. Similarly, there is an inverse relationship between household wealth and stunting. Children in the poorest households are three times as likely to be stunted (54 percent) as children in the wealthiest households (18 percent).

Regarding weight-for-height (the indicator for wasting) in Nigeria, the prevalence for children under five is 18 percent. There is no disparity between rural and urban areas in the proportion of wasted children, but wasting is generally high in the northwest (27 percent) and northeast (20 percent), while it is lowest in the southwest (10 percent). As in the case of stunting, male children are also more likely to be wasted (19 percent) than female children (17 percent). Wasting is highest (27 percent) among children age 9-11 months and lowest (12 percent) among children age 48-59 months. There is again an inverse relationship between mother's level of education and wasting, with the lowest proportion of wasting among children of mothers with a more education (11 percent) and the highest proportion among children of mothers with no education (23 percent). There is a similar inverse relationship between household wealth and wasting. About 22 percent of the poorest are likely to be wasted compared with 14 percent of the wealthiest.

The third indicator of malnutrition is underweight. The ERH database shows that, in Nigeria, 29 percent of children under age five are underweight (weight-for-age below -2 standard deviations). Again, the problem of underweight, like the other indicators, is more prevalent in the north than south. It is highest in the northeast (47 percent), followed by northwest (31 percent), and then north-central (19 percent). Across the zones the proportion of underweight children is lowest in the southeast (11 percent). Unlike in the cases of stunting and wasting, age variation in underweight children is not as wide, though the proportion of underweight children is highest (32 percent) among those in age brackets 12-17 months and 24-35 months. Male children are more likely to be underweight (30 percent) than female children (27 percent), and rural children are more likely to be underweight (32 percent) than urban children (23 percent). As is the case with stunting and wasting, wealth and mother's education have an inverse relationship with being underweight. The lowest proportion of underweight children (10 percent) have mothers with more than secondary education while the highest proportion (40 percent) have mothers with no

education. The lowest proportion (16 percent) of underweight children is associated with the wealthiest households while the highest proportion (42 percent) is associated with the poorest.

By and large, the main causes of malnutrition include poverty and lack of access to health care, water, sanitation, and nutrition education. These factors lead to poor maternal nutrition, harmful infant and young child feeding practices, inadequate health services, and limited access to nutritious foods. Women with low educational status are particularly vulnerable to harmful infant and young child feeding practices. Even for those families that receive education regarding infant and young child feeding practices, they still lack access to affordable foods with sufficient quantities of micro- and macronutrients required for a growing infant. These nutrients are lacking not only for the child, but also for the mother during pregnancy and breastfeeding. Thus, poverty remains a major cause of malnutrition in the country. Rural areas are more adversely affected than the urban areas for many reasons, including distance from markets, limited health and educational resources, as well as access to sanitary water and refuse disposal sites, which render them vulnerable to disease.

### 3.5 Agricultural productivity gaps

In order to have a positive change in the FNS situation in the country agricultural productivity has to improve considerably. The low level of agricultural productivity often leads to less availability of food, which in turn results in less consumption of food with adverse consequences on malnutrition. Bridging productivity gaps in the country through interventions that enhance the production of crops rich in micronutrients, bio-fortification, and agricultural intensification with applications of improved inputs and crop varieties is apt to have positive impact on food availability, dietary diversity, and micronutrient intake.

In this analysis, the agricultural productivity gap component of needs covers measurements of cereal yields, extent of family farming, total factor productivity (TFP) growth in agriculture, rural infrastructure, access to modern seed varieties, fertilizer, financial services, and transport. Nigeria performs notably better than the regional average in three indicators (input markets, account at formal rural financial institution, and road density) but lower in three others (arable land equipped for irrigation, access to financing for farmers, and distance to fertilizer index) (Table 2). The agricultural input markets indicator is based on a discrete measure ranging from 1 to 6.<sup>4</sup> Nigeria's score of 4.11 implies that the government has made significant efforts to liberalize and reduce

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<sup>4</sup> See Appendix 2 for the definition of the value labels of discrete policy variables.

rural market distorting policies and practices. The regional score of 3.72, on the other hand, indicates that, on average, governments across the region have made slightly more limited efforts to commercialize agricultural inputs and produce markets and trading systems. This contrast could, in large part, reflect the extensive input market liberalization policies under the ATA implemented by the Nigerian government from 2011 to 2015. With regard to accounts at rural formal financial institutions, which refer to the percentage of rural respondents (age 15+) with an account (self or together with someone else) at a bank, credit union, and other financial institutions (e.g., cooperative, microfinance institution), Nigeria performs above the regional average. Road density is slightly higher in Nigeria (20.9 km of road per 100 square km of land area) than the regional average (13.4).

**Table 2: Scores for agricultural productivity gap**

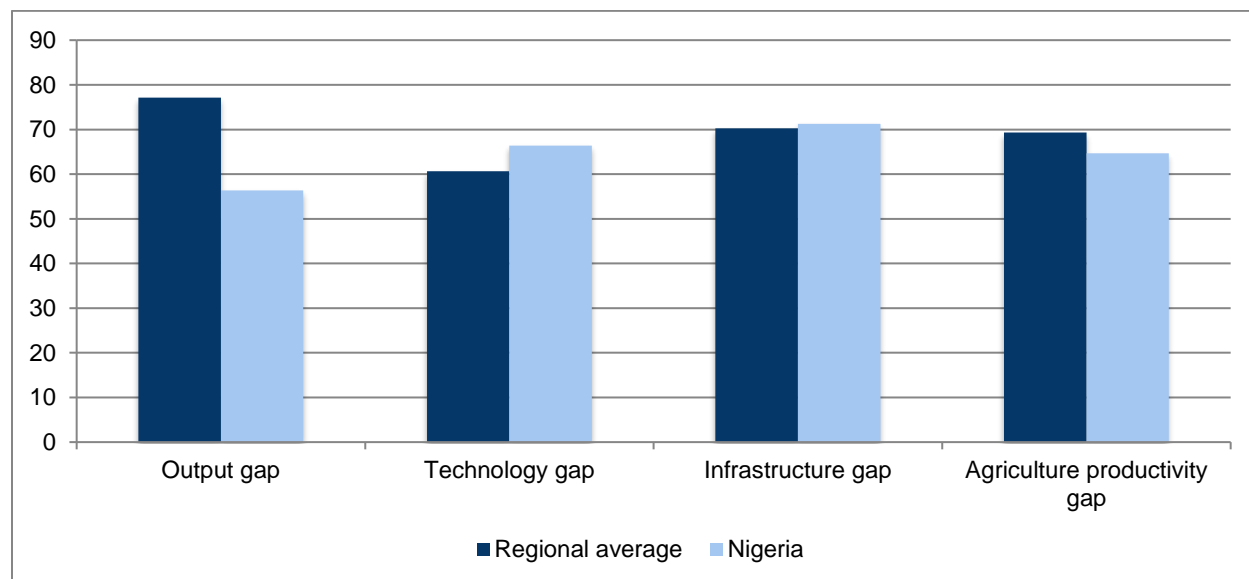
| Indicator   | Nigeria  | Regional average |
|---|----------|------------------|
| <b>Output gap</b>   |          |                  |
| Cereal yield (kg per hectare)                                   | 1467.16  | 1485.04          |
| Agricultural value added per worker (constant 2005 USD, logged) | 8.35     | 6.54             |
| <b>Technology gap</b>   |          |                  |
| Percent of area devoted to modern varieties (%)                 | 25.91    | 21.35            |
| Agricultural total factor productivity growth (%)               | 0.01     | 0.01             |
| <b>Infrastructure gap</b>                                       |          |                  |
| Account at a formal financial institution, rural (%)            | 22.71    | 16.21            |
| Access to agricultural input markets (discrete 1-6)             | 4.11     | 3.72             |
| Arable land equipped for irrigation (%)                         | 0.90     | 7.48             |
| Road density (km of road per 100 sq. km of land area)           | 3.04     | 2.14             |
| Access to financing for farmers (discrete 0-4)                  | 1.00     | 1.13             |
| Distance to fertilizer index                                    | 12494.50 | 9085.72          |

Source: Author's computation using Brookings ERH database.

For analytical purposes, the above indicators are further categorized into the output gap (cereal yield, agricultural value added, cold storage, family farm prevalence), the technology gap (percent of area devoted to modern varieties and agricultural total factor productivity growth), and the infrastructure gap (road density, access to agricultural input markets, access to financing for farmers, account at a formal rural financial institution, arable land equipped for irrigation, and distance to fertilizer index). Overall, Nigeria's performance in terms of the agricultural productivity gap is better than the regional average. However, out of the three components of that measurement (output gap, technology gap, and infrastructure gap), Nigeria performs better in

only one: the output gap (Figure 5). Nigeria country ranks 8 out of 46 countries in output compared to 28 and 22 in the technology and infrastructure, respectively (Table 3).

**Figure 5: Needs scores for components of agricultural productivity gap**



Source: Author's illustration using data from Brookings ERH database.

**Table 3: Sub-index scores for agricultural productivity gap in Nigeria**

| Indicator                     | Nigeria | Regional average | Nigeria's rank (sub-Saharan Africa) |
|-------------------------------|---------|------------------|-------------------------------------|
| Output gap                    | 56.36   | 77.15            | 8/46                                |
| Technology gap                | 66.38   | 60.68            | 28/46                               |
| Infrastructure gap            | 71.25   | 70.24            | 22/46                               |
| Agricultural productivity gap | 64.66   | 69.36            | 11/46                               |

Source: Author's computation using ERH database.

### 3.6 Vulnerability

Vulnerability of food and agricultural systems refers to instability in the commodity value chains arising from production, consumption, and environmental shocks. Food vulnerability in particular includes the inability of consumers to maintain normal patterns of food consumption including frequency of food consumption and dietary diversity in the face of social, economic, and policy shocks. In general, the vulnerability dimension of needs includes measurements of agro-climatic vulnerabilities and shocks such as environmental shocks (total renewable water resources per capita, projected change in runoff, projected change in agricultural yield and land degradation

risk), production shocks (volatility of agricultural production, volatility of cereal crops yields, and volatility of food production) and consumption shocks (household exposure to food price shocks and country in receipt of emergency food aid for 8 to 10 years) (see Table 4). The result shows that total renewable water resources per capita<sup>5</sup> is lower in Nigeria than in the region, indicating a greater environmental shock. Projected change in runoff<sup>6</sup> within the region is expected to be on the decline, but the decline is less severe in Nigeria. In terms of the projected change in agricultural yield,<sup>7</sup> Nigeria is also expected to experience a decline (-0.28 percent), implying another greater environmental shock in the country than the region (with a projected yield increase of 0.06 percent). Nigeria, on the other hand, has a lower risk of land degradation<sup>8</sup> (26.77 percent) compared to the region (32.78 percent).

**Table 4: Scores for vulnerability in Nigeria**

| Indicator  | Nigeria  | Regional average |
|--|----------|------------------|
| <b>Environmental shocks</b>  |          |                  |
| Total renewable water resources per capita (cubic meters/year/capita)                              | 1695     | 13060.95         |
| Projected change in runoff (%)   | -0.30058 | -0.46152         |
| Projected change in agricultural yield (%)   | -0.28232 | 0.06501          |
| Land degradation risk (%)  | 26.77473 | 32.77784         |
| <b>Production shocks</b>   |          |                  |
| Volatility of agricultural production (tons – coefficient of variation of agricultural production) | 0.043957 | 0.114241         |
| Volatility of cereal crop yields (tons/ha – coefficient of variation of crop yields)               | 0.086291 | 0.207438         |
| Volatility of food production (USD/person – coefficient of variation of food production)           | 0.04205  | 0.035594         |
| <b>Consumption shocks</b>  |          |                  |
| Household exposure to food price shocks (index)  | 443.058  | 500.7893         |
| Country in receipt of emergency food aid for 8-10 years (binary 0/1)                               | 0        | 0.875            |

Source: Author's computation using Brookings ERH database.

Nigeria's vulnerability scores arising from production shocks are below the regional average, except in the case of food production variability (Table 4). The vulnerability scores associated with

<sup>5</sup> Total renewable water resources per capita is the annual total of actual renewable water resources per inhabitant expressed as the sum of internal renewable water resources and external actual renewable water resources, divided by the rural population. It corresponds to the maximum theoretical annual amount of water available for a country at a given moment.

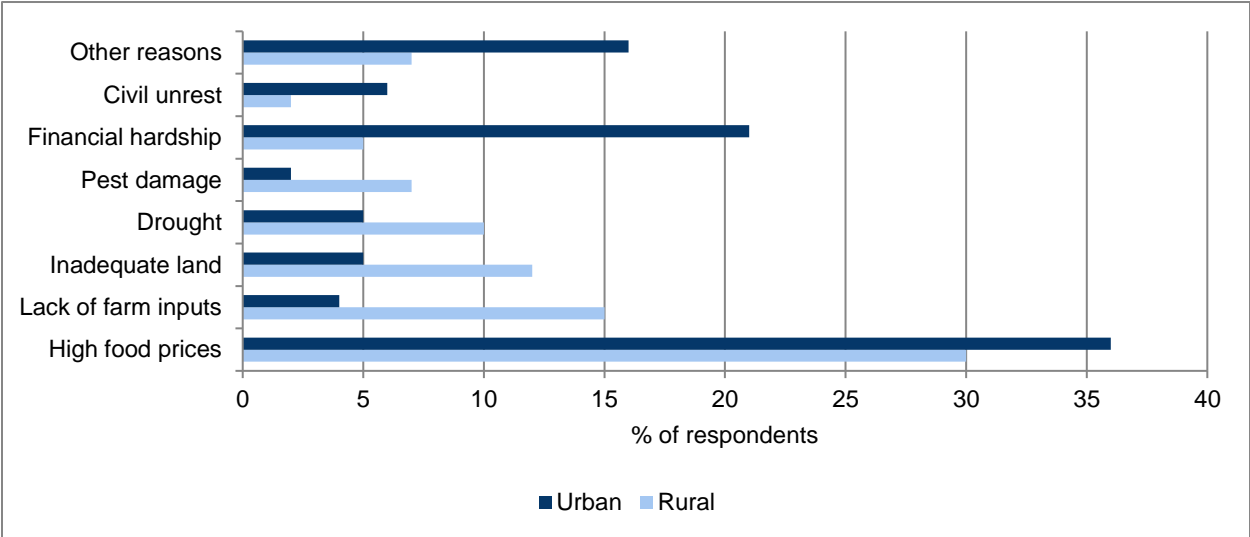
<sup>6</sup> Projected change in runoff is an estimate of the effects of climate change on surface water resources. The projected change is the percent change of annual runoff from the baseline projection (1980-2009) to the future projection (2040-2069) using a specific emission scenario.

<sup>7</sup> The projected change in agricultural yield is a proxy for the effect of climate change on agricultural yields. The projected change is the percent change of annual yield from the baseline projection (1980-2009) to the future projection (2040-2069).

<sup>8</sup> Land degradation risk measures the percentage of area for each country where soil organic content (SOC) is low (<15 g kg<sup>-1</sup>) and soil erosion is higher than 50 percent.

consumption shocks in Nigeria are also lower than the regional average, implying that consumption shocks pose a greater threat to FNS within the region as a whole than in Nigeria. Despite these findings, evidence based on data collected in Nigeria suggests that the main causes of food shortages are still production shocks (in terms of inadequate land and lack of modern farm inputs), consumption shocks (high food prices and financial hardship), and environmental shocks, such as drought and pests (Kuku-Shittu et al., 2013). As shown in Figure 6, these causes also vary from rural to urban areas. Production and environmental shocks are more prevalent in rural areas, whereas vulnerability to food insecurity due to consumption shocks is greater in urban areas. In general, consumption shocks seem to be the single most important determinant of food vulnerability in the country. There are also non-farm related factors such as macroeconomic policies (double-digit lending rates, tariff policies, and exchange rate policies) that influence performance in the agricultural sector. This is an indication that, apart from addressing production and environment-related vulnerabilities, efforts should be intensified to tackle consumption shocks.

**Figure 6: Dimensions of food vulnerability in Nigeria**

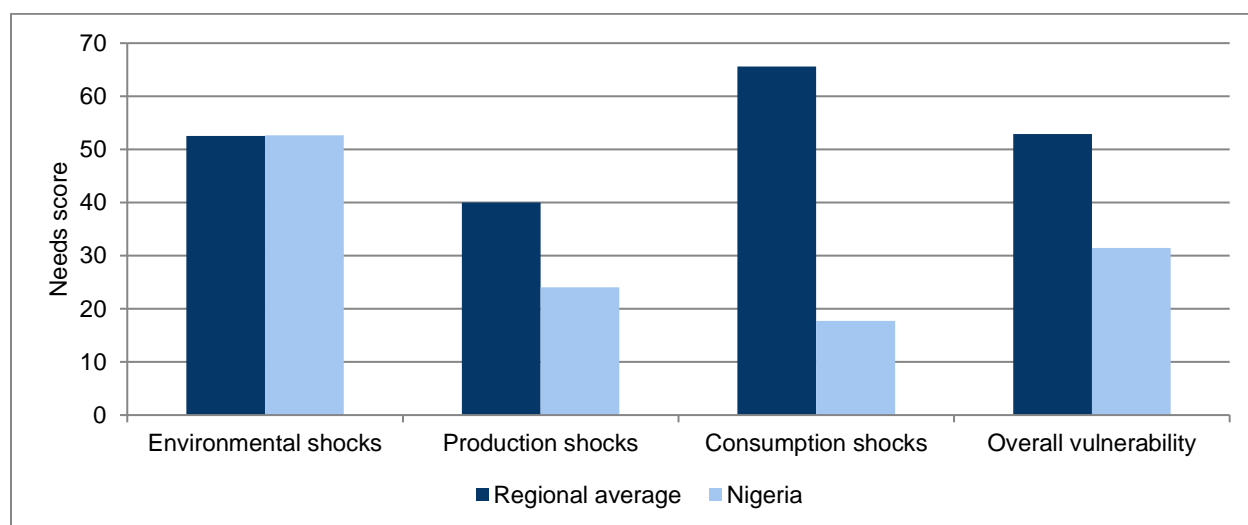


Source: Author's graph adapted from Kuku-Shittu et al, 2013 using Nigeria 2011 LSMS-ISA data.

Nigeria's scores relating to environmental shocks indicate more severe vulnerabilities than the regional average with the exception of land degradation risk and projected change in annual runoff. The results further show that the magnitude of the vulnerability problem varies according to the individual components. Specifically, the greatest problem is posed by environmental shocks followed by production shocks and then consumption shocks (Figure 7). As shown in Table 5, the needs score for environmental shocks is slightly higher than the regional average, while the needs

score for production shocks is much lower than the regional average, suggesting that Nigeria is less susceptible to production shocks than the average African country. The country is ranked seventh in terms of consumption shocks with a needs score (17.74) far below the regional average (65.58), also indicating that consumption shocks are less severe in Nigeria than in the region. Moreover, even though some of the individual vulnerability indicators vary, Nigeria's aggregate vulnerability score is much lower than the regional average, which implies that Nigeria is less vulnerable to risks than the region in general.

**Figure 7: Needs scores for dimensions of vulnerability in Nigeria**



Source: Author's illustration using data from Brookings ERH database.

**Table 5: Sub-index scores for vulnerability in Nigeria**

| Indicator             | Nigeria | Regional average | Nigeria's rank (sub-Saharan Africa) |
|-----------------------|---------|------------------|-------------------------------------|
| Environmental shocks  | 52.66   | 52.52            | 22/46                               |
| Production shocks     | 24.05   | 39.99            | 12/46                               |
| Consumption shocks    | 17.74   | 65.58            | 7/46                                |
| Overall vulnerability | 31.48   | 52.88            | 4/46                                |

Source: Author's computation using ERH database.

Overall, vulnerability arising from production instability is not as severe in Nigeria compared to the region. Also, the vulnerability scores associated with consumption shocks in Nigeria are lower than regional average. This implies that consumption shocks pose less of a threat to food security in Nigeria than within the region. This relatively strong performance reflects the success of the

strategies adopted in the country to transform the agricultural sector and reduce food shortages during the period covered by this study (Olomola, 2013a; Adesina, 2015).

Although these results may be valid during the period (2009-2013) covered by the ERH data set, the validity cannot be guaranteed as things stand in 2017. Production costs have risen considerably since 2014 as inflation assumed double digits leading to erosion of the real income for many people. As international oil prices fell drastically in mid-2014, availability of foreign exchange dropped, and the exchange rate depreciated significantly. This event and resultant energy and transportation costs fueled inflation. The inflation rate hit double digit in 2016 and rose from 17.9 percent in September to an all-time high of 18.03 percent in October. As of the third quarter of 2017, the inflation rate is 16.05 percent. With the associated decline in real income and rising unemployment in the country, demand for goods and services has been falling—creating the possibility of a more severe trend of vulnerability than what was the case between 2009 and 2013. The current situation has been exacerbated by the escalation of insurgency in the northeastern part of the country since 2014 and the resultant displacement of farm and non-farm populations and the deleterious effects on food and nutrition security.

In sum, the results show that FNS challenges appear to be most severe with respect to malnutrition, followed by the agricultural productivity gap, and then access to food, and finally vulnerability. The severity of the malnutrition problem is exceptional. The malnutrition needs score is above the African average, and the country ranks 108 out of 116 developing countries (Table 6).

**Table 6: Needs scores for food and nutrition security in Nigeria**

| Needs category                | Nigeria | Regional average | Nigeria's rank (developing country) |
|-------------------------------|---------|------------------|-------------------------------------|
| Access to food                | 59      | 62               | 85/115                              |
| Malnutrition                  | 78      | 68               | 108/116                             |
| Agricultural productivity gap | 65      | 72               | 77/116                              |
| Vulnerability                 | 31      | 49               | 24/116                              |
| Overall                       | 58      | 63               | 81/116                              |

Source: Adapted from Kharas et al. Brookings ERH Report 2015.



## 4. Policies to address the needs

In the light of the above analysis, we present an assessment, using the Brookings ERH policy scores, of the performance of the various government actions aimed at ensuring food and nutrition security. Policies in this analysis refer to the key enabling conditions for progress in FNS, such as the market infrastructure to allow farmers to operate effectively, national economic policies to encourage efficient investment, and domestic political commitment to prioritize ending hunger. Since the role and functioning of institutions and governance are a major element of how policies are implemented some indicators of the strength of relevant institutions are also considered as key indicators. The overall FNS policy score is an average of scores on two sub-indices: agricultural economic policy and political prioritization. In what follows, we assess the individual elements of these two policy categories and thereafter assess the aggregate policy score to determine the strength of the policy environment across the two sub-indices and across indicators.

### 4.1 Agricultural economic policy

The assessment here includes measurements of the rural investment climate, pricing and trade distortions that affect national agricultural markets, and the level of expertise in science, technology, and extension services.

#### 4.1.1 Rural investment climate

The assessment of government actions to improve the rural investment climate is based on 11 indicators; seven of which have categorical measurements (Appendix 2) while four are measured as indices (Appendix 3). The analysis reveals that the government is making efforts to create the conditions for organizations of rural poor people, but efforts to encourage private traders to open businesses are weak. Rural residents still have less access to productive inputs and financial resources. A majority of poor rural households have access to some land, though this access is often insecure. The government has a water resources management strategy, but does not use it effectively to manage the allocation of water resources, according to the ERH database. Development plans recognize the important role of financial services in the rural development process, but the rural entrepreneurs, including small-holder farmers, are still discriminated against by the formal financial system. Unfortunately, there is no direct or transparent process for rural

organizations to enter into dialogue with the government on investment opportunities and even their welfare in general.

According to the ERH indicators, Nigeria has an average performance compared to other African countries when it comes to its rural policy framework. However, its performance in terms of enabling conditions for rural finance is better than the regional average as is its rank in the “Doing Business Index” (though it ranks only 93 out of 113 countries globally). In the remaining 7 out of 11 indicators of rural investment climate, though, Nigeria scores worse than the regional average. Indeed, with regard to corruption, political stability, and the rule of law, Nigeria fares much worse than Africa generally, especially with the rising wave of insurgency and militancy in the past five years and the massive looting of public funds (which are now being vigorously tackled). The Nigerian government does have a policy of decentralizing limited administrative authority to the local level, but this is not accompanied by fiscal decentralization or the institutional reforms and safeguards necessary to enhance transparency and accountability and to eliminate local corruption.

#### 4.1.2 Agricultural pricing and trade distortions

The policies put in place to address agricultural pricing and trade distortions are assessed using 11 indicators (Table 7). These economic policies offer protection to African farmers, but less so in Nigeria, as evidenced by its lower ERH scores of nominal and relative rates of assistance.

**Table 7: Policy scores for agricultural pricing and trade distortions in Nigeria**

| Indicator  | Nigeria | Regional average |
|--|---------|------------------|
| <b>Pricing policies</b>  |         |                  |
| Nominal rate of assistance (%)                                     | 0.115   | 0.121            |
| Relative rate of assistance (%)                                    | 0.115   | 0.202            |
| Welfare reduction index (%)  | 34.005  | 31.757           |
| <b>Trade policies</b>  |         |                  |
| Non-tariff barrier, agriculture (%)                                | n.a.    | 0.005            |
| Simple average applied MFN tariff, agriculture (%)                 | 15.56   | 18.736           |
| Trade bias index (%)   | 0.512   | 0.246            |
| Trade reduction index (%)  | 0.101   | 0.079            |
| Time to export (days)  | 23.98   | 30.982           |
| Logistics performance index, transport (index)                     | 2.350   | 2.201            |
| Consumer tax equivalent of farmer support (%)                      | 0.048   | 0.132            |
| Share of agricultural peak tariffs in all agricultural tariffs (%) | 0.607   | 0.563            |

Source: Author’s computation using data from Brookings ERH database.

Note: n.a. = not available.

The consumer tax equivalent of farmer support also falls below the regional average. The trade-related indicators reveal mixed results. On the positive side, the simple average applied most-favored-nation tariff for agriculture and the time to export are better than the regional averages. The logistics performance index is also better. On the other hand, the trade bias index, welfare reduction index, trade reduction index, and share of agricultural peak tariffs in all agricultural tariffs are higher than the regional averages. Overall, the results show that the agricultural pricing and trade policies offer an unfavorable environment for FNS with different implications for producers and consumers. With the indicators showing trade bias against import and in the face of domestic food supply shortages, consumers are likely to face the challenge of inadequate dietary intake with adverse nutritional outcomes especially for the urban poor and non-farm rural population.

#### 4.1.3 Research skills and extension

Research and extension have implications for improved agricultural productivity and design of effective FNS policies. If the staff of nutrition departments do not possess the requisite knowledge, they will not be in a position to participate in nutrition projects that seek to disseminate nutrition education to project beneficiaries. The country lacks nutrition information systems and there is inadequate funding to mobilize experts to conduct nutrition research to provide evidence for nutrition policy decision making. This is an indication of weakness in the policy environment. The policies in support of research skills and extension are assessed using four indicators (Table 8). All indicators highlight that Nigeria's agriculture is accompanied by a low-performing research sector. The results show that public (government, higher education, and non-profit) spending on agricultural research and development as a share of agricultural GDP is much lower than the regional average. The number of Ph.D.-qualified agricultural researchers and number of female agricultural researchers per rural capita are very low and under the regional average. About one in 117,000 researchers is female and one in 225,000 has a Ph.D. The access to extension services score (see the ERH definition of categorical values ranging from 0-6) implies that the agricultural research and extension system is weak and does not address the needs of poor Nigerian farmers.

**Table 8: Policy scores for research skills and extension in Nigeria**

| Indicator                                       | Nigeria  | Regional average |
|---|----------|------------------|
| Agricultural R&D as percent of agricultural GDP | 0.266667 | 0.673125         |
| Access to agricultural extension services       | 3.25     | 3.794            |
| Share of researchers with Ph.D.                 | 4.45E-06 | 1.32E-05         |
| Share of female researchers                     | 8.56E-06 | 9.99E-06         |

Source: Author's computation using data from Brookings ERH database.

## 4.2 Political prioritization

Political prioritization includes measurements of the government’s prioritization of agriculture, nutrition, rural social assistance, and the enabling environment for women farmers in public policy documents. We examine the policy scores in each category in comparison with the situation on the ground and thereafter consider the overall strength of the policy environment (Table 9).

**Table 9: Political prioritization scores**

| Indicator  | Nigeria | Regional average |
|--|---------|------------------|
| <b>Agriculture</b>   |         |                  |
| Agricultural spending intensity (%)  | 1.60    | 7.65             |
| Degree to which FNS features in citizens’ priorities (%)                     | 0.35    | 0.42             |
| Allocation and management of resources for rural development (discrete: 1-6) | 3.23    | 3.67             |
| <b>Nutrition</b>   |         |                  |
| National dietary guidelines (binary: 0/1)                                    | 1       | 0.34             |
| Time-bound nutrition targets (binary: 0/1)                                   | 1       | 0.33             |
| Governments promote complementary feeding (binary: 0/1)                      | 1       | 0.82             |
| Food safety score (%)  | 60      | 50.21            |
| <b>Rural social assistance</b>   |         |                  |
| Food safety net programs (score)   | 0       | 0.95             |
| Social safety net benefit incidence (%)                                      | 11.92   | 22.76            |
| Social safety net adequacy (%)   | 0.89    | 35.23            |
| Social safety net coverage (%)   | 1.04    | 26.13            |
| <b>Women’s enabling environment</b>  |         |                  |
| Secured access to land (index: 0-1)  | 0.5     | 0.55             |
| Access to financial services (index: 0-1)                                    | 1       | 0.40             |

Source: Author’s computation using data from Brookings ERH database.

### 4.2.1 Agriculture

As shown in Table 9, Nigeria scores low in all three agriculture political prioritization indicators and below the regional average. Agricultural spending intensity (defined as the proportion of national agriculture expenditure in total agricultural GDP) is quite low (1.60 percent) and far below the regional average (7.65 percent). Allocation and management of resources for rural development is low, with a score of 3.23 (a score of 3 implies that the development plans and budget document give some emphasis to agriculture and rural development, but the sectoral policies do not provide a strong basis for reducing rural poverty and promoting broad-based growth). The degree to which FNS features in *citizen* priorities is rather limited. While this result

could mean that citizens have other more pressing priorities than FNS, it could also be indicative of a non-participatory approach in setting the agenda for food and nutrition security in the country.

#### 4.2.2 Nutrition policy

Nigeria scores quite well in the nutrition policy category through the existence of national dietary guidelines, time-bound nutrition targets, and the promotion of complementary feeding by the government. The food safety score of 60 percent indicates that a reasonable percentage of WHO's recommended international food safety regulations has been attained in Nigeria. This achievement is also higher than the regional average.

#### 4.2.3 Rural social assistance

With the widespread incidence of poverty in the country, the need for social assistance to enable the poor segments of the society meet their nutritional requirements cannot be overemphasized. However, there is no national social protection policy to provide the necessary safety to assist in improving the FNS of low-income people and the vulnerable groups. Direct transfer of food occurs only in emergency situations, such as insurgency or natural disaster. The misperception among policy makers is that since the rural area is the domain of food production, food poverty is unlikely to be a rural phenomenon. Thus, public incentives to protect the rural poor from food-related shocks are quite minimal. For instance, during the Christmas festivity in 2016 the Lagos state government supplied rice to the market at ₦12,000 (\$47.34) per 50 kg bag, much lower than the prevailing market price of ₦20,000 (\$78.89)—but it was urban consumers that were the target of this intervention. The federal government came up with the policy of the homegrown school-feeding program in 2015 and commenced implementation in 2016. Prior to this, such programs were implemented in few states of the country and they have proved to be unsustainable. Rural social assistance is measured by four indicators, as shown in Table 9. Nigeria scores significantly worse than the regional average for all social assistance indicators, especially in social safety net coverage, social safety net adequacy, and social safety net benefit incidence. Such assistance is required to reduce malnutrition and vulnerability to food shortages, and it should have nationwide coverage if any significant impact on FNS is to be achieved.

#### 4.2.4 Women's enabling environment

Access to financial services and secure access to land are the two ERH indicators that assess women's enabling environment. The database notes that, in Nigeria, the law guarantees the same

rights to own, use, and control land to women and men, but there are some customary, traditional, or religious practices that discriminate against women. This finding is consistent with recent studies (Olomola, 2013b). Regarding women's access to finance, the ERH data shows that the law does not guarantee the same rights to access formal financial services to women as men, or women have no legal rights to access financial services. However, this finding is at variance with the situation in the country. The true position is that the law guarantees the same rights to access formal financial services (e.g., credit, bank accounts, and bank loans) to both women and men, but there are some customary, traditional, or religious practices that discriminate against women (see Olomola, 2013b).

There is no significant departure between the ERH policy scorecard and policy performance in reality in Nigeria. As suggested by the ERH needs and policy assessments, there is no direct relationship between the intensity of needs and strength of policy. More often than not, there is a mismatch between needs and policy, exemplified by policy inconsistencies and discontinuities. There is a strong need to bridge agricultural productivity gaps, reduce malnutrition, and increase access to food physically and economically, but the policy environment is weak. The relationship fares better in regard to nutrition security though. Nigeria's nutrition policies are better focused on nutrition targets while food security policies' targets are usually less specific (if defined at all). Nigeria's low policy scores reflect its weak policy environment. Nigeria's poor performance is due to (i) poor policy implementation; (ii) weak, non-inclusive, and not pro-poor strategies; (iii) low FNS priority in resource allocation; (iv) irregular disbursement of allocated funds; and (v) conflict between policies and practices, between laws and customs, and between strategies and culture.

At the federal level, nutrition activities are scattered across several MDAs, each having a small number of professionals well-trained in nutrition issues. The situation is worse at the state level where capacity is much weaker and resources far more constraining. Although each state has a primary health care facility for the delivery of nutrition services, a single state nutrition officer in the primary health care directorate of each state ministry of health wields little power to influence resource and policy prioritization. These and related issues were examined in the National Nutrition Summit in February 2012, which resulted in the revision of the National Policy on Food and Nutrition and the National Plan of Action on Food and Nutrition (NPAFN) (Barker, 2013).

In sum, the ERH policy scores vary widely in each of the two policy categories (agricultural economic policy and political prioritization) and the sub-index scores for the major policies are largely below the regional average. As shown in Table 10, Nigeria scores above the regional

average in only one of the three agricultural economic policies indicators (agricultural pricing and trade distortions)—placing the country 70 out of 116 developing countries globally. In terms of the rural investment climate, Nigeria ranks below the regional average and 92 out of 116 countries globally. Nigeria’s score is even lower for research skills and extension. Regarding the four policies under the category of political prioritization, only the nutrition policy score is above the regional average, with Nigeria at 28 out of 109 countries globally. The greatest gap occurs in the case of rural social assistance where the country is ranks 92 out of 98 countries globally. Overall, Nigeria is ranked 97 out of 116 countries in the FNS policy score. This score is very low and below the regional average.

**Table 10: FNS Policies Index Score (0-100, 100 being strongest)**

| Policy category                            | Nigeria   | Regional average score | Nigeria’s rank (developing country) |
|--|-----------|------------------------|-------------------------------------|
| <b>Agricultural economic policy</b>        |           |                        |                                     |
| Rural investment climate                   | 44        | 47                     | 92/116                              |
| Agricultural pricing and trade distortions | 56        | 53                     | 70/116                              |
| Research skills and extension              | 15        | 32                     | 56/69                               |
| <b>Political prioritization</b>            |           |                        |                                     |
| Agriculture                                | 28        | 45                     | 103/116                             |
| Nutrition                                  | 89        | 47                     | 28/109                              |
| Rural social assistance                    | 2         | 22                     | 92/98                               |
| Women’s enabling environment               | 25        | 30                     | 76/114                              |
| <b>Overall</b>                             | <b>37</b> | <b>40</b>              | <b>97/116</b>                       |

Source: Adapted from Kharas et al., Brookings ERH Report, 2015.

### 4.3. Program interventions of Nigeria to achieve FNS

Although the implementation of programs under the NPFN was generally lax, some FNS-related programs were vigorously implemented by FMARD between 2011 and 2015 under the Agricultural Transformation Agenda (ATA) of the federal government. The ATA was made up of six major components: (i) the Growth Enhancement Support Scheme (GESS), which was designed to improve farmers’ access to modern agricultural inputs at subsidized prices; (ii) Staple Crop Processing Zones (SCPZs), based on the comparative advantage of each region and aimed at forming clusters in major food production for rice, sorghum, cassava, fisheries, and horticulture; (iii) Agricultural Commodity Value Chain Development (ACVCD), which focused on developing key commodities in both crop and livestock sub-sectors in different agro-ecological zones; (iv) Agricultural Marketing and Trade Development Corporations (AMTDCs), to enhance farmers’

access to markets; (v) the Agricultural Extension Transformation Agenda (AETA), to improve dissemination of information and adoption of innovations; and (vi) the Nigerian Incentive-based Risk-Sharing System for Agricultural Lending (NIRSAL), to de-risk lending to agriculture and tackle the bottlenecks that affect agricultural commodity value chains and the agricultural financing value chain (see Adesina, 2013).

#### 4.3.1 Agriculture interventions

By far the most successful program under the ATA has been the GESS, under which an innovative input subsidy scheme was designed and implemented to guarantee food security in the country and increase farmers' income, productivity, and access to modern inputs. The total public spending on fertilizer subsidies (by federal and state governments) under the GESS increased from ₦13.30 billion (\$84.44 million) in 2012 to ₦82.38 billion (\$519.57 million) in 2014. Similarly, the value change development initiative involved distribution of modern inputs to producers in all the sub-sectors of agriculture to boost output and drive food self-sufficiency in the country. Implementation commenced in 2013, with focus on soybean, ginger, groundnut, sorghum, sesame, oil palm, cotton, cashew, cocoa, poultry, sheep and goats, pigs, dairy, leather, beef, aquaculture, and artisanal fishery.

Achievement in the sub-sectors varies considerably with the livestock sub-sector witnessing an upward trend of input distribution compared to declines in the trend of some inputs distributed in the other sub-sectors. For instance, the number of day-old chicks distributed to poultry producers increased from 28,500 in 2013 to 220,900 in 2014 (or by 675 percent) while the quantity of chicken feed increased from 36 metric tons to 169 metric tons (o369 percent) over the period. Over the same period, the distribution of improved seeds increased from 376,281 to 791,090 metric tons (about 110 percent) whereas the quantity of fertilizer distributed declined from 648,746 to 36,115 metric tons (about -94 percent). In the fishery sub-sector, the emphasis was on aquaculture. The number of juveniles distributed to fish farmers declined from about 3.7 million in 2013 to 2.4 million in 2014 while the quantity of fish feed distributed declined from 553 metric tons to 361 metric ton over the period. The limited performance under the value chain development initiative was due not only to declining revenue of government but also to the increasing inability of the entrepreneurs involved to meet their own cost of such inputs.

Furthermore, the SCPZs were designed to boost import substitution, improve the competitiveness of Nigeria's agricultural sector, and establish the appropriate linkages between the sector and the industrial sectors as a basis for Nigeria's industrial development, with a focus on key commodities



such as rice, sorghum, cassava, fisheries, horticulture, livestock, and oil palm. The production clusters for these commodities were delineated in 2013 with the support state governments. The identified sites were located in Anambra, Enugu, Kogi, Kebbi, Sokoto, Niger, Bayelsa, Taraba, Kano, Kwara, Lagos, Benue, Ogun, and Rivers states. An additional site was included in November 2014 stretching over 200 km and targeting various crops including maize, rice, cassava, oil palm, and cocoa in Cross River state. In addition to driving rural industrialization, the 15 SCPZs have the potential to strengthen downstream activities and increase revenues by reducing post-harvest losses and food imports. Some of the incentives put in place to achieve this goal include tax breaks on the importation of agricultural processing equipment, tax holidays for food processors located within an SCPZ, and increased government investments in roads, logistics, storage facilities, and utilities. To date, however, the project is yet to be fully implemented due to inadequate financial resources.

#### 4.3.2 Banking and credit interventions

NIRSAL has provided incentives to attract the banking sector to lend to agriculture, although it took considerable time and effort to persuade the commercial banks to take advantage of the lending opportunities and incentives. As at 2012, when they were expected to finance the agrodealers and input suppliers, many of the banks remained unconvinced about the prospects of NIRSAL and so the level of financing was quite low. However, in 2013, 13 commercial banks granted loans to the agrodealers to finance their input distribution across the country. Nonetheless, a substantial part of the ₦19.612 billion loan came from only six banks, implying that, despite the available incentives (improved guarantee cover and interest rate rebate ranging between 20 and 40 percent), only a few banks have the capacity to cope with the requirements of agricultural lending in accordance with NIRSAL guidelines (Olomola, 2015c).

Despite the achievements made through GESS and other components of the ATA, recent evidence suggests that, overall, the ATA faced challenges, such as weak access to credit by small-holder farmers, heavy fiscal burden resulting in sharp rise in indebtedness to banks,<sup>9</sup> unfulfilled financial commitments by external investors, high post-harvest losses, and illegal food imports, which prevented it from delivering on all the stipulated targets. Consequently, Nigeria remains food insecure, relying on food imports worth about \$3.0 billion to \$5.0 billion annually, especially wheat, rice, fish, and sundry items, like fresh fruits and vegetables (FGN, 2016b). In

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<sup>9</sup> Indebtedness increased especially among agrodealers, who obtained loans from banks to finance input purchase and distribution, but then were not paid on time by the government, which was responsible for paying 50 percent of what the farmers should pay the agrodealers under the existing subsidy program.

the light of the aforementioned developments, the government resolved to develop a new policy to consolidate on the gains of the ATA and identified areas for improvement in promoting rapid growth in the agricultural sector and strengthening food security in the country. The new agricultural policy, the Agricultural Promotion Program (APP), released in August 2016, emphasizes nutrition-sensitive agriculture, implying that policy actions will be geared towards addressing the issues of stunting, wasting, underweight, and other manifestations of hunger and malnutrition with particular reference to vulnerable groups, which include children under five, nursing mothers, and persons with chronic illness and disabilities.

Even though there are no dramatic changes between the ATA and the new APP, it is important to stress that the lag in transitioning from one policy regime to another has been unnecessarily delayed, and unless urgent actions are taken to jump-start activities in key agricultural value chains, consolidating the gains of the ATA may be more difficult than expected. Most of the key elements of the new policy were not captured in the 2016 budget, and as efforts were made to finalize the 2017 budget in the last quarter of 2016, there was no investment plan emanating from the new agricultural policy upon which resource allocation could be based. This was a major gap in the ATA now being repeated under the APP. To mobilize resources for the implementation of the identified projects, the preparation of the national agricultural investment plan is ongoing and is scheduled to be finalized by the end of 2017. The failure to properly identify the resource bottlenecks of the past and bring the lessons to bear on the preparation of a new strategic plan is symptomatic of a faulty beginning and defective policy process, which is unlikely to augur well for effective implementation of the policy. It remains to be seen, therefore, how the FNS programs will be adequately financed and the targets achieved as specified in the policy document.

#### 4.3.3 Nutrition and social intervention programs

Aside from the APP, an important component of the social intervention program of the federal government, the Government Enterprise and Empowerment Program (GEEP), has developed the women empowerment fund specifically targeting rural women. Essentially, it is a soft loan scheme targeting 1.6 million women, traders, artisans, small businesses, and youths. The fund's strategy is to provide ₦1.6 billion (\$5.25 million) in micro-finance loans to women across the nation to assist in rehabilitating the economies of rural communities. Under the scheme, soft loans of between ₦10,000 (\$32.79) and ₦100,000 (\$327.87) will be granted without interest with a repayment period of 3 to 6 months and administration cost of 5 percent by the Bank of Industry (BOI). Beneficiaries are expected to be organized in co-operatives and market associations to

access this loan. Under the first phase, beneficiaries have been identified and verified from the Federal Capital Territory, Abia, Adamawa, Bauchi, Delta, Imo, Kwara, Kano, Katsina, Lagos, Osun, Oyo, Ogun, and Kogi states. As of June 2016, the release of funds to BOI commenced for the enterprise and empowerment program, but there has been no spending on any of the social investment programs due to delays in the budget process. Loan disbursement under the program started in November 2016 and by June 2017, the program has registered 3,162,451 people who are members of 26,924 registered cooperatives for purposes of the loans. The program has recorded good progress with the disbursement of 57,234 interest free loans amounting to ₦7.301 billion (\$23.94 million) representing 17.8 percent of the ₦41 billion (\$134.43 million) so far released for funding of its social intervention program under the 2016 budget. Female participation in the program has been remarkable, with 56 percent of loans disbursed to them in 28 states and the federal capital territory (FCT) (Kolawole, 2017).

In terms of nutrition-specific programming, the National Strategic Plan of Action for Nutrition (2014-2019) features 10 key interventions for addressing FNS needs, focusing in particular on malnutrition. These include Community Management of Acute Nutrition (CMAN) programs, comprehensive food for prevention of moderate malnutrition programs, and programs for the provision of Vitamin A supplements, therapeutic zones, multiple micronutrients powders, deworming care, iron folic acid supplements for pregnant women, iron fortification of staples, and salt iodization, among others. The National Policy on Food and Nutrition has also been revised and re-launched in 2016 with a view to reducing hunger and malnutrition by 50 percent by 2025.

There are three main features of the revised policy that can make the implementation of the intervention programs more effective. The first is the intention of the government to increase the number of relevant MDAs at all levels with functional nutritional unit by 75 percent in 2017. The second is the identification of programs and projects for implementation in the short-, medium- and long-term horizon and accordingly designing the NPFN as a 10-year blueprint for eradicating malnutrition to ensure sustainable economic growth and development in the country. This is a departure from previous policies and action plans usually designed for a five-year period. The third is the inclination of the government to ensure that the policy provides the opportunity to mainstream nutrition objectives into social protection and safety net programs of all nutrition-related MDAs by 2020. These are major deficiencies in previous policies, which the revised policy has taken into consideration. It is expected by stakeholders that the institutional restructuring and flexibility in programming of activities will be adequately captured in the budgetary process and commensurate resources will be allocated to achieve the new targets identified in the policy

document. This expectation is based on increased emphasis by MDAs and NGOs working on FNS on the need for government to create a specific budget line for nutrition and to ensure the release of budgeted funds as a matter of priority.

## 5. Resources

The analysis of ERH data considers resources from two major categories: public investment and private external investment. Private domestic investment was not captured in the cross-country data available in the ERH database. In what follows, we consider the type of resource flows, the main indicators under each category, and the resource scores.

### 5.1 Current resource allocation

By and large, investment in FNS has been very low in Nigeria despite the strong need for action and the numerous policy actions that have been articulated and implemented. Domestic public investment over the assessment period (2009-2013) averaged \$11 per rural capita.<sup>10</sup> ODA and other official flows performed worse, standing at merely \$2 per rural capita. Private external investment is even more precarious,<sup>11</sup> as FDI averaged only \$1 per rural capita, and philanthropic contributions<sup>12</sup> is even less than half of that (Table 11 and Figure 8). As shown in Figure 8, the ERH database indicates that the level of government spending on agriculture in Nigeria is quite low, nearly a third of the regional average. Notably, the bulk of financial resources flowing into FNS in the country comes from domestic sources. In general, ODA and OOF (DAC) to FNS in the country is very low and much lower than the regional average, so are FNS-specific resources derived from philanthropists. This trend is also the case for OOF (DAC) as well as Official flows to FNS from Brazil.<sup>13</sup> Further, FDI to agriculture is lower than ODA to FNS and much lower than the regional average. These findings may be affected by the fact that the ERH data measure resources on rural per capita basis, which may lead to very low results in the case of Nigeria because it has a large rural population.

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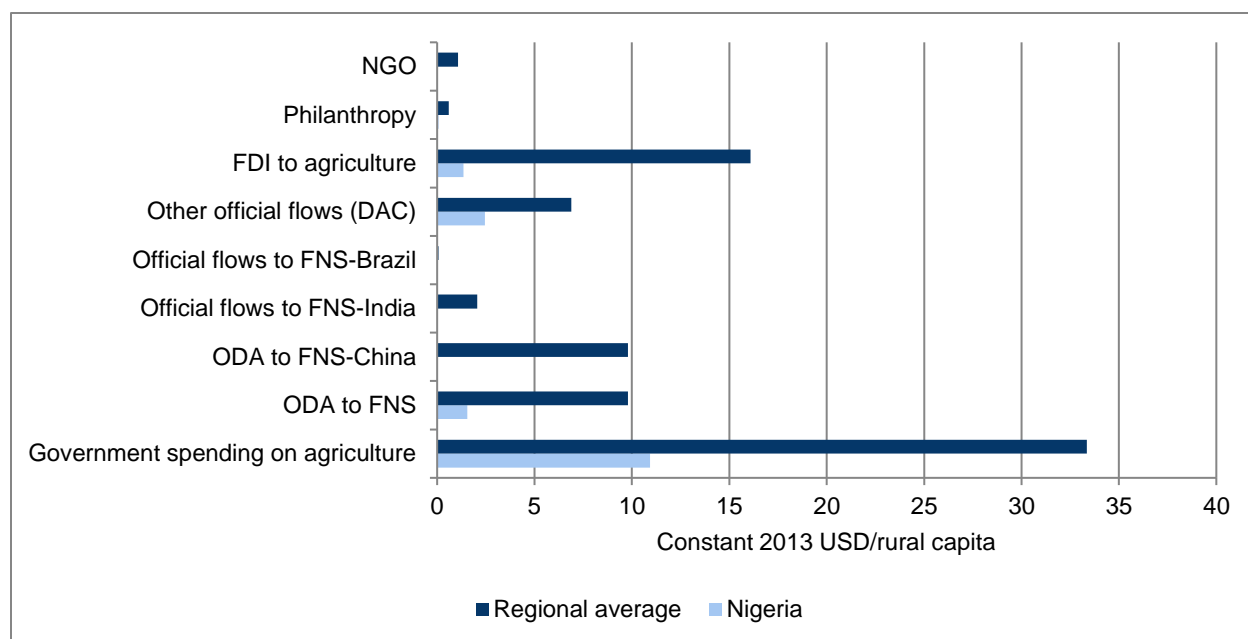
<sup>10</sup> Public investment includes measures of domestic public investment (that is, government spending on agriculture), official development assistance (ODA) for FNS, and other official flows (OOF) for FNS, including non-concessional loans from international institutions such as the World Bank plus loans and grants from emerging economies such as China, India, and Brazil. By definition, the OOF indicator captures the transactions by the official sector with aid recipient countries that do not meet the conditions for eligibility as official development assistance or official aid, either because they are not primarily aimed at development, or because they have a grant element of less than 25 percent (Brookings ERH, 2015). ODA measures FNS official development assistance received by developing countries via all channels minus other official flows. The values represent disbursements for all projects in the database whose status is either completed or in implementation.

<sup>11</sup> Private external investment includes measures of foreign direct investment (FDI) by multinational corporations in the agricultural sector as well as spending by private U.S.-based philanthropists and NGOs on FNS projects in developing countries. FDI indicator measures the FDI inflows (commitments) from all source countries in the *Financial Times* database to the following subsectors: animal food, animal production, animal slaughtering and processing, coffee and tea, crop production, dairy products, fishing, hunting, and trapping, food and vegetables, specialist foods, grains and oilseed, sugar, confectionary products, and all other food (Brookings ERH, 2015).

<sup>12</sup> The NGOs indicator measures the sum of incoming project budgets (commitments) in the InterAction Food Security database, but there is no data on actual spending by NGOs on FNS in Nigeria. Another indicator, U.S. philanthropy, measures the amounts of development aid committed to agriculture, forestry, fishing, and food security in the AidData aggregate search.

<sup>13</sup> Data on ODA to FNS from China are not available in the case of Nigeria. There is also no data on inflows of OOF from India.

**Figure 8: Resource sub-index scores for FNS in Nigeria**



Source: Author's graph using data from Brookings ERH database.

**Table 11: Investment in FNS activities in Nigeria**

| Sources of funding                 | Amount invested (USD/rural capita) |
|------------------------------------|------------------------------------|
| <b>Public investment</b>           |                                    |
| Domestic public investment         | 11                                 |
| Official development assistance    | 2                                  |
| Other official flows               | 2                                  |
| <b>Private external investment</b> |                                    |
| Foreign direct investment          | 1                                  |
| U.S. NGOs and philanthropy         | 0.1                                |
| Nigerian average (USD)             | 16                                 |
| Regional average (USD)             | 80                                 |
| Rank (developing countries)        | 96/113                             |

Source: Adapted from Kharas et al., Brookings ERH Report, 2015.

The situation—though a reflection of the huge gap in resource flows into the FNS sector in Africa and other developing countries more generally—highlights the fact that FNS activities are far more underfunded in Nigeria than in the region. Overall, FNS investment averaged \$16 per rural capita in Nigeria compared to the regional average of \$44, thus placing the country 96 out of 113 developing countries.

The single most important reason policy targets are not met is inadequate funding. The situation is exacerbated by the proliferation of needs at times when resources are dwindling. This has been the situation since 2012 as conflicts and insurgency have worsened rural poverty and heightened food insecurity in the country. Development partners have also modified the conditions for joint financing of FNS activities, a change that sometimes causes delays. Usually the fund disbursement is contingent on the payment of counterpart funds by the government. Nonpayment of counterpart funds when due has been a major problem in the country and has caused delays in implementing many FNS-related projects, sometimes leading to extension of project life and resulting in unmet targets in critical areas of need.

Current resource allocation can be gleaned from the national strategic plan of action for nutrition or NPAN (2014-2019), which was launched in 2014 as the health component of NPFN. It comprised a more detailed breakdown of resource allocation by intervention program and geopolitical zone (Table 12). The estimated public investment for the identified interventions was \$412.2 million. The two percent allocation for monitoring and evaluation and 9 percent for capacity building together with estimated contributions by households bring the total cost to \$471.4 million. The pattern of resource allocation is consistent with that of the previous plan (the 2004 NPAFN) as it shows positive correspondence between resource allocation and areas of need. As shown in Table 12, the largest allocation (38.4 percent) goes to the northwest followed distantly by northeast (14.6 percent), zones where nutritional challenges have been most severe over the years. However, following the successes achieved in tackling insurgency in the northeast and the possibility of the return of millions of internally displaced persons (IDPs), the northeast will soon face the greatest need for resources to tackle FNS issues in the country. Of the 10 national intervention programs in the plan, the Community Management of Acute Nutrition (CMAN) program has the lion share of the cost (33 percent) followed closely by the Comprehensive Food for Prevention of Moderate Malnutrition program (32.1 percent), underpinning the severity of the malnutrition in the country.

With the economic recession in the country from the second quarter of 2016 and dwindling government revenues, actual disbursement of funds for implementing the intervention programs is expected to fall largely below the budgeted figures. Consequently, the actual disbursement of funds is unlikely to be consistent with FNS needs. This is borne out of the historical trend that shows that even if budgetary allocation is consistent with needs, actual spending could follow a perverse trajectory as far as developmental needs are concerned. For instance, between 2008 and 2012, the share of agricultural spending in total federal spending averaged only 4.6 percent,

**Table 12: Estimated cost of implementing plan of action for nutrition in Nigeria (millions USD)**

| Program  | North-west      | North-east      | North-central   | South-west      | South-east     | South-south     | All zones        |
|--|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|------------------|
| Community nutrition program                                | 8.86<br>(6.3)   | 4.74<br>(8.7)   | 5.17<br>(11.3)  | 6.89<br>(12.6)  | 4.01<br>(12.1) | 5.22<br>(12.4)  | 34.89<br>(9.3)   |
| Vitamin A supplement                                       | 1.21<br>(0.8)   | 0.74<br>(1.4)   | 0.53<br>(1.2)   | 0.31<br>(0.6)   | 0.17<br>(0.5)  | 0.29<br>(0.6)   | 3.26<br>(0.8)    |
| Therapeutic zone   | 5.49<br>(3.8)   | 2.94<br>(5.4)   | 3.20<br>(7.2)   | 4.26<br>(7.9)   | 2.48<br>(7.5)  | 3.23<br>(7.7)   | 21.60<br>(5.8)   |
| Multiple micro-nutrients powders                           | 0.83<br>(0.6)   | 1.80<br>(3.3)   | 3.30<br>(7.2)   | 4.78<br>(8.9)   | 3.01<br>(9.1)  | 3.78<br>(8.9)   | 17.49<br>(4.7)   |
| Deworming  | 3.32<br>(2.3)   | 1.51<br>(2.8)   | 2.19<br>(4.8)   | 3.37<br>(6.3)   | 2.27<br>(6.8)  | 2.42<br>(5.8)   | 15.09<br>(4.0)   |
| Iron folic acid supplements for pregnant women             | 1.69<br>(1.2)   | 1.69<br>(3.1)   | 1.13<br>(2.5)   | 2.52<br>(4.7)   | 1.43<br>(4.3)  | 1.66<br>(3.9)   | 10.13<br>(2.7)   |
| Iron fortification of staples                              | 8.85<br>(6.2)   | 4.74<br>(8.7)   | 5.17<br>(11.3)  | 6.89<br>(12.8)  | 4.01<br>(12.1) | 5.22<br>(12.4)  | 34.89<br>(9.3)   |
| Salt iodization  | 0.83<br>(0.6)   | 0.32<br>(0.6)   | 0.32<br>(0.7)   | 0.22<br>(0.4)   | 0.10<br>(0.3)  | 0.15<br>(0.4)   | 1.94<br>(0.5)    |
| CMAN for severe acute malnutrition                         | 56.49<br>(39.7) | 15.97<br>(29.5) | 10.13<br>(22.1) | 10.66<br>(19.8) | 9.75<br>(29.5) | 9.69<br>(23.0)  | 122.69<br>(33.0) |
| Comprehensive food for prevention of moderate malnutrition | 54.90<br>(38.5) | 19.73<br>(36.4) | 14.87<br>(32.4) | 13.91<br>(25.8) | 5.77<br>(17.5) | 10.39<br>(24.7) | 119.35<br>(32.1) |
| Total cost of all 10 Interventions                         | 142.49<br>(100) | 54.17<br>(100)  | 45.84<br>(100)  | 53.80<br>(100)  | 32.99<br>(100) | 42.03<br>(100)  | 371.33<br>(100)  |
| Zonal share of cost (%)                                    | 38.37           | 14.59           | 12.34           | 14.49           | 8.89           | 11.32           | 100              |
| Capacity development (9% of interventions)                 | 12.82           | 4.88            | 4.13            | 4.84            | 2.97           | 3.78            | 33.42            |
| M&E and operations Research (2% of intervention costs)     | 2.85            | 1.08            | 0.92            | 1.08            | 0.66           | 0.84            | 7.43             |
| <b>Grand total</b>   | <b>158.16</b>   | <b>60.13</b>    | <b>50.88</b>    | <b>412.18</b>   | <b>36.63</b>   | <b>48.66</b>    | <b>412.18</b>    |
| Household contributions                                    | 16.07           | 6.13            | 8.63            | 13.23           | 5.87           | 9.27            | 59.20            |

Source: Adapted from FGN (2014) National Strategic Plan of Action for Nutrition. Abuja.

Note: Figures in parentheses are program shares of total intervention cost in each geopolitical zone.

despite the increasing trend of agricultural GDP and the sector's role in tackling poverty, hunger, and unemployment. Public investment has been stymied not only by periodic oil revenue shocks but also by the lopsided manner in which national revenue is being allocated among the three tiers of government that have responsibility for agricultural development. Delays in concluding



transfer arrangements, weak executive capacity, and institutional rigidities can often postpone the release of funds to finance approved projects (Olomola et al., 2014).

## 5.2 Resource mobilization strategy of Nigeria

The extent to which Nigeria will achieve its desired FNS objectives depends on the availability and management of resources. The government is aware of the need to mobilize resources from domestic and external sources to finance FNS policies and projects. This awareness is clearly reflected in the 2004 NPAFN, which outlined budget and resource mobilization strategies. Specifically, the federal government was to finance the plan from the annual budget to the FNS-related line of ministries and institutions that were assigned specific responsibilities in the implementation of the plan. In addition, the government was to mobilize resources from the value-added tax, an education tax, and other taxes on imported food, nutraceuticals, and beverages as well as loans from regional and multilateral institutions (such as the AfDB and World Bank). As shown in Table 13, a total sum of \$253.62 million was expected to be mobilized to finance the plan from 2004 to 2015, with the costs for the short-term, medium-term, and long-term actions representing 10.84 percent, 54.91 percent, and 34.25 percent, respectively.

**Table 13: Budget estimate for financing NPAFN in Nigeria (millions USD)**

| Program focus  | Short-term | Medium-term | Long-term | Total  | Share of NPAN total (%) |
|--|------------|-------------|-----------|--------|-------------------------|
| Food security programs   | 10.74      | 102.85      | 60.0      | 173.59 | 68.44                   |
| Enhancing care-giving capacity   | 6.98       | 15.35       | 2.5       | 24.83  | 9.79                    |
| Enhancing provision of human services  | 2.83       | 15.05       | 19        | 36.88  | 14.54                   |
| Improving capacity to address food and nutrition issues                        | 4.7        | 4.5         | 4.2       | 13.4   | 5.28                    |
| Raising awareness and understanding of the problems of malnutrition in Nigeria | 2.25       | 1.5         | 1.17      | 4.92   | 1.94                    |
| Total cost   | 27.5       | 139.25      | 86.87     | 253.62 | 100                     |

Source: NPAFN - National Planning Commission, Abuja, Nigeria, 2016.

Under the plan, resource allocation is commensurate with FNS needs. Food security programs are allocated the highest share of resources (68.44 percent). The components that deal with provision of human services (14.54 percent), care-giving capacity (9.79 percent), capacity to address food and nutrition issues (5.28 percent), and raising awareness about malnutrition (1.94 percent) follow in that order. In terms of actual disbursements, however, the amount spent on the

activities indicated in the plan is hard to come by. However, analysis of the NPAFN's outcomes suggest that disbursements posed major challenges to the implementation of the plan's programs.

Despite the strong emphasis on policy formulation and articulation of strategies, funding was a serious problem in the implementation of the NPAFN and delivery of nutrition targets. The fundamental issues are the inadequacy of resources, imbalances in resource allocation, and limited executive capacity as well as poor intergovernmental relationships and weak coordination of the multiple agencies involved in the implementation of nutrition policies. According to Barker (2013), there is no publicly available information on public expenditure on nutrition. At the federal level, any budget for nutrition is subsumed within the Federal Ministry of Health's (FMoH) Department of Family Health budget. Once the FMoH's budget is approved, there are typically long delays before it is finally released to its departments and divisions. This leaves little room to maneuver any efforts to plan and implement nutrition-related activities within a short period of time.

## 6. Recommendations and conclusions

### 6.1 Main findings

The targets and action points of SDG2 are part and parcel of policies and action plans of various MDAs in Nigeria, such as the Agricultural Research Council of Nigeria (ARCN), Bank of Agriculture (BOA), Central Bank of Nigeria (CBN), Federal Ministry of Agriculture and Rural Development (FMARD), Nigerian Agricultural Insurance Corporation (NAIC), River Basin Development Authorities (RBDAs), and the Nigerian Incentive-based Risk-Sharing System for Agricultural Lending (NIRSAL). Efforts are being made to coordinate the activities of these MDAs to ensure successful implementation of their programs. Analysis of the FNS gaps and policy environment shows that there is a strong need for intervention to sharpen the policy process and create effective coordination mechanisms in order to have more meaningful impact.

Nigeria's needs score (which is a composite measure of access to food, malnutrition, agricultural productivity gaps, and vulnerability—the four basic targets of the global goal for FNS) indicates that the country's needs are less severe than the average African country, although Nigeria still ranks 81 out of 116 developing countries globally. Moreover, the policy environment is generally weak, as evidenced by the country's policy score, falling below the regional average and ranking 97 out of 116 developing countries. In terms of resource allocation and articulating policies that reflect the significance and nature of the FNS needs in Nigeria, the country's results are mixed. We find a disconnect between the needs and policies on one hand and between needs and resources on the other, possibly accounting for the slow progress made in attaining several FNS targets over the years.

In general, the strengths of the policies vary. Nutrition policies and policies relating to agricultural pricing and trade distortions are well above regional average. In contrast, policies relating to rural investment climate and agriculture, in particular policies relating to research skills and extension, rural social assistance, and women's enabling environment, and resource allocation to rural development, are weak and below regional average. This suggests that agricultural economic policy design needs to be one in which the policy environment should be stronger with higher level of malnutrition and agricultural productivity gap. On the other hand, the good scores in nutrition policy in combination with the poor malnutrition and agricultural productivity gap scores suggest a need for better targeting and participation of stakeholders in implementing those policies.

With regard to resources, domestic public investment is higher than external flows. It is higher than ODA and far higher than private external investment. Stakeholders contacted during the course of this study, however, indicated that domestic investment on FNS programs might have fallen since 2015 and that the observed level of per capita funding may not translate to anything tangible in terms of impact. Moreover, it was indicated that in 2016, external funding might actually have been greater than domestic investment given the inflows from USAID and the AfDB. Overall, however, there is a glaring lack of correspondence between FNS needs and resource flows from domestic and external sources. All the indicators capturing (domestic and external) resource flows to FNS are very low and fall below the regional average. This is an indication that FNS intervention programs have been grossly underfunded, partly accounting for the slow progress made in achieving the targets specified in the action plans.

There seems to be no direct correspondence between available resources and FNS needs, especially in the case of malnutrition where the strongest need has been observed. Evidently, malnutrition needs are very strong and above the regional average whereas the resources are very low and largely below the regional average. The only area where there has been direct correspondence is vulnerability. The low level of vulnerability in the country, which is also below the regional average, is commensurate with the level of available resources. It is important to stress, however, and as shown in Table 13, that there does seem to be a focus on malnutrition in terms of allocation of funds at the resource planning stage. However, full release of allocated funds has never been achieved. Thus, FNS must not only be prioritized in the annual budgetary allocations, allocated funds must also be released and utilized in a timely and organized fashion to implement the related programs in order to achieve the desired FNS outcomes.

## 6.2 Actions to be taken by the government

To realign policy objectives and targets with prevailing FNS needs and resource allocation to achieve the SDG2 targets, the following actions are recommended.

### 6.2.1 Strengthen the institutional framework for implementing SDG2 programs

The policy and institutional framework for implementing SDG2 programs must be strengthened to ensure that adequate and suitable resources are mobilized in order to achieve the specified targets. In this regard, all stakeholders (federal, state, and local governments, and organized private sector and non-state actors) must participate in designing appropriate strategies to achieve the targets and implement, monitor, and evaluate relevant projects. There should also be

more effective use of existing institutional arrangements for collective decision making, especially in the case of FNS issues where cross-tier partnerships are required.<sup>14</sup> Presentation of already-designed projects to secure buy-in is consistent with cooperation, but can only lead to effective collaboration if the other tiers of government are true partners and expected to show real commitment to project implementation.

### 6.2.2 Prepare investment plan for FNS intervention programs

The Agricultural Promotion Policy (APP) document was released in August 2016; however, as of April 2017, there is no associated investment plan to ensure proper linkages between policy actions and resource allocations both at the federal and sub-national levels. This omission has been a major cause of financing gaps, which have hindered the attainment of the specified targets. An investment plan should be prepared without further delay based on projects to be derived from the strategic plan in line with the new agricultural road map. Such an investment plan should give details of the financing requirements annually during the implementation period in accordance with the established priorities (in the Agricultural Promotion Policy document) among agricultural commodity value chains and weighted priorities among the subsectors of agriculture, livestock, and fisheries.

### 6.2.3 Improve rural investment climate through provision of modern infrastructure

Over the years, the rural areas that constitute the domain of agriculture have been ignored in the provision of basic infrastructure such as roads, electricity, and water. A modern agro-industry, which should be the basis for diversifying the Nigerian economy for improved food and nutrition security, cannot thrive in an environment where infrastructure is non-existent or has woefully deteriorated. Input delivery for agroindustrial transformation will not proceed smoothly no matter how keenly interested the private sector is in commercializing the process unless the government provides the requisite infrastructure, such as a road network, electricity, storage facilities, and security network.

### 6.2.4 Expansion of the implementation of the women empowerment fund

There is need to expand this program to cover the 36 states of the federation and ensure that the targeting of beneficiaries is based on credible criteria devoid of political connotation. It is also

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<sup>14</sup> Such institutions include the National Economic and Development Council, National Councils on Agriculture (NCA), National Council on Health (NCH), and National Council on Education (NCE).

important to eliminate delays in disbursement, ensure regularity in the loan cycle, and ensure effective utilization of the loans.

#### 6.2.5 Reconfigure agricultural subsidy for improved FNS and rural investment

In view of the substantial decline in government revenue and the need to attract investment in the rural sector to enhance FNS, there must be a rebalance of the emphasis between subsidizing agricultural inputs (private goods) and providing financial support for agribusiness projects with public good characteristics. A total withdrawal of subsidies on inputs such as improved seeds and fertilizers is not advisable. Rather, what is strongly recommended is a reconfiguration of the subsidy spending in which 50 percent of the current subsidy is allocated to support the provision of specific infrastructure associated with agribusiness projects located in rural areas. The infrastructure support available can be used for matching grants to motivate states to provide infrastructure in rural areas where agribusiness projects are to be cited by private investors under agreed public-private partnerships.

#### 6.2.6 Increase local ownership of intervention projects

The lack of counterpart funds in many of the tripartite donor-assisted projects is often associated with budget constraints. Usually, donors offer the ideas and recommend the projects as part of their contributions to agricultural and rural development in the country. The projects are designed and memoranda prepared for the states to sign at the implementation stage, without adequate input from the states concerned regarding their financial capacity to finance the projects throughout the specified project period, which is also determined by the sponsors (donors). As a result, ownership of the projects does not squarely rest with the government. Project implementation suffers because the states cannot meet the financial requirements of the project and sustainability is jeopardized as project impacts are limited and government commitment wanes. Therefore, policymakers must be in the driver's seat in setting the development agenda, designing the projects to be implemented, and determining the sources of finance. There must also be effective coordination of the development partners such that the financing of FNS intervention programs is not so thinly spread, rendering the impact intangible and objectives unattainable.

### 6.2.7 Establish budget line for nutrition in the relevant MDAs

There is a need to change the existing practice of subsuming nutrition projects under different budget sub-heads in the allocation of treasury funds among MDAs. The government should establish a visible budget head for financing nutrition projects in the relevant MDAs, especially the Ministry of Budget and National Planning, Ministry of Agriculture and Rural Development, Ministry of Health, and Ministry of Education to enable them to finance prioritized nutrition projects accordingly.

### 6.2.8 Target assistance to the most vulnerable groups

The government should promote dietary diversity and improved nutrition for (i) women of childbearing age (15-49 years) through provision of time-saving technologies for food production and processing to allow women more time for child care and enhance their income for increased access to health services; (ii) children under five years of age (6-59 months) through the provision of complementary feeding programs and the promotion of local production of therapeutic foods to assist in treating severe acute malnutrition among children; (iii) school-age children by linking school-feeding programs with local agricultural projects; and (iv) internally displaced people in the northeast by linking school-feeding programs with food procurement from small-holder farmers and relevant food distribution and nutrition interventions.

## 6.3 Suggested actions to be taken by donor agencies

(i) Donor agencies must endeavor to comply with the coordinating arrangements between federal and state governments in project design and implementation. In particular, they should ensure that selection of project beneficiaries and locations are determined based on local priorities and socio-economic considerations rather than the pre-conceived preferences of the donor agencies.

(ii) Donor agencies must raise awareness among project participants about the potential nutrition benefits available from participation. This is likely to address the apathy and unwillingness of some local partners to participate effectively in projects where there is no adequate provision for direct remuneration for implementation staff.

## 6.4 Suggested actions to be taken by local NGOs

(i) The executive capacity of local NGOs to deliver project outcomes needs to be strengthened.

(ii) Local NGOs must strive towards having adequate number of personnel with desired competency to implement nutrition projects.

## 6.5 Suggested actions to be taken by international NGOs

International NGOs need to involve government officials with the responsibility for implementing nutrition projects right from the planning stage any nutrition intervention projects and strengthen partnerships with the government from the stage of project preparation.

## 6.6 Conclusions

Nigeria is determined to end hunger by 2025, in line with SDG2, which aims to eliminate hunger globally by 2030. To this end, FNS-related policy documents and action plans are currently being revised and re-launched by the federal government. Stakeholders are also being mobilized to participate in the design and implementation of intervention programs to achieve the SDG2 targets. Progress is slow at this initial stage while the challenge of food insecurity seems relentless, indicating the advisability to involve experts and institutions with the desired capabilities to provide evidence-based inputs. The inconsistencies between policy actions and FNS needs must also be redressed in the process.

Notwithstanding the enormous resources committed to tackle insurgency and revamp the economy, it is imperative that the government reinforce its commitment to the Zero-Hunger Initiative by prioritizing FNS in the allocation of available resources. The government must also strengthen the policy environment and forge a better alignment between FNS needs and policy actions to prevent a reversal of the gains already made during the MDGs era. Ending hunger and improving FNS under economic recession requires prudent management of resources and a reform of the policy and business environments to attract domestic and external resources. The country has greater need for such resources now more than ever before in its bid to grow the economy out of recession and improve the FNS status of Nigerians.

Finally, the ongoing Zero-Hunger Initiative must inculcate a paradigm shift in government's partnership with NGOs, civil society organizations, and development partners. There is a need to move emphasis away from excessive advocacy and politicization of the intervention programs and towards prioritizing resource allocation by all partners to finance relevant programs. Importance must be placed on empowering vulnerable groups and lifting them out of poverty; developing the skills of those implementing FNS programs; and providing health and nutrition



facilities in addition to basic amenities in the rural areas. By clearing the pathway to ending hunger in this manner, existing and future resource gaps can be bridged and progress towards attaining SDG2 targets can be accelerated in Nigeria.

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## Appendices

**Appendix 1: Trends in Policy Development for FNS in Nigeria**

|   | Year | Nature of policy   | Policy thrust  |
|---|------|--|--|
| 1 | 1995 | National Policy on Food and Nutrition (NPFN) formulated  |  |
| 2 | 1998 | Federal Government approved the National Policy on Food and Nutrition  |  |
| 3 | 2002 | Federal Government launched the National Policy on Food and Nutrition  | To address problems of food and nutrition across different sectors and different strata of society.  |
| 4 | 2003 | National Program for Food Security (2003 to date)  | The specific objectives include: (i) training and educating farmers to produce food; (ii) assisting farmers in achieving their potential for increasing output and productivity; (iii) strengthening the effectiveness of research and extension in bringing technological innovations to farmers, and (iv) utilizing international farming experience to maximize the use of existing facilities. |
| 5 | 2004 | National Plan of Action for Food and Nutrition (NPAFN)   | To translate the goals, objectives and strategies articulated in NPFN into implementable activities and projects.  |
| 6 | 2011 | Agricultural Transformation Agenda (2011-2015)   | ATA sought to add 20 million MT of food to the domestic food supply by 2015 and create 3.5 million jobs. The focus was on driving import substitution by accelerating the production of local staples, to reduce dependence on food imports and turn Nigeria into a net exporter of food.  |
| 7 | 2014 | National Strategic Plan of Action for Nutrition (NPAN) (Health Sector Component of National Policy on Food and Nutrition) 2014-2019. | The general objective is to build upon the framework outlined in the National Food and Nutrition Policy to improve the nutrition status throughout the life cycle of Nigerians with particular focus on vulnerable groups including women of reproductive age and children under five years of age.  |
| 8 | 2016 | Agricultural Promotion Policy (The Green Alternative) 2016 – 2020  | The focus is on food security, import substitution, job creation, and economic diversification.  |
| 9 | 2016 | National Policy on Food and Nutrition in Nigeria (Revised)   | To provide a framework for addressing the problems of food and nutrition insecurity in Nigeria from the individual, household, and community up to the national level. It guides the identification, design and implementation of intervention activities across different sectors.  |

Source: Author's compilation.

## Appendix 2: Rural investment climate sub-index scores for Nigeria (categorical indicators)

|   | Indicators                               | Unit                | Description   | Nigeria | Regional Average |
|---|--|---------------------|---|---------|------------------|
| 1 | Investment climate for rural businesses  | Discrete 1-6        | <p>6: Good for three years</p> <p>5: Government has made major efforts to encourage private traders to open a business</p> <p>4: Government is making efforts to encourage private traders to open a business</p> <p>3: Government efforts to encourage private traders to open a business are weak</p> <p>2: The policy and institutional framework effectively discourages the emergence of rural private businesses with legal status.</p> <p>1: Unsatisfactory for three years</p>  | 3.65    | 3.71             |
| 2 | Policy framework for rural organizations | Discrete 1-6        | <p>6: Good for three years</p> <p>5: Government is pro-active in its political and legal support for the establishment of conditions conducive to the development of organizations of the rural poor.</p> <p>4: Government may make efforts to create the conditions conducive to the establishment of organizations of rural poor people</p> <p>3: While the government may not be officially opposed to the existence of organizations of the rural poor, it makes no effort to create the conditions that facilitate their development.</p> <p>2: The government opposes efforts of the rural poor to organize or to strengthen their representation.</p> <p>1: Unsatisfactory for three years</p> | 4.09    | 4.09             |
| 3 | Accountability in rural areas            | Discrete 1-6        | <p>6: Good for three years</p> <p>5: Government has fully decentralized administrative and fiscal authority to the local level</p> <p>4: Government has done much to decentralize administrative and fiscal authority to the local level</p> <p>3: Government has a policy of decentralizing limited administrative authority to the local level, but this is not accompanied by fiscal decentralization or the institutional reforms and safeguards necessary to enhance transparency and accountability and to eliminate local corruption.</p> <p>2: Government has no effective policy for decentralizing administrative or fiscal authority.</p> <p>1: Unsatisfactory for three years</p>         | 3.34    | 3.45             |
| 4 | <b>Access to land</b>                    | <b>Discrete 1-6</b> | <p>6: Good for three years</p> <p>5: A range of land access mechanisms is available to rural poor households, including women, indigenous populations and other vulnerable groups, and their land access is generally secure.</p> <p>4: A majority of rural poor households, including women, indigenous populations and other vulnerable groups, have access to land.</p> <p>3: A majority of rural poor households have access to some land, though this access is often insecure.</p> <p>2: Rural poor households typically have either no access, or at best insecure access, to land.</p>  | 3.35    | 3.54             |

|   |   |                     |  |      |      |
|---|---|---------------------|--|------|------|
|   |   |                     | 1: Unsatisfactory for three years  |      |      |
| 5 | <b>Access to water for agriculture</b>                  | Discrete 1-6        | 6: Good for three years<br>5: Government is actively pursuing a clear and equitable strategy for water resources management that recognizes the imperatives of agricultural water use<br>4: Government has a water resources management strategy that provides an integrated framework for equitable water resources allocation<br>3: Government may have a water resources management strategy, but does not use it effectively to manage the allocation of water resources.<br>2: Government policy (or PRSP where it exists) does not highlight the need for an equitable allocation of water resources for agriculture.<br>1: Unsatisfactory for three years | 3.62 | 3.62 |
| 6 | <b>Enabling conditions for rural financial services</b> | <b>Discrete 1-6</b> | 6: Good for three years<br>5: Government development plans (including PRSPs) fully recognize the importance of a well-functioning rural finance subsector<br>4: Development plans recognize the important role of financial services in the rural development process<br>3: Government development plans make general supportive comments on the importance of rural finance and access for the rural poor<br>2: The role of rural finance (including but not restricted to credit) and access for the rural poor is not adequately recognized in government policies<br>1: Unsatisfactory for three years   | 4.26 | 3.65 |
| 7 | <b>Dialogue with rural organizations</b>                | <b>Discrete 1-6</b> | 6: Good for three years<br>5: There are well-established political processes for rural organizations to enter into dialogue with government at all levels<br>4: There is a process for rural organizations to enter into dialogue with government or to lobby government<br>3: There is no direct or transparent process for rural organizations to enter into dialogue with government<br>2: There is no process or opportunity for rural organizations to enter into dialogue with government.<br>1: Unsatisfactory for three years  | 3.61 | 3.81 |

Source: Adapted from Kharas et al., *Brookings ERH Report*, 2015.

### Appendix 3: Rural investment climate sub-index scores for Nigeria (Unit = Index)

|   | Indicators                  | Unit         | Description   | Nigeria | Regional Average |
|---|-----------------------------|--------------|---|---------|------------------|
| 1 | <b>Corruption</b>           | <b>Index</b> | This indicator captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as “capture” of the state by elites and private interests.   | -1.088  | -0.681           |
| 2 | <b>Political stability</b>  | <b>Index</b> | This indicator captures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.  | -2.045  | -0.683           |
| 3 | <b>Rule of law</b>          | <b>Index</b> | This indicator captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular, the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence      | -1.177  | -0.768           |
| 4 | <b>Doing business index</b> | <b>Index</b> | This indicator uses a similar distance-to-frontier methodology in order to rank countries based on their ease of doing business. Higher rankings (a low numerical value) indicate better, usually simpler, regulations for businesses and stronger protections of property rights | 43.27   | 48.097           |

Source: Author's computation using data from Brookings ERH database.