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Research study on
Food Systems for Healthier Diets (FSHD)

Implementing agency
Alex Ekwueme Federal University Ndufu-Alike (AE-FUNAI), Ebonyi State, Nigeria

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In collaboration with
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by the **International Food Policy Research Institute (IFPRI)**

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Abbreviations

A4NH	Agriculture for Nutrition and Health
AE-FUNAI	Alex Ekwueme Federal University Ndufu-Alike, Ebonyi State, Nigeria
CGIAR	Consultative Group for International Agricultural Research
CSO	Civil Society Organizations
FAO	Food and Agriculture Organization of the United Nations
FMBNP	Federal Ministry of Budget and National Planning
FSHD	Food Systems for Healthier Diets
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IITA	International Institute of Tropical Agriculture
INGOs	International Nongovernment Organizations
IYCF	National Policy on Infant and Young Child Feeding
MBO	Members of Business Organizations
MDAs	Ministries, Departments and Agencies
NAFDAC	National Agency for Food and Drug Administration and Control
NCFN	National Committee on Food and Nutrition
NGOs	Nongovernment Organizations
NPAFN	National Plan of Action on Food and Nutrition
NPAN	National Plan of Action for Nutrition
NPC	National Population Commission
NPFN	National Policy on Food and Nutrition in Nigeria
NRCRI	National Root Crop Research Institute of Nigeria
SCFN	State Committee on Food and Nutrition
SDGs	Sustainable Development Goals
SUN	Scaling Up Nutrition
UN	United Nations
UNICEF	United Nations Children's Fund
WFP	UN World Food Programme
WHO	World Health Organization
WUR	Wageningen University & Research

Foreword

This research study on Food Systems for Healthier Diets (FSHD) was implemented by Alex Ekwueme Federal University Ndufu-Alike (AE-FUNAI), Ebonyi State, Nigeria. It was sponsored by Wageningen University, Netherlands in collaboration with CGIAR Research Program on Agriculture for Nutrition and Health (A4NH). Interestingly International Food Policy Research Institute (IFPRI) led the study.

The strategic goal of A4NH and its research program seek to maximize the health and nutritional benefits of the underprivileged through development of agriculture by identifying, developing, and supporting collaboration between agriculture, health, and nutrition. FSHD is designed to guarantee that the practices and interventions of agriculture cum policies are implemented effectively in such a way as to make the best use of health and nutrition benefits. Once achieved, it will bring about reduction in health risks by using a food systems approach. The all-encompassing and sustainable food systems so developed will then, make possible an even-handed access, availability and efficient delivery of safe cum healthy food to consumers.

The study focused on the following foundation issues as integral aspects of FSHD: food and nutrition security, land and water use, climate change, cum agri-marketing and value chain. Respondents gave their opinion about major food system-related policies in Nigeria. It is interesting to note that “food and nutrition security exists when all people at all times have physical, social and economic access to food, which is consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life.” This study is revolves around Goal 2 of the 17 Sustainable Development Goals adopted by the UN General Assembly in 2015 dealing with “end hunger, achieve food security and improved nutrition and promote sustainable agriculture”.

In line with its vision, mission and objectives, AE-FUNAI as a young University is working hard to contribute towards food security and income generation for farmers in Nigeria and in Africa generally. The University is therefore grateful for the opportunity of spare-heading this study and collaborating with all the partners to achieve this.³³ These efforts will become useless to beneficiaries and the masses of Nigerian citizens if they do not receive an assurance of improved food, nutrition, and healthier diets. There is need for Government to devise ways in which agriculture can address household dietary gaps which is paramount in any research-for-development agenda that expects to bring about innovations and policy interventions capable of facilitating diet transformation in Nigeria and Africa at large.”

Responses from stakeholders in this study were received. Their personal views of key actions relating to specific food system issues in Nigeria were used as a basis for this report. The report observed that food and nutrition situation in Nigeria has given rise to different policies and intervention programs aimed at addressing food system-related concerns in the country. However, government participation in food policy support to healthy diet is considered to be disappointingly low. Unfortunately, majority of the respondents affirmed that the federal government policy agenda on food system does not reflect realities in the country. This report also identified some policy challenges in the country regarding; access to sufficient, safe and healthy food. It calls for more action by the Government and other stakeholders.

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Abstract

Nutrition and healthy diet are perennial issues that have dogged food security debates for decades. Their prevalence is understandable, given that these issues have received considerable attention from researchers, development agencies and policy-makers in industrial and developing country contexts. Efforts and initiatives to enhance nutrition and healthy diet in developing countries are gaining momentum at local and national levels. To design and utilize effective vehicles for action on nutrition and healthy diets require a clear understanding of how the key players in the sector understand and perceive the nature and role of such vehicle. This baseline study was, therefore, motivated by the need to shed light on the personal views of key actors on specific food system issues in Nigeria which will form a benchmark for a longer-term policy impact evaluation for the Food System for Healthier Diets (FSHD) programme. Four core issues relevant to food systems and healthier diets in the Nigerian context were examined. These are food and nutrition security, land and water use, climate change, and agri-marketing and value chains. Specifically, the study considered the general view of the key actors on the importance of access to sufficient, safe and healthy food to Nigeria; examined if there are any issue they consider as urgent policy challenge in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria; and ascertained the perception of these key actors on major food system-related policies in Nigeria. The findings of this study is mixed at best. However, there is consensus among the participants that access to sufficient, safe and healthy food is important to Nigeria. In any case, the need for sufficient food to end hunger tends to crowd out quest for safe and healthy food in the country. Identified as more vulnerable to the challenges of access to sufficient, safe and healthy food are the pregnant and lactating women, children below 5 years, and urban poor households. There are policy challenges in the country with respect to access to sufficient, safe and healthy food. Among the major policy challenges are the need to increase agricultural production to end hunger; inadequate implementation of policy due to poor funding and corruption practices – monitoring and evaluation of policy implementation are hardly provided for; inadequate policy communication and awareness among implementing agencies; and lack of synergy among food system-related policy stakeholders (especially among government agencies, and between government agencies and other related organizations). Nevertheless, government agencies, private sector actors, NGOs, development partners and other related organizations are making efforts to address these challenges. However, the uncoordinated nature of these efforts due to lack of synergy among the key actors seems to be the most urgent challenge militating against access to sufficient, safe and healthy food in Nigeria. Therefore, the current drive of the Federal Government towards the establishment of food safety management committee in each State of the federation is commendable.

1 Introduction

1.1 Introductory background

Recent studies continue to point to a rise in global hunger after a prolonged decline. It is estimated that about 821 million people – that is, about one out of every nine persons in the world – are undernourished. Severe food insecurity and undernourishment are apparently increasing in virtually every regions of Africa. Of course, increasing in food insecurity and undernourishment are clear indication that there are a lot to be done to ensure that no one is left behind in the quest towards a world with zero hunger (FAO, IFAD, UNICEF, WFP and WHO, 2018). Little wonder food security related issues continue to be of public policy concern in many economies of the world. The relationship between food security and food-related public policy has continued to be emphasized, particularly at the various national and international summits aimed at improving healthy diet. Nutrition has significant influence on human growth, development, and productive life and by extension on economic growth and development (UNICEF, 2016; and United Nations Children’s Fund, 2015).

Individual and household nutrition security is threatened by several factors including poor storage and distribution of food, increased food price volatility, globalisation, climate change, and international trade regimes. Without coordinated effort, increasing numbers of individuals and households may experience inadequate access to nutrition and healthy diet (IFPRI, 2004). To end hunger, food insecurity and malnutrition requires that relevant state and non-state actors implement in a coordinated manner a coherent set of actions. Public policy remains a major instrument for coordinating, controlling and management of these factors to ensure adequate nutrition and healthy diet.

Globally, there is renewed commitment to strengthen policies that will reshape the world’s food system. The well-being of individuals and households will depend on the creation of a food system that is more inclusive, efficient, climate-smart, sustainable, business-friendly, nutrition- and health-driven (Shenggen, 2016). It is, therefore, not unusual that the government of Nigeria has continued to demonstrate commitment towards sustainable national food system.

The commitment of government of Nigeria to the goal of food and nutrition security has led to remarkable improvements in agricultural production and productivity. This achievement is not credited to the efforts of government alone. Other relevant sectors such as the private sector, international and national Non-governmental organizations (NGOs), research institutes, and development agencies have also played key roles (General Economics Division, 2015). However, the remarkable improvement in agricultural production and productivity has not easily translated into improved nutrition and healthy diet among most of the consumers. For instance, an estimated 2 million children in Nigeria suffer from severe acute malnutrition (SAM), but only two out of every 10 children affected is currently reached with treatment. Seven percent of women of childbearing age also suffer from acute malnutrition (NNHS, 2018; UNICEF, 2019). As a result, nutrition and healthy diet have become cardinal issues on food security debate, research and policy formulation (FAO, IFAD, UNICEF, WFP and WHO, 2018; and UNICEF, 2016).

Consequently, IFPRI and AN4H have embarked on a multi-country project for a baseline survey of food system-related policies with the aim to use the output of this study as the first component of a longer-term policy impact evaluation of the Food System for Healthier Diet (FSHD) Flagship. The FSHD is a part of the Agriculture for Nutrition and Health (A4NH) CGIAR Research Program. The Nigerian study is based on a similar exercise already implemented in Bangladesh and Vietnam and is expected to contribute to a comparative baseline for the different countries in this flagship program. The Wageningen University & Research in the Netherlands in partnership with Alex Ekwueme Federal University Ndufu-Alike in Ebonyi State of Nigeria conducted the policy baseline survey for Nigeria.

1.2 The policy landscape on food system and food security

Nigeria, Africa's most populous country and recently its largest economy, has the highest burden of malnutrition in the continent with over 10 million stunted children and wasting of children beyond WHO's threshold of 15%. In addition, 25 percent of children under 5 are underweight and almost half (about 49%) of the women of reproductive age are anaemic. Malnutrition is widespread in the country. Ironically, the rural and sub-urban areas where most of the food products are supposedly cultivated are especially vulnerable to chronic food shortages, unbalanced nutrition, malnutrition, erratic food supply, high food costs, poor quality foods, and even total lack of food.

Each of these food and nutrition challenges has significant implications for individuals, households and the economy. These include lost investments in human capital due to premature adult mortality and preventable child deaths linked to diet-related diseases, health-related challenges and associated care costs, loss of income due to illness, low labour productivity and so on. The economic burden of micronutrient deficiencies, overweight and undernutrition to the national economy is large. The huge amount of money invested in attempting to ensure food and nutrition security in Nigeria without significant success calls for a fundamental review of the policies driving these efforts (Akinyele, 2009; European Commission, 2017; and FAO, 2017).

In the past, food and nutrition programs in Nigeria were sectoral based, coordinated separately and with limited scope. Different ministries designed policies with nutrition component where nutrition was considered based on the perspective of each ministerial mandate. Among such policies are: Health Sector Nutrition Policy, National Health Policy and Guidelines, Science and Technology Policy, Mass Communication Policy, Agricultural Transformation Agenda, National Agricultural Policy, Social Development Policy, National Population Policy, Industrial Policy, Women in Development Policy, National Policy on School Health, National Policy on Education, Early Child Care and Development, National Policy on Non-Communicable Diseases, National Policy on Food Safety and its Implementation Strategy, National Policy on Infant and Young Child Feeding (IYCF), National Policy on Adolescent Health and Development in Nigeria, and Rural Development Policy (NPC, 2001).

Since the last decade, the Federal Government of Nigeria has placed high priority on nutrition and healthy diets in its development agenda. The Nigerian government is striving to reduce reliance on imported food, and improve on national food nutrition security to meet dietary needs for a healthy and active life. As a result, the government has made efforts towards strengthening nutrition governance. These include participation in the Scaling Up Nutrition (SUN) Movement designed for multiple coordination that includes government, Civil Society Organizations (CSO), donors, development partners, Members of Business Organizations (MBO) and other related stakeholder groups. The National Plan of Action on Food and Nutrition (NPAFN) was adopted in 2014. The 2001 multi-sectoral National Policy on Food and Nutrition was revised and re-launched in 2016. To coordinate all relevant multi-sectoral stakeholders, the federal government established

a multi-sectoral National Committee on Food and Nutrition (NCFN) chaired by the Federal Ministry of Budget and National Planning (FMBNP). The NCFN meets quarterly to review and align activities of relevant ministries, departments and agencies (MDAs) with the National Policy on Food and Nutrition (NPFN), and to discuss development of strategies and decisions relating to nutrition emergencies.

Members of NCFN are drawn from the Ministries of Agriculture, Health, Education, Finance, Women Affairs, Information, Water Resources, Science and Technology, and the Planning Commission. Other external partners include UN agencies, national and international non-governmental organizations, donors, media, and the private sector. The major focus of NPFN and NPAN are presented below:

- National Policy on Food and Nutrition in Nigeria (NPFN): The overall goal of the National Policy on Food and Nutrition in Nigeria is to attain optimal nutritional status for all Nigerians, with particular emphasis on the most vulnerable groups such as children, women, adolescents, elderly, and groups with special nutritional needs. The deadline set for the achievement of NPFN's goal is 2025.
- National Plan of Action for Nutrition (NPAN): The primary objective of the National Plan of Action on Food and Nutrition (NPAN) is to transform the objectives, goals and strategies articulated in the NPFN into implementable activities and projects.

The State (sub-national) governments are expected to replicate NCFN in their States as State Committee on Food and Nutrition (SCFN). However, not many States have operational SCFN. In any case, there is obvious deliberate effort by Nigerian government to explore the nexus between agriculture and nutrition in order to further contribute to the nation's efforts to expand multi-sectoral approaches to nutrition (JICA, 2017; and European Commission, 2017). In 2016, Nigeria launched its "Zero Hunger Initiative" to achieve the UN's Sustainable Development goal of eliminating hunger and undernutrition by 2025 – ahead of the 2030 deadline of the UN's SDGs. The initiative is being coordinated by the former President of Nigeria, Chief Olusegun Obasanjo.

These efforts to ensure a food-secure future in the country are facing a growing set of challenges. Increase in insecurity of farmers and farm produce, high population growth rates, heavy disease

burdens, increasing competition for land and natural resources, and economic crises are among the many factors restricting progress on food and nutrition security (IUCN, 2013). While these and other related issues have been widely recognized by food security policy-makers across the world, one vital factor has received much less attention: the need to consider the personal views of key actors in food-system related sector on policies designed to achieve food and nutrition security in the country. This is a major contribution of this report.

2 Objectives, scope and methodology

2.1 Objectives of the research

The research objective was to conduct a policy baseline assessment among a cross-sectional sample of food system-related policy actors on their understanding of food system changes and evolving priorities of healthier diet. This assessment provides an overview of the current policy context around food systems in Nigeria which will form the threshold for a longer-term policy impact assessment of the Food System for Healthier Diet (FSHD) Flagship in 2021 or 2022. The FSHD is a major component of the Agriculture for Nutrition and Health (A4NH) CGIAR Research Program. The idea of this baseline assessment is to document the perceptions of the key-actors in food system-related policies and changes in views.

2.2 The conceptual framework

The notion that the policy process can be considered as a series of steps in a cyclical model of decision making was first proposed in the work of Harold Lasswell in the early 1950s (Lasswell, 1956, 1971). Thus, in reality, a policy process is hardly linear. To capture the multiple and interrelated factors shaping policy outcomes, the study adopted a conceptual framework for capturing this inter-sectionalism of the policy process as presented by Institute of Development Studies (IDS) (2006). The framework has been found very useful for establishing a policy baseline against which changes can be evaluated after a reasonable time lag. The IDS document on understanding policy processes presents three interrelated dimensions of policy process.

- i. Knowledge and discourse dimension: this aspect focuses on ‘policy narrative’. It considers how policy narrative is framed through science, research, and related activities;

- ii. Actors and networks dimension: this considers the key players and how they are connected; and,
- iii. Politics and interests dimension: this focuses on the underlying power dynamics.

Understanding policy outcomes requires the consideration of these three dimensions and the intersections among the overlapping perspectives. The research approach used in this policy baseline assessment followed this conceptual framework. Two strategies were used: a qualitative study based on face-to-face interviews of selected policy actors drawn from diverse fields and a semi-quantitative assisted online survey of a similar but larger pool of respondents. The primary research was also complemented by a review of selected literature.

2.3 Contextualizing the research: finalizing choice of issues through literature review

Food System for Healthier Diet (FSHD) is a multi-country studies designed on a common analytical framework for ease comparison and understanding of the outcomes. However, the studies captured each country's peculiarities. To capture the peculiarities in Nigeria, the first stage involved the review of selected literature with the aim of identifying relevant issues on food system-related policies. This was followed by consultation of few selected key actors drawn from academia, research consultants, food system practitioners, and policy planners. The purpose of the consultations was to harmonize and prioritize relevant issues identified during literature review. These activities informed the design of the research instruments for the face-to-face interviews and online survey. Four cardinal issues most relevant to food systems and healthier diets in the Nigerian context were identified (Meybeck et al., 2018). These are:

- i. Food and nutrition security
- ii. Land and water use
- iii. Climate Change
- iv. Agri-marketing and Value Chain

In this study ‘food system’ is broadly defined as the set of different processes, activities, and infrastructures as well as institutions, individual and collective actors that are directly involved in the production, processing, distribution, and consumption of food, and the outputs of these activities, including socioeconomic and environmental outcomes. On the other hand, a diet is considered as healthy if it contains adequate amounts of all the necessary nutrients required for healthy growth and activity and to protect against malnutrition in all its forms, as well as non-communicable diseases, including diabetes, heart disease, stroke and cancer (Rahman, Islam and Rahman, 2018).

2.4 Methodology and research implementation

Primary data was used in this study. To identify relevant issues on food system-related policies in Nigeria, related literature were reviewed and few key actors were consulted. After identifying the cardinal issues, the research instrument for the face-to-face open-ended interview was designed based on the Actors-Discourses-Interest (ADI) framework (Keeley and Scoones, 2003). The questionnaire for the face-to-face interview is presented in *Annex A*. After the face-to-face interviews which were conducted in November and December 2018, the responses obtained were incorporated in preparing the final questionnaire used in the online survey. This is presented in *Annex B*. The two research instruments were reviewed by members of the project team.

The face-to-face interviews comprised of 25 key informants selected from different sectors in the food system value-chain while 100 key informants sample size was selected for the online survey. The key informants for both surveys were drawn from a cross-section of sectors, including:

- Government officials from the ministries of agriculture and health (nutrition subdivision)
- Private sector (food processors, dealers, and transporters)
- National research organizations
- NGOs and INGOs
- Think tanks
- Development partners, and
- Academia and technical experts.

2.5 Respondent profiles

Several indicators were used to collect the profiles of the respondents of both the face-to-face interviews and online survey. However, in conformity with ethical guideline for the study, the personal identity of the respondents have been kept anonymous. The analyses of responses collected reflect only the main indicators of institutional type.

2.5.1 Face-to-face interviews

Twenty five key-informants (*Annex C*) were interviewed using a face-to-face open-ended approach structured around the Actors-Discourses-Interest framework to unveil the narratives, agenda setting and processes of current access to sufficient, safe and healthy food; policy challenges with respect to access to sufficient, safe and healthy food; key actors relevant for food policy and the focus of each actors; major food system-related policies; and insights in the interests of key actors in food system-related policy. The respondents were selected from a broad range of personnel from Academia/national research institutes, Development partners, Private sector, Government, International NGO, and Think Tank (see Table 1). Multistage sampling method was used for the selection. First, relevant organizations and government agencies in Lagos and Ibadan were purposively sampled. Then, letters were sent and visits were made to explain the study and its essence. The organizations and government agencies were requested to select the person(s) in the right position to discuss the subject of the study. Few private organizations that were not willing to participate in the study were replaced with similar relevant organizations. The government sector recorded the single largest group of participants; this is because in each of the cities (Lagos and Ibadan), staff of both the Ministry of Agriculture and Ministry of Health (Nutrition unit) were sampled. This is followed by the private sector and academia/national research institutes. Data on the indicators captured during the face-to-face interviews are provided in Annex D.

Table 1. Face-to-face interview: profile of respondents

SN	Type of organization	Number of participants	% of total
1.	Academia/National Research Institutes	4	16
2.	Government	11	44
3.	International Development Partner	1	4
4.	International NGO	1	4
5.	Private	7	28
6.	Thank Tank	1	4
	<i>Total</i>	25	100

2.5.2 Respondent profiles: online survey

While framing the research methodology, a total of 100 respondents were purposively selected from different relevant organizations and government agencies mostly from Lagos, Ibadan, and Abuja; few relevant key players outside these cities were selected. Additional 20 respondents were selected to provide for possible non-responses. Thus, 120 respondents were invited to participate in the online survey. However, although 107 attempted the online survey, only about 70 respondents completed the survey questions after several official visits, email and telephonic reminders, and persuasion. For instance, just like the face-to-face interview, we had to obtain official permission to administer the online questionnaire to staff of Lagos State Government (Ministry of Agriculture and Ministry of Health) before they could respond. The information about the online respondents is given in *Annex E* and summaries of the responses on the indicators, as captured during the online survey, are presented in *Annex F*. Figure 1 depicts the categories of respondents who participated in the online survey.

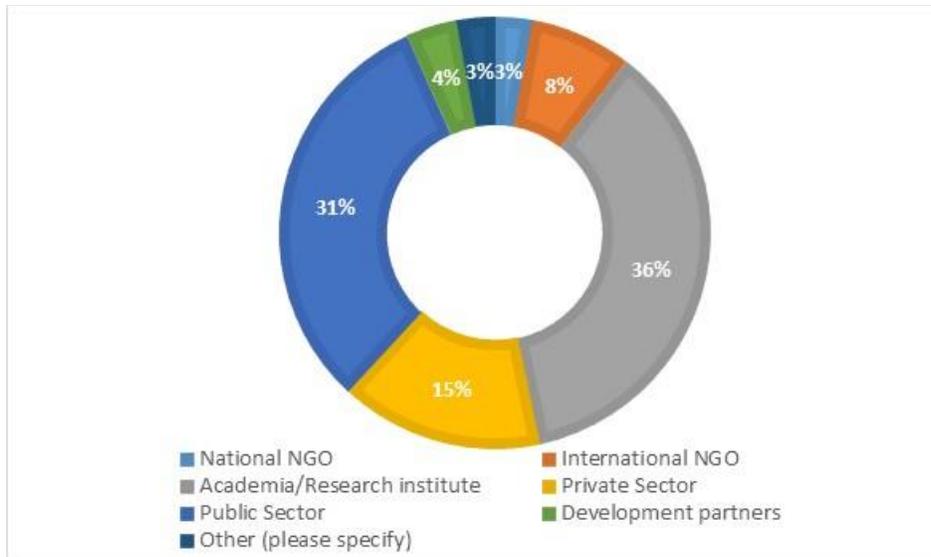


Figure 1. Online survey: Profile of Respondents

Unlike in the face-to-face interviews, the single largest group of participants in the online survey was from the academia/research institutes followed by various government ministries and agencies, and the private sector. Figure 1 also suggests that key players in national NGO probably did not show much interest in the study; alternatively, it is possible that some staff of these national NGOs who work elsewhere preferred to identify with their regular job. The few international NGOs and development partners selected responded. Only three respondents did not indicate their sectors.

2.5.3 Comparison of respondent profiles of face-to-face interviews and online survey

Figure 2 presents a comparison between the profiles of the face-to-face survey and the online survey using percentage of total respondents. Academia/national Research institutes was highest in the online survey while government sector participation was highest in the face-to-face component. In both components, the private sector participation was prominent. Proportions of participation from the development partners were almost the same in both components of the research.

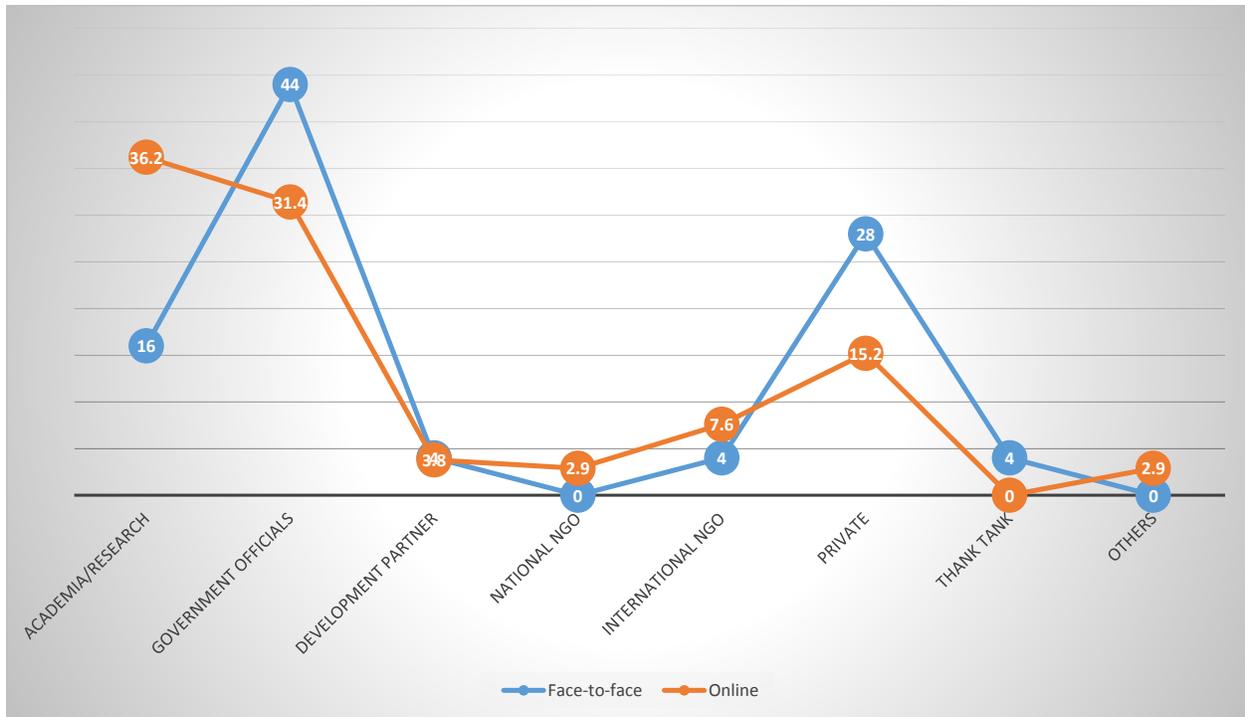


Figure 2. Comparison of respondent profiles of face-to-face interviews and online survey

3 Findings of the research: face-to-face survey

The questions and summaries of the responses in the face-to-face survey are presented in this section. In drawing these summaries, efforts were made to keep the responses as close as possible the way they were expressed.

1. Do you consider access to sufficient, safe and healthy food important to Nigeria?

This was part of the entry behaviour questions included to ensure that the participant is relaxed for more detailed discussion. All the respondents but one agreed that access to sufficient, safe and healthy food is important to Nigeria.

2. Why do you consider (or do not consider) access to sufficient, safe and healthy food important to Nigeria?

The respondent, who did not agree that access to sufficient, safe and healthy food is important to Nigeria, opined that most people in the country do not consider the quality of what they eat as much as they consider the quantity. He blamed the government, who according to him, is not doing enough to reduce the first challenge which is hunger. People know the healthy food to eat to be nourished but availability of money is the problem.

However, the rest of the respondents who agreed that access to sufficient, safe and healthy food is important to Nigeria gave diverse reasons including:

- i. Unsafe food is a death trap. If someone wants to die quickly he should eat contaminated fish. Most fish hawkers are not selling good and quality fish generally because most are already contaminated due to exposure to dusts and methods through which those fishes were killed.
- ii. The awareness for safe and healthy food is increasing though it is still relatively low. Generally, Nigerians are yet to appreciate the importance of nutrition as against quantity consumed.
- iii. The way we handle our foods especially the farmers, from the farm to the point of sale where the market women take over, is not too healthy and that is why different types of ailments are emerging in the society.
- iv. We need safe and healthy food for healthy living. “We are what we eat”.
- v. The level of malnutrition is too high. Child malnutrition are on the increase.
- vi. Abundant food is needed to feed the teeming population; given sufficient food, the citizens will begin to care about safety and healthy nutrition
- vii. Unsafe and unhealthy food predispose the body to diseases.
- viii. Eating the right food (nutritious and safe) has direct relationship with the development of human body especially at the early stages of life.
- ix. Insisting on sufficient, safe and healthy food is a proactive way of managing food contamination and malnutrition.
- x. There is total misconception on the purpose of food as well as why it should be safe and healthy.

There is consensus among the respondents that access to sufficient, safe and healthy food is important to Nigeria; however, access to safe and healthy food seems to be crowded out by the need for sufficient food. Other reasons most Nigerians do not take the need for safe and healthy food seriously is the high level of poverty as well as general perception that eating processed food, often associated with the elites, implies eating safe and healthy food. In addition, the high cost of

safe and healthy food affect its accessibility by most households. Captured in the Box 1 are direct responses from three participants.

Box 1. Why should Nigeria be concerned about access to sufficient, access, and healthy food?

Response A: *The way we handle our foods, especially from the farm to the point of sale where the market women take over, is not too healthy and that is why different types of ailments are emerging in the society. We are consuming a lot of food materials that are not safe. The farmers are not to be blamed anyway because there is no processing facilities to preserve the food, even the road network is very poor too. There is a research we conducted a while ago on fish, groundnut and melon brought from the northern part of the country. We checked the mycotoxin level of these products and found out that the aflatoxin level is very high. So awareness needs to be created for people to be well informed on the safeness of what they consume as this will make people to comply with food safety rules. The European Union (EU) is doing a great job in this aspect.*

Response B: *Food safety is very important. This is the reason why Nigeria relies on National Agency for Food and Drug Administration Control (NAFDAC) to enforce food safety. But the truth of the matter is that finance is key. People know the good food to eat to be nourished but availability of money is the problem. There is no enabling environment for private manufacturing companies to function well; that is why most of them have stopped production. The hungry government officials collect multiple taxes from poor companies that are just evolving thereby killing them and sending them out of the market. Corruption, lack of infrastructure and security affect access to sufficient, safe and healthy food in Nigeria.*

Response C: *There is clear difference among the terms: sufficient food, safe food and healthy food. Food is not food if it can't supply what the body needs. Food security should focus on the micronutrients the body needs. People can be eating without having the nutrients the body needs. We need the right nutrients to grow and develop to our full capacity as human beings. When we are well developed, we can contribute towards the development of our society. This is what is holding Africa down. Until we give food its rightful place, we will not make progress. If you look at a nation that is not growing, you can trace it to their food system. Every country that has developed today, started from the food sector. You need the right capacity to develop. You can't have the right capacity if your brain and body cannot function effectively. We need to look at food beyond just filling up the stomach. Food should lead to capacity development.*

Food safety and food security are not the same. Food safety may not consider the content of your food. It may be looking at how hygienic the food is, the contents that helps for proper digestion and assimilation into the body system.

Healthy food is not all about being safe. Healthy food is the one that guarantees that your body cells are healthy. It is the food that has those essential components that drive health. But within the ambit of healthy food, you can discuss food safety. Your healthy food must be safe before it can add full value to the body.

Unfortunately, what we call food today is only in respect to hunger – what fills up the stomach. Today, we look at food from a layman's view of hunger. But we know that the stomach doesn't get hungry. What gets hungry are those parts and cells of the body that need micronutrients to function optimally; examples: the eyes, brain, organs, and all the cells; they get hungry. It's often the case that when these cells get hungry, they send message to the brain. The brain respond by sending message to the stomach walls. The stomach walls will wobble; then, you think you are hungry. It's never the stomach that gets hungry. But what has happened to us? The stomach walls wobble and once you put in something into it, the wobbling will end because it doesn't distinguish between classes of food. So, what you put there may not necessarily be what the cells need (or, are asking for). Unfortunately, we have lost all sense of what food should be. That's why some people get hungry today and buy a bottle of Coke, drink and the hunger stops. The stomach walls stop wobbling, but the cells are left hungry. This is what is called hidden hunger.

There is a school of thought, today, that Africa is suffering from hidden hunger. Our type of civilization has made us loss those traditional eating habits that ensures we get little of all the nutrients needed by our body cells. Except we begin to address the problem of hidden hunger, Africa may remain less developed.

Are there peculiarities around Lagos and Ibadan areas? If yes, why – what informed your classification?

Most participants agreed that there are peculiarities around Lagos and Oyo area in the light of access to sufficient, safe and healthy food. They identified the under-listed factors:

- i. Oyo State is a major stakeholder in the production of aquaculture products such as fish. Thus, if there is a major disease outbreak in Oyo aquaculture, it will affect national production and it can easily spread to other States receiving supplies from Ibadan (the State capital).
- ii. Ibadan people (in Oyo State) generally do not appreciate quality of food as much as they appreciate the quantity of food. Even the farmers sell the best of their harvest for revenue while they eat the damaged or low quality portion of their produce.
- iii. Most of the people erroneously believe that one must be rich to eat healthy food.
- iv. Low level of literacy in Oyo State is one of the major causes of nonchalance of many market women in the area of safe and healthy food.
- v. Majority of food in Lagos (about 82%) is from other states of the country including foreign markets. This makes Lagos State vulnerable to food shocks in other States.

Thus, there are clear peculiarities around Lagos and Ibadan areas in terms of access to sufficient, safe and healthy food. The two localities have large population of low income households whose major interest is, first, to end hunger. As a result, many food producers who supply these localities do not invest in ensuring that the food or farm produce are safe and healthy.

3. Are there particular categories in the population more vulnerable in respect to access to sufficient, safe and healthy food important to Nigeria?

Majority agree that the following are more vulnerable in respect to access to sufficient, safe and healthy food important to Nigeria.

- i. The women (especially pregnant and lactating women) and children (especially below age 5). Sufficient, safe and healthy food affects the brain development of children.
- ii. The urban poor and the rural poor, including street children, are the most vulnerable groups. The urban poor is much more vulnerable than the rural poor.
- iii. The illiterate are the most vulnerable.
- iv. Men, because of the psychological effects of not providing enough for their children.

Basically, the participants identified as more vulnerable the pregnant and lactating women, followed by children below 5 years. Urban poor households were also identified as vulnerable by most of the respondents.

4. In your opinion, what do you consider as the most urgent policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria?

The most urgent policy challenges identified include:

- i. The need for increased agricultural production.
- ii. Lack of proper regulation and monitoring of agricultural activities. Apart from processed and packaged food, generally, there is no set standard for guiding the quality of food in the country. Even in few cases where there are standards, there is no effective implementation strategy to accomplish them.
- iii. Non-existent legal framework to back up some policies especially on fishery and aquaculture.
- iv. Sometimes, advocacy and lobbying against certain food policies end up distorting these policies such that the main essence is defeated.
- v. Welfare of the workers (identified as the major challenge).
- vi. Non-availability of appropriate regulatory tools for workers as well as lack of training and retraining of staff.
- vii. Ineffective implementation of policies and strategies. Policy implementation is not properly funded. Nigeria has good policies and strategies but most end on paper. Most of these policies are not given the awareness they deserve. Thus, most of the concerned classes of the society especially the small subsistence farmers, processors and vendors are ignorant of these policies. Most stakeholders are not carried along when policies are formulated and this makes policy actualization very difficult resulting in policy somersault. There is an obvious gap between policy-makers and policy implementers. There is poor policy and information dissemination.
- viii. Lack of Monitoring and Evaluation system in most food policies.
- ix. Regulatory agencies in the food industry, like NAFDAC, are a hindrance to the growth of the food industry. For instance, due to the presence of rent-seekers, the general cost

(legal and illegal) of registration with NAFDAC is very high and it takes a long time to finish the process.

- x. Ageing farmers.
- xi. Lack of storage facility which is the major cause of high postharvest losses.
- xii. Bad road network affects transporters' willingness to transport perishable food items.
- xiii. Lack of synergy among the stakeholders (government, NGOs and private organizations) in the food value chain.

Increase in agricultural production to end hunger is needed before the campaign for safe and healthy food can gain popularity among the middle- and low-income classes. Most policies do not receive implementation and monitoring cum evaluation funds; hence the poor level of implementation of food system-related policies. Effective implementation requires proper policy communication to all the relevant actors. This is hardly the case due to poor funding of the action plan. The response of one of the key informant is captured in Box 2.

Box 2. Urgent policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria.

Response: Generally, there is no policy challenge in Nigeria. The country has well-thought through policies. Check the policies of different government regimes, they are essentially the same. All we need is to implement what we have. If we solve the problem of hidden hunger and begin to think effectively, our problems will end.

The other issue is inconsistency. Each government regime wants to make a name and claim ownership by truncating previous policies – policy 'in-continuity'! The nation still lacks the right leadership. Our leaders lack commitment to national (common) goals. Producing a good policy to a leader who doesn't believe in the policy is useless. Even the citizens are not aware of most policies.

In this country, there is no M&E [monitoring & Evaluation] framework attached to our policies. None had been evaluated before. When you implement and evaluate your policies, you can identify the existing gaps. Our political structure doesn't permit policy consistency. Why can't we have, like many other developed nations, long term policy that new government regime cannot change until it runs to the end?

5. Are you aware of any effort by government (including government agencies) or other organizations towards addressing these challenges in Nigeria?

The following were identified as government effects towards address food system-related policy challenges:

- i. State governments, especially Oyo, are currently formulating policies to sanitize the fish industry.

- ii. Government effort in engaging youth in agriculture and creation of jobs; example is the N-power scheme.
- iii. A lot of NGOs are working on the issue of safe food and malnutrition among children.
- iv. Federal Government mandated State governments to set up food safety management committee in their States. This committee comprises of personnel from ministry of health, agriculture, education, and restaurant owners, bakers, food sellers and other relevant stakeholders. The mandate is to enhance healthy and safe food in the state.
- v. Government is actively creating awareness on the negative effects of the use of chemical preservatives and the importance of selling fresh food items.
- vi. Government provides loans, incentives and subsidies. The Anchor borrowers program by the federal government is funding the agriculture value chain.
- vii. Government initiated Agricultural Youth Empowerment Scheme (AYES) including School Agricultural Program (SAP). Under SAP, secondary students and their teachers participate in establishing greenhouses, poultry, aquaculture, and the summer agricultural program during the long vacation holiday.
- viii. Farm settlement agreement by the governments of the western region.
- ix. Agricultural transformation agenda (ATA) established by the federal government.
- x. Government regulatory agencies (like NAFDAC and SON) play key roles in ensuring quality in processed and packaged food.
- xi. Government policy on the inclusion of iodine in salt; and vitamin A in flour (especially, used by bakers), oil and sugar.
- xii. Private sector is also playing major roles towards ensuring access to sufficient food. For instance, PZ Cussons has about 27 hectares of palm oil plantation.

A lot of government agencies, private sector actors, NGOs, development partners and other organizations are working towards addressing the challenges of access to sufficient, safe and healthy food in Nigeria. However, there is clear lack of synergy among these actors. Well-coordinated efforts will reduce the waste of funds occasioned by duplication and ensure earlier achievement of common targets. The effort of Federal Government to ensure the establishment of a food safety management committee mandated by each state government is commendable. The response of one of the key informants is captured in Box 3 – the picture of the plastic baskets was taken in his office when he presented the baskets as their research output.

Box 3. Research output on packaging of perishable vegetables.

Response: There are organizations that are really trying their best in terms of packaging and processing even in the area of transportation too. For example there is a package plastic made for transporting tomatoes in lorries so that there would be minimal damage to the products before they get to the final destination, especially from the North to Lagos State. It was an outcome of a research sponsored by a Canadian foundation and implemented by University of Ibadan. Unfortunately, the packaging plastic did not get the awareness it needed, so people are still using their raffia basket. Coordinated efforts by key stakeholders would have enhanced the adoption of this technology.



package plastic



Raffle basket

6. What different (groups of) actors relevant for food policy in Nigeria have you interacted with and what are their focus areas and practices/actions?

These group include:

- i. Federal Government Ministry of Agriculture
- ii. Federal Government Ministry of Health
- iii. Ladipo radio agricultural loan.
- iv. Nigeria Agency for Food and Drug Administration Control (NAFDAC)
- v. Government and Development partner programs
- vi. National Horticultural Research Institute (NIHORT)
- vii. International Institute of Tropical Agriculture (IITA)
- viii. Nigerian Institute Of Social And Economic Research (NISER)

- ix. National Cereals Research Institute (NCRI)
- x. Forestry Research Institute of Nigeria (FRIN)
- xi. Cocoa Research Institute of Nigeria (CRIN)
- xii. Manufacturers Association of Nigeria (MAN)
- xiii. Consumers protection
- xiv. Standard Organization of Nigeria (SON)
- xv. Institute of Agricultural Research And Training (IAR&T)
- xvi. Members of Business Organization (Private sector)

This list suggests that there is interaction among the key actors from research institutes, regulatory agencies, private organizations, financial institutes, government agencies, development partners and the media. However, this interaction seems to lack the needed coordination envisaged by the participants in the survey.

7. What do you think led to many of these organizations establishing offices in Lagos or Ibadan?
- These establishments exist in Lagos or Ibadan majorly as a result of the following:
- i. Early agricultural activities in Ibadan such as coco farms.
 - ii. Early political and education (first University College in Nigeria was established in Ibadan) activities in Oyo state. Ibadan was the political headquarter of western region.
 - iii. Lagos is the center of commercial activities.
 - iv. New road network between Ibadan and Lagos.
 - v. Large population in Lagos and Ibadan (huge market)
 - vi. Proximity to ports for import and export.

Earlier boom in cocoa market attracted European and Levantine firms as well as traders from Lagos to Ibadan. In addition, all road traffic from Lagos to the North converged in Ibadan making the city a major point of bulk trade. The accessibility of Ibadan from the commercial city of Lagos were major considerations in the choice of Ibadan by many agricultural organizations. The establishment of University College at Ibadan (which later became the University of Ibadan) in 1948 led to the concentration of qualified persons in the city. This could have influenced the concentration of several agricultural research organizations in the city.

8. Could you mention and discuss some of the major food system-related policies in Nigeria?

Some of the major food system-related policies include:

- i. Fishing laws in Oyo state. For example there are sizes of nets to be used for each category of fish. Motorized engines are not allowed on our waters; this is to prevent over-fishing on our lakes and any fisherman that errs will have his/her license revoked.
- ii. Oyo State Agricultural Initiative Program (OYSAIP): this program integrates all the department of agriculture into just one unit for effective administration and cohesion of strategy. OYSAIP provides a platform for interaction between producers and the buyers.
- iii. NIHORT mandate is to increase the production of some selected seedlings for farmers to boost productivity, the development of selected traditional processing method and improving on some focus crops such as plantain, ginger, turmeric, and others.
- iv. Policy on the printing of expiration date on packaged food products.
- v. Ban on most imported food including tomato ketchup and rice.
- vi. Government regulatory agencies (SON and NAFDAC)
- vii. Promotion of the inclusion of 10% cassava flour in bread and fortification of cassava and packaged salt and oil with Vitamin A.
- viii. National policy of food safety: public health coordinators are used to enforce compliance on food safety. Hazard Analysis Critical Control Point (HACCP) focuses on healthy safe and sufficient food.
- ix. Anchor borrowers' program by the federal government in funding of agriculture value chains putting in consideration the interests of the primary producers.
- x. Food and Nutrition policy of Federal Government: this has a health component.
- xi. National policy on food safety and implementation plan.

The participants are well informed on the existing national and State food system-related policies in Nigeria. They emphasized the need for coordinated efforts between Federal and State governments. Sometimes, the State government may not be willing to domestic food system-related policy by the federal government.

9. Are there such policies with special focus on *Food Systems for Healthier Diet* (FSHD)?

The popular among these policies with special focus on Food Systems for Healthier Diet (FSHD) include:

- i. The ban policy on indiscriminate use of antibiotics on fishes and beating of water during fishing.
- ii. The policy that all butchers should slaughter their meat in a central abattoir for effective monitoring and inspection by government health workers. To enforce this policy, a mobile court that can prosecute any erring butchers was established.
- iii. Policy probating ripening of fruit with Calcium carbide.
- iv. Establishment of Nigeria Agency for Food and Drug Administration Control (NAFDAC)

The participants agreed that considerable efforts are being made by the government to enhance food systems for healthier diet. However, when such policies are not backed by law, implementation becomes a big challenge.

10. Is there any food system-related policy in Nigeria that is particularly related to your organization/agency?

- i. Laws on fishery.
- ii. NAFDAC which is involved with certification of processed foods and drugs.
- iii. Land allocation policy.
- iv. Ensuring that cleanliness is maintained in any food processing area and environment generally; food handlers must be neat also.
- v. Hazard Analysis and Critical Control Point (HACCP): adopted in line with national and international best practices aimed at reducing wastage, increase food safety, etc.

Food system-related policies identified by the participants are in line with four cardinal issues considered in this study among the most relevant to food systems and healthier diets in Nigeria. These are registration of processed food to ensure safety and nutritional quality, land allocation policy, reducing food shortage and wastage occasioned by climate change, and ensuring best practices in agri-marketing and value chain.

11. If yes, what is your view or perception about these policies?

Two major responses are:

- i. The law on fishing is effective. It protects the interest of farmers who are actually the task force team regulating the activities of their members and recommending sanctions to the Ministry on erring members.
- ii. HACCP is very effective and has helped in the reduction of wastage and hazards that comes in through the food value chain.

Generally, the policies that employed participatory approached during formulation and implementation are often effective in achieving set goals. Thus, the respondents in this study recommend a participatory approach during policy formulation and implementation.

12. Are there changes in view on these policies?

Three major policy changes identified are:

- i. Oyo State Fishery and Aquaculture Legal Framework which has been forwarded to the legislature for consideration and ratification.
- ii. The National Agricultural investment Program by Federal Government. The implantation is at the initial stage.
- iii. Agricultural Transformation Agenda (ATA): the main objective is to increase the income of smallholder farmers and rural entrepreneurs that are involved in the production, processing, storage and marketing of the selected commodity value chains. Implementation of this program is necessitating certain changes in the agricultural value chains both at national and state levels.

13. Are you aware of any food system-related policy that was **formulated** in response to the need of Healthier Diet in Nigeria?

The practice of ripening fruits with calcium carbide suddenly became common among fruit dealers. This is very dangerous to human health. Thus, the Government, through relevant agencies, is working to totally eradicate this unhealthy practice. Also, the idea of using harmful chemicals

(like insecticides such as sniper) to preserve food became common among grain dealers. Government has formulated policies and strategies to end the usage of such chemicals for the reservation of grains and related food stuffs. In addition, the use of harmful chemicals for fishing has been prohibited; this policy is effective given that the associations of fishermen and fisherwomen are key members of the taskforce to ensure adherence by members and non-members.

14. If yes, how would you evaluate this policy in terms of its strength, weakest, opportunity, and threat?

Corruption is affecting the effectiveness of most food system-related policies. There are good policies but they are poorly implemented. Another factor affecting implementation of the food-system related policy is poor funding. Research institutes and universities are poorly funded. Most drivers (public workers) of government policies often work towards their personal interest instead of the public interest. The national borders are porous making the country vulnerable to different disease-carrying materials entering the country.

15. What do food system-related actors believe and do about food policy issues in light of their organizational interests? (cite example if possible):

Some of the fishing associations are collaborating with those in government to work against some of the policies in order to satisfy their own personal interest which is in variance with public interest. For example, the government can generate a lot of revenue through the fishery sector. However, some political players are working against it because they are also players in the fish industry, and most big players in the fish industry are not ready to pay tax. Generally, the aim of the food policy system is centred on the public but there are some cabals (interested individuals and groups) that hijack the system that would not let things work as planned.

Again, most organizations are pursuing their own interest at the detriment of the public interest. It is obvious that most government agencies' mandates overlap which is stressful for the people; this is one of the major reasons many food processing companies are packing in the country. So there should be synergy (effective coordination) among these agencies to enhance effective service delivery.

16. Given your experience and interactions with different actors (groups) relevant for food policy in Nigeria, what are some of the assumptions and prescriptions assumed by people when talking about food policy issues? Are there any specific example relating to Food Systems for Healthier Diet (FSHD)?
- i. Most fishermen/women assume that their profit is more important than the health of the consumers. Hence the use of unhealthy substances during fishing.
 - ii. Most people wrongly assume that a silver bullet policy or strategy can solve the problem of human nutrition and food safety. They forget the need to focus on the entire value chain – from production to processing and to consumption.
 - iii. The assumption that formulation of good policies is the solution; where implantation and awareness campaign are neglected. “The assumption is that there is no policy anywhere. So people tend to burst into fight when these policies are being enforced because they were not aware of the policy,” said one of the key informants.
 - iv. Again, government agencies assume that they can succeed individually without considering the interconnectivity of their mandates and goals with other related agencies.
 - v. It is also commonly assumed that farmers are supposed to do everything along the value chain such as provision of security for their farmsteads, capital sourcing, supervisory role, etc.
 - vi. In addition, people often assume that policies are meant for government alone. Many actors see the government as being selfish in their dealings with other stakeholders in the food system.
 - vii. It is the sole duty of the government to formulate policies instead of involving the major stakeholders. Policy-makers, sometimes, assume that farmers do not know anything. To a certain extent, farmers have a level of knowledge which help them in what they do. Thus, it is important to involve farmers during policy formulation.
 - viii. Most people who engage in policy discussions often do not have the patience to listen to others. Everybody has their own mind-set; there is a huge mistrust among stakeholders. Thus, everyone wants to be the champion. People also assume that armed-chair policy formation, not based on research findings, will work.

Participants in the study agree that many of the food policy actors in Nigeria have some level of wrong assumptions. Many of them champion policy formulation and implementation on these wrong premises. This underscores the need for a proper orientation among the actors in the food value chain and to ensure that policy formulation is based on research evidence. The view of one of the key informants is captured in Box 4.

Box 4. Some of the assumptions by people when talking about food policy issues in Nigeria.

Response: Nigerians make good assumptions! Assumptions and theories are not our problems. We believe in documentation. We see policy in terms of paper and not in the perceptive of impact. Every policy should have M&E framework. Before any new policy, we ought to evaluate the previous ones. Let me ask you a critical question. How many of our policy documents go with budgets? None! We assume that policies will work without fund.

4 Findings of the research: online survey

The online survey captured both generic and thematic issues. Key findings are discussed in this section. Most of the questions in the online survey required the respondents to present their response on a Likert-scale using 5 point. In the discussion of these responses, points 1 and 2 are regarded as below average, 4 and 5 are above average; while point 3 is average.

4.1 Generic issues: prioritizing food system issues

The first question to the participants in the online survey was on the generic issue of ‘food system discussions and debates in Nigeria in the last 12 months’. Respondents were asked to identify their gender.

Table 2. Gender distribution of participants

	Female		Male		Total	
National NGO	33%	1	67%	2	3.00%	3
International NGO	37%	3	63%	5	8.00%	8
Academia/Research institutes	32%	12	68%	26	38.00%	38
Private Sector	27%	4	73%	11	15.00%	15
Public Sector	30%	10	70%	23	32.00%	33
Development partners	25%	1	75%	3	4.00%	4
Total	31%	31	69%	70	100.00%	101
					Answered	101

Results in Table 2 show more than an equal number of respondents was male (67%) compared with female. A higher response rate was received from the academia/research institutes with a total of 38 percent, followed by the public sector which consists 33 percent and 15 percent from the private sector. Efforts were made to ensure that civil society organizations participated, however this effort seemed not to have yielded positive response. This could be because not many civil society organizations are directly committed to the championing of food for healthy diet in Nigeria. On the other hand, a good number of staff in civil society organizations work in other organizations such as the universities (or other research organizations) and are often quick to associate with the university (or such research organizations) when responding to issues that are research related. In any case, members of professional organizations such as Association of Nigerian Dietitians, Nutrition Society of Nigeria and Nigerian Institute of Food Science and Technology (NIFST) participated in the online survey.

Table 3. Main work focus in the last two years

Answer Choices	Responses	
Food security	37.39%	40
Agriculture development	18.69%	20
Development/poverty alleviation	4.67%	5
Health	13.08%	14
Trade	3.74%	4
Land and water use	0.93%	1
Urbanization	0.00%	0
Institutional and Capacity Development	6.54%	7
Agriculture Marketing	4.67%	5
Climate change	1.87%	2
Other (please specify)	8.41%	9
	Answered	107

The majority (37%) of the respondents focused on food security in the last two years. This was followed by agricultural development (18.7%) and health (13%). Among the academia/research institutes, about 58% focused on food security; while about 18% and 27% asserted the same in the private and public sectors respectively. Health (33%) and climate change (34%) were the discussion focus among national NGOs in past two years. However institutional and capacity

development, urbanization, land and water use and others achieved low priority focus among the listed sectors (Table 3).

In other words, the major focus of discussion among the respondents in the last two years are food security, agricultural development, health, and climate change. This agrees with the four cardinal issues identified, during literature review and pre-survey consultation with key informants, as most relevant to food systems and healthier diets in the Nigeria.

Table 4. Level of involvement in food systems discussions and debates in Nigeria

	1 = Lowest		2		3		4		5= Highest		Total	
Q2: National NGO	50.00%	1	0.00%	0	50.00%	1	0.00%	0	0.00%	0	3.03%	2
Q2: International NGO	0.00%	0	0.00%	0	14.29%	1	57.14%	4	28.57%	2	10.61%	7
Q2: Academia /Research institutes	0.00%	0	13.04%	3	39.13%	9	39.13%	9	8.70%	2	34.85%	23
Q2: Private Sector	8.33%	1	16.67%	2	33.33%	4	33.33%	4	8.33%	1	18.18%	12
Q2: Public Sector	0.00%	0	19.05%	4	57.14%	12	19.05%	4	4.76%	1	31.82%	21
Q2: Development partners	0.00%	0	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1.52%	1
Total	3.0%	2	13.6%	9	42.4%	28	31.8%	21	9.1%	6	100%	66

From sixty-six respondents in the listed sectors, about 42 percent considered its involvement in food systems discussion and debates in Nigeria in the last 12 months as average, about 41 percent ranked its level of involvement above average, while the rest ranked itself below average – all in

a scale of 1 to 5 where 1 is lowest and 5 is highest (Table 4). Relatively, greater proportion of actors in private sector, academia/research institutes, and international NGO ranked above average with about 41%, 48% and 86% respectively. Generally, the policy actors in the surveyed sectors were actively involved in food systems discussion and debates in Nigeria in the last 12 months given that above 80 percent were ranked either average or above average on aggregate.

Table 5. Level of institution's involvement in food system discussions and debates

	1 = Lowest		2		3		4		5= Highest		Total
Q2: Development partners	0.00%	0	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1
Q2: Public Sector	0.00%	0	10.00%	2	25.00%	5	50.00%	10	15.00%	3	20
Q2: Private Sector	15.38%	2	7.69%	1	30.77%	4	38.46%	5	7.69%	1	13
Q2: Academia/Research institutes	0.00%	0	8.70%	2	17.39%	4	52.17%	12	21.74%	5	23
Q2: International NGO	0.00%	0	0.00%	0	0.00%	0	42.86%	3	57.14%	4	7
Q2: National NGO	0.00%	0	50.00%	1	0.00%	0	50.00%	1	0.00%	0	2
Total	3.03%	2	9.09%	6	21.21%	14	46.97%	31	19.70%	13	66
	0.00%	0	0.00%	0	1.52%	1	0.00%	0	0.00%	0	1
	100.00%	66	100.00%	66	100.00%	66	100.00%	66	100.00%	66	66

Table 5 shows that, on aggregate level, institutions' involvement in food system discussions and debates in Nigeria in the last twelve months ranked either average or above with about 88 percent. In terms of different sectors, the public sector, academia/research institutes, and international NGOs demonstrated a high level of institutional involvement in food systems discussion and

debates in the last twelve months with about 65%, 74%, and 100% respectively, ranking above average.

Table 6. Own level of knowledge and understanding about food systems

	1 = Lowest		2		3		4		5 = Highest		Total	
Total	0.00%	0	4.48%	3	25.37%	17	58.21%	39	11.94%	8	100.00%	67
Q2: Development partners	0.00%	0	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1.49%	1
Q2: Public Sector	0.00%	0	0.00%	0	23.81%	5	76.19%	16	0.00%	0	31.34%	21
Q2: Private Sector	0.00%	0	7.69%	1	0.00%	0	69.23%	9	23.08%	3	19.40%	13
Q2: Academia/Research institutes	0.00%	0	0.00%	0	39.13%	9	47.83%	11	13.04%	3	34.33%	23
Q2: International NGO	0.00%	0	14.29%	1	14.29%	1	42.86%	3	28.57%	2	10.45%	7
Q2: National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.99%	2

In terms of personal level of knowledge and understanding about food systems in Nigeria, a total of 67 responded on the 1-5 Likert-scale (Table 6). On aggregate, the majority (about 70%) indicated a high level of knowledge and understanding about food systems in Nigeria, and about 25 percent ranked average; only about 5 percent accepted that their level of knowledge and understanding about food systems in Nigeria is below average. More than 60 percent of participants in the public sector, private sector, academia/research institutes, and international NGOs opines that their level of knowledge and understanding about food systems in Nigeria is

above average. In other words, these players can actually participate actively in the process of food system-related policy formulation and implementation.

Table 7. Level of knowledge and understanding about food systems within own institution

	1 = Lowest		2		3		4		5 = Highest		Total	
	%	n	%	n	%	n	%	n	%	n		
Q2: Development partners	0.00%	0	0.00%	0	100.00%	1	0.00%	0	0.00%	0	1.49%	1
Q2: Public Sector	0.00%	0	0.00%	0	19.05%	4	61.90%	13	19.05%	4	31.34%	21
Q2: Private Sector	7.69%	1	15.38%	2	7.69%	1	38.46%	5	30.77%	4	19.40%	13
Q2: Academia/Research institutes	0.00%	0	8.70%	2	26.09%	6	43.48%	10	21.74%	5	34.33%	23
Q2: International NGO	0.00%	0	0.00%	0	42.86%	3	14.29%	1	42.86%	3	10.45%	7
Q2: National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.99%	2
Total	2.99%	2	5.97%	4	22.39%	15	44.78%	30	23.88%	16	100.00%	67

In terms of level of knowledge and understanding within their own institution (i.e. among colleagues) about food systems, on aggregate, the responses indicate a relatively high level of understanding with about 68 percent ranked above average (Table 7). The private sector recorded about 31 percent whose level of knowledge and understanding about food systems is ranked average or below average. Invariably, this will most likely reflect the contribution of the sector to food system policy discussion and formulation.

Table 8. Respondents' opinion about the four major food system issues in Nigeria

Total	Q2: Development partners	Q2: Public Sector	Q2: Private Sector	Q2: Academia/Research institutes	Q2: International NGO	Q2: National NGO
21.54%	0.00%	19.05%	33.33%	18.18%	28.57%	0.00%
14	0	4	4	4	2	0
75.38%	100.00%	66.67%	58.33%	90.91%	71.43%	100.00%
49	1	14	7	20	5	2
4.62%	0.00%	0.00%	0.00%	9.09%	14.29%	0.00%
3	0	0	0	2	1	0
41.54%	0.00%	52.38%	50.00%	31.82%	14.29%	100.00%
27	0	11	6	7	1	2
67.69%	100.00%	66.67%	58.33%	72.73%	57.14%	100.00%
44	1	14	7	16	4	2
15.38%	0.00%	9.52%	0.00%	18.18%	42.86%	50.00%
10	0	2	0	4	3	1
60.00%	100.00%	76.19%	75.00%	50.00%	28.57%	0.00%
39	1	16	9	11	2	0
29.23%	0.00%	28.57%	25.00%	36.36%	28.57%	0.00%
19	0	6	3	8	2	0
10.77%	0.00%	0.00%	16.67%	13.64%	28.57%	0.00%
7	0	0	2	3	2	0
13.85%	0.00%	4.76%	25.00%	4.55%	57.14%	0.00%
9	0	1	3	1	4	0
26.15%	0.00%	19.05%	0.00%	45.45%	42.86%	0.00%
17	0	4	0	10	3	0
33.85%	100.00%	28.57%	33.33%	40.91%	14.29%	50.00%
22	1	6	4	9	1	1
23.08%	0.00%	28.57%	25.00%	9.09%	57.14%	0.00%
15	0	6	3	2	4	0
100.00%	1.54%	32.31%	18.46%	33.85%	10.77%	3.08%
65	1	21	12	22	7	2

The first response sought from the participants in the survey was on the generic issue of 'food system discussions and debates in Nigeria in the last 12 months'. Respondents were asked to identify the four most important food system issues in current Nigeria. The overall ranking, disaggregated by respondent categories and the overall results are presented in Tables 8.

The top four ranked in order of importance were:

1. Post-harvest loss and storage
2. Food production
3. Access to sufficient and healthy food
4. Food safety and water quality

Once again, the afore-mentioned issues agree with the four cardinal food systems issues identified during the pre-survey. Thus, key players in the food systems in Nigeria need to focus more on these issues to achieve any national goal on food system.

Table 9. Level of collaboration among governmental agencies to deal with issues related to food systems in Nigeria

Total	1 = Lowest		2		3		4		5 = Highest		Total	
	%		%		%		%		%			
15.15%	100.00%	1	9.52%	2	15.38%	2	22.73%	5	0.00%	0	0.00%	0
24.24%	0.00%	0	19.05%	4	30.77%	4	22.73%	5	14.29%	1	100.00%	2
45.45%	0.00%	0	52.38%	11	38.46%	5	45.45%	10	57.14%	4	0.00%	0
13.64%	0.00%	0	14.29%	3	15.38%	2	9.09%	2	28.57%	2	0.00%	0
9%	0.00%	0	4.76%	1	0.00%	0	0.00%	0	0.00%	0	0.00%	0
1.52%	0.00%	0	31.82%	1	19.70%	13	33.33%	22	10.61%	7	3.03%	2
100.00%	1.52%	1	31.82%	21	19.70%	13	33.33%	22	10.61%	7	3.03%	2
66												

On aggregate, about 85 percent opines that the level of collaboration among governmental agencies in dealing with issues related to food systems is not above average, only about 15 percent

agreed that the level of such collaboration is above average (Table 9). The majority (84%) of the private sector actors did not rank the collaboration among government agencies above average. Even among the public sector actors, about 80 percent agreed that collaboration among governmental agencies in dealing with issues related to food systems is not above average. These views agree with the findings from the key informants’ interviews which identified lack of synergy among stakeholders (especially government agencies) in the food value chain as one of the most urgent policy challenges in Nigeria.

Table 10. Supportiveness of federal government food system policies to healthy diets

Total	Q2: Development partners	Q2: Public Sector	Q2: Private Sector	Q2: Academia/ Research institutes	Q2: International NGO	Q2: National NGO	1 = Lowest		2	3	4	5 = Highest	Total
							%	Count					
20.29%	100.00%	9.09%	30.77%	17.39%	14.29%	50.00%	14	2	4	4	0	0	2
26.09%	0.00%	18.18%	23.08%	34.78%	42.86%	0.00%	18	0	3	8	0	0	2
39.13%	0.00%	50.00%	30.77%	39.13%	28.57%	50.00%	27	0	4	9	1	0	2
11.59%	0.00%	22.73%	0.00%	8.70%	14.29%	0.00%	8	0	0	2	1	0	2
2.90%	0.00%	0.00%	15.38%	0.00%	0.00%	0.00%	2	0	2	0	0	0	2
100.00%	2.90%	31.88%	18.84%	33.33%	10.14%	2.90%	69	2	13	23	7	2	2

On aggregate, about 47 percent considered Federal Government support to healthy diets to be clearly below average, 39 percent viewed such support as average, while only 14 percent considered it to be above average on a scale of 5 (Table 10). Greater numbers of respondents from international NGOs (57%), academia/research institutes (52%), and private sectors (53%) viewed the level of federal government food policy support to healthy diets as below average. The Federal Government of Nigeria could be supporting different aspects of food systems value chain; however, the key actors interviewed in this study are yet to observe significant commitment from the government on food system policies specifically for healthy diets.

Table 11. Influence of advocacy and lobbying on federal government policy agenda on food systems

	1 = Lowest								3		4		5 = Highest		Total											
Total	8.82%	6	39.71%	27	29.41%	20	19.12%	13	2.94%	2	100.00%	68	8.82%	6	39.71%	27	29.41%	20	19.12%	13	2.94%	2	100.00%	68		
Development partners	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	2.94%	2	0.00%	0	0.00%	0	0.00%	0	2.94%	2	100.00%	68
Q2: Public Sector	9.09%	2	40.91%	9	22.73%	5	22.73%	5	4.55%	1	32.35%	22	9.09%	2	32.35%	22	22.73%	5	22.73%	5	7.69%	1	32.35%	22	40.91%	9
Q2: Private Sector	7.69%	1	46.15%	6	15.38%	2	23.08%	3	7.69%	1	19.12%	13	7.69%	1	19.12%	13	15.38%	2	23.08%	3	7.69%	1	19.12%	13	46.15%	6
Q2: Academia/Research institutes	9.09%	2	27.27%	6	40.91%	9	22.73%	5	4.55%	1	32.35%	22	9.09%	2	32.35%	22	40.91%	9	22.73%	5	7.69%	1	32.35%	22	40.91%	9
Q2: International NGO	14.29%	1	28.57%	2	57.14%	4	0.00%	0	0.00%	0	10.29%	7	14.29%	1	10.29%	7	57.14%	4	0.00%	0	0.00%	0	10.29%	7	28.57%	2
Q2: National NGO	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2.94%	2	0.00%	0	2.94%	2	0.00%	0	0.00%	0	0.00%	0	2.94%	2	100.00%	68

As depicted in Table 11, a good number of the respondents (48%) think that the government is responsible for making and implementing policies, rules and regulations related to food and nutrition safety and healthy diets. About 27%, 31%, and 22% from the public sector, private sector and academia/research institutes, respectively, opined that the agenda on food systems is influenced by advocacy and lobby from stakeholders. However, the majority among public sector actors (72%) as well as private sector (69%), academia/research institutes (77%), and international

NGOs (100%) insists that the influence of advocacy and lobbying on the Federal Government policy agenda on food systems is not above average. In other words, the Federal Government policy agenda on food systems could be influenced by advocacy and lobbying from private sector and public sector actors; however, to a large extent to the government is responsible for setting policy agenda on food systems.

Table 12. Extent to which federal government policy agenda on food system reflect realities in the country

Total	Q2: Development partners	Q2: Public Sector	Q2: Private Sector	Q2: Academia/ Research institutes	Q2: International NGO	Q2: National NGO	1 = Lowest		2	3	4	5 = Highest		Total
							%	Count				%	Count	
15.71%	0.00%	9.09%	23.08%	16.67%	14.29%	50.00%	11	0	2	3	4	0	1	0
47.14%	50.00%	50.00%	46.15%	45.83%	42.86%	50.00%	33	1	11	6	11	3	4	1
28.57%	0.00%	31.82%	23.08%	33.33%	28.57%	0.00%	20	0	7	3	8	2	0	0
8.57%	50.00%	9.09%	7.69%	4.17%	14.29%	0.00%	6	1	2	1	1	1	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0	0	0	0	0	0	0	0
100.00%	2.86%	31.43%	18.57%	34.29%	10.00%	2.86%	70	2	22	13	24	7	2	2

Respondents were asked about the extent to which the federal government policy agenda on food systems reflects the realities in the country (Table 12). On aggregate, a majority of the respondents (63%) opined that the Federal Government policy agenda on food systems does not reflect realities in the country. Greater proportions among the actors in public sector (59%), private sector (69%), academia/research institutes (62%), international NGOs (57%), and national NGOs (100%) agree that the Federal Government policy agenda on food systems does not reflect realities in the country. This result suggests the existence of a gap between the government policy formulation process and research outputs.

Table 13. Sensitivity of overall food system policy to environmental issues in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
	%	Count	%	Count	%	Count	%	Count	%	Count		
Q2: Development partners	0.00%	0	50.00%	1	0.00%	0	0.00%	0	50.00%	1	2.86%	2
Q2: Public Sector	9.09%	2	45.45%	10	27.27%	6	13.64%	3	4.55%	1	31.43%	22
Q2: Private Sector	15.38%	2	23.08%	3	38.46%	5	23.08%	3	0.00%	0	18.57%	13
Q2: Academia/Research institutes	16.67%	4	37.50%	9	33.33%	8	8.33%	2	4.17%	1	34.29%	24
Q2: International NGO	0.00%	0	57.14%	4	42.86%	3	0.00%	0	0.00%	0	10.00%	7
Q2: National NGO	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2.86%	2
Total	11.43%	8	41.43%	29	31.43%	22	11.43%	8	4.29%	3	100%	70

Table 13 presents responses on the overall food system policy to environmental issues in Nigeria. On aggregate, the majority (about 52%) maintains that food system policy in Nigeria is not

and academia/research institutes (58%) could not identify sufficient policies put in place to ensure the provision of healthier diets. The public sector recorded the highest proportion of actors (about 41%) who agreed that there are sufficient policies put in place to ensure the provision of healthy diets. Thus, it could be inferred that what the public sector actors consider as sufficient policies for the provision of healthy diets is not sufficient in the view of other stakeholders, or that such policies are not properly communicated to these other stakeholders.

Table 15. Level of activity of NGOs and Non-Profit Organizations in relation to food system policies in Nigeria

Total	1 = Lowest		2	3	4	5 = Highest		Total
	%	Count				%	Count	
14.49%	0.00%	10	13.64%	36.36%	17.39%	4.35%	3	69
Q2: Development partners	0.00%	0	31.82%	0.00%	100.00%	0.00%	0	2
Q2: Public Sector	13.64%	3	31.82%	36.36%	9.09%	9.09%	2	22
Q2: Private Sector	15.38%	2	15.38%	46.15%	15.38%	7.69%	1	13
Q2: Academia/ Research institutes	13.04%	3	39.13%	30.43%	17.39%	0.00%	0	23
Q2: International NGO	14.29%	1	0.00%	57.14%	28.57%	0.00%	0	7
Q2: National NGO	50.00%	1	0.00%	50.00%	0.00%	0.00%	0	2
	100%	2.90%	31.88%	18.84%	33.33%	10.14%	2.90%	

Table 15 depicts that about 40 percent of the respondents rated the activities of NGOs and non-profit organizations in relation to food system issues and or policies in Nigeria below average;

only about 22 percent rated them above average. A good proportion among public sector actors (45%) as well as the academia/research institutes (52%) also rated the activities of NGOs and non-profit organizations in relation to food system issues and or policies in Nigeria below average. The development partners, who often collaborate with NGOs as implementing partners, recorded the highest proportion (100%) who agreed that the activities of NGOs and non-profit organizations in relation to food system issues and or policies in Nigeria above average; while the national NGOs recorded the lowest proportion (0%) who agreed that such activities of NGOs and non-profit organizations in Nigeria are above average. The majority (57%) of the actors among the international NGOs rated such activities of NGOs and non-profit organizations in Nigeria to be merely average.

Table 16. Existence of appropriate practices in Nigeria to steer food system towards healthy diets

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.86%	2
International NGO	14.29%	1	57.14%	4	14.29%	1	14.29%	1	0.00%	0	10.00%	7
Academia/Research institutes	16.67%	4	54.17%	13	25.00%	6	4.17%	1	0.00%	0	34.29%	24
Private Sector	7.69%	1	46.15%	6	30.77%	4	7.69%	1	7.69%	1	18.57%	13
Public Sector	13.64%	3	50%	11	27.27%	6	9.09%	2	0.00%	0	31.43%	22
Development partners	0.00%	0	100%	2	0.00%	0	0.00%	0	0.00%	0	2.86%	2
Total	12.86%	9	52.86%	37	25.71%	18	7.14%	5	1.43%	1	100%	70

Table 16 shows that, on aggregate, about 66 percent opine that the existence of appropriate practices in Nigeria to steer food systems towards healthy diets is below average. Only about 8 percent agree that the existence of such practices is above average. The majority of actors among development partners (100%), public sector (63%), private sector (53%), academia/research institutes (70%), and international NGOs (71%) insisted that the existence of appropriate practices in Nigeria to steer food system towards healthy diets is below average.

Table 17. Institutions capacity and technical ability to deal with food system issues

	1=Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.86%	2
International NGO	0.00%	0	0.00%	0	28.57%	2	42.86%	3	28.57%	2	10.00%	7
Academia/Research institutes	0.00%	0	8.33%	2	29.17%	7	41.67%	10	20.83%	5	34.29%	24
Private Sector	7.69%	1	7.69%	1	46.15%	6	15.38%	2	23.08%	3	18.57%	13
Public Sector	0.00%	0	22.73%	5	27.27%	6	36.36%	8	13.64%	3	31.43%	22
Development partners	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	2.86%	2
Total	1.43%	1	12.86%	9	32.86%	23	34.29%	24	18.57%	13	100%	70

Generally, about 53 percent of the respondents agreed that their institutes have the capacity and technical ability to deal with food system issues. Fourteen (14) percent rated their institutes below average while the rest were ranked average (Table 17). On sectorial basis, development partners (50%), academia/research institutes (62%), and international NGOs (71%) agreed that their institutions' capacity to deal with food system issues is above average. About 23 percent among the public sector actors insist that the sector's capability is below average.

Table 18. Level of awareness of the policy-makers on food system issues and about the changes needed to lead to healthier diets

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	2.86%	2
International NGO	14.29%	1	42.86%	3	28.57%	2	14.29%	1	0.00%	0	10.00%	7
Academia/Research institutes	29.17%	7	16.67%	4	37.50%	9	16.67%	4	0.00%	0	34.29%	24
Private Sector	7.69%	1	23.08%	3	61.54%	8	7.69%	1	0.00%	0	18.57%	13
Public Sector	9.09%	2	27.27%	6	40.91%	9	22.73%	5	0.00%	0	31.43%	22
Development partners	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.86%	2
Total	15.71%	11	24.29%	17	42.86%	30	17.14%	12	0.00%	0	100%	70

On aggregate, none of the 70 respondents rated the policy-makers a maximum score of 5 on awareness about food system issues and the changes needed to ensure healthier diets (Table 18) Only about 17 percent rated them little above average, approximately 43 percent agreed that their awareness on food system issues and the changes required for healthier diets is average, while the remaining 40 percent rated their awareness below average. A greater proportion of actors among international NGOs (57%) and academia/research institutes (46%) rated the policy-makers'

awareness on food system issues and about the changes needed to lead to healthier diets below average.

Table 19. Level of awareness of consumers on healthy diets in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.90%	2
International NGO	14.29%	1	71.43%	5	14.29%	1	0.00%	0	0.00%	0	10.14%	7
Academia/Research institutes	8.70%	2	56.52%	13	26.09%	6	4.35%	1	4.35%	1	33.33%	23
Private Sector	7.69%	1	15.38%	2	30.77%	4	30.77%	4	15.38%	2	18.84%	13
Public Sector	13.64%	3	36.36%	8	40.91%	9	9.09%	2	0.00%	0	31.88%	22
Development partners	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2.90%	2
Total	10.14%	7	44.93%	31	30.43%	21	10.14%	7	4.35%	3	100%	69

Table 19 indicates that, generally, 55 percent of the respondents opines that the level of awareness of consumers on healthy diets is below average; only about 14% rated the consumers' level of awareness above average. A greater proportion of actors among international NGOs (86%), academia/research institutes (65%), public sector (50%), and development partners (100%) affirmed that the level of awareness of consumers on healthy diets is below average. This low level of awareness among consumers could adversely affect demand-driven food system policies for healthy diets.

Table 20. Citizen's access to knowledge and resources in making optimal choices for nutritious and healthy diets

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.86%	2
International NGO	28.57%	2	71.43%	5	0.00%	0	0.00%	0	0.00%	0	10.00%	7
Academia/Research institutes	12.50%	3	79.17%	19	8.33%	2	0.00%	0	0.00%	0	34.29%	24
Private Sector	15.38%	2	30.77%	4	53.85%	7	0.00%	0	0.00%	0	18.57%	13
Public Sector	18.18%	4	40.91%	9	31.82%	7	9.09%	2	0.00%	0	31.43%	22
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.86%	2
Total	17.14%	12	54.29%	38	24.29%	17	4.29%	3	0.00%	0	100%	70

On aggregate, none of the 70 respondents rated citizen's access to knowledge and resources in making optimal choices for nutritious and healthy diets as 5; only about 4 percent rated it a little above average, while 71 percent rated it below average (Table 20). The majority of the actors

among international NGOs (100%), academia/research institutes (91%), and public sector (59%) asserted that citizen's access to knowledge and resources in making optimal choices for nutritious and healthy diets is below average. Thus, there is an urgent need for intensive and extensive awareness campaign in Nigeria on the benefits of making right choices for nutritious and healthy diets and how to make such choices.

Table 21. Perception of respondents on threats of climate change and land use pattern on domestic production

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	100.00%	2	0.00%	0	2.94%	2
International NGO	16.67%	1	0.00%	0	16.67%	1	50.00%	3	16.67%	1	8.82%	6
Academia/Research institutes	4.17%	1	8.33%	2	8.33%	2	33.33%	8	45.83%	11	35.29%	24
Private Sector	0.00%	0	15.38%	2	23.08%	3	38.46%	5	23.08%	3	19.12%	13
Public Sector	0.00%	0	9.52%	2	23.81%	5	47.62%	10	19.05%	4	30.88%	21
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	2.94%	2
Total	2.94%	2	8.82%	6	16.18%	11	42.65%	29	29.41%	20	100%	68

According to Table 21, on aggregate, most (72%) of the respondents agreed that climate change and altered patterns of land use pose a threat to domestic production. In fact, over 50 percent of the respondents in each of the sectors agrees with the existence of such threat on domestic food production. For instance, those who maintained that climate change and altered patterns of land use pose a threat to domestic production include development partners (100%), public sector (66%), private sector (61%), academia/research institutes (79%), international NGOs (66%), and national NGOs (100%). This suggests that domestic food production is highly vulnerable to climate change and altered patterns of land use.

Table 22. Perception on availability of adequate, timely and relevant information on unsafe food in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2.86%	2
International NGO	14.29%	1	14.29%	1	57.14%	4	14.29%	1	0.00%	0	10.00%	7
Academia/Research institutes	29.17%	7	45.83%	11	16.67%	4	4.17%	1	4.17%	1	34.29%	24
Private Sector	7.69%	1	61.54%	8	15.38%	2	15.38%	2	0.00%	0	18.57%	13
Public Sector	22.73%	5	40.91%	9	27.27%	6	4.55%	1	4.55%	1	31.43%	22
Development partners	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	2.86%	2
Total	20.00%	14	45.71%	32	24.29%	17	7.14%	5	2.86%	2	100%	70

Generally, about 66 percent opined that the availability of adequate, timely and relevant information on unsafe food in Nigeria is below average; only 10 percent rated it above average (Table 22). The majority of the actors among the public sector (63%), private sector (69%), academia/research institutes (75%), and national NGO (100%) rated the availability of adequate, timely and relevant information on unsafe food in Nigeria below average. Perhaps, this explains the low level of consumers' awareness. However, a greater proportion of the actors among international NGOs (57%) maintained that the availability of adequate, timely and relevant information on unsafe food in Nigeria is, at least, average.

Table 23. Respondents' level of knowledge and understanding about the National Policy on Food and Nutrition in Nigeria produced by Ministry of Budget and National Planning in 2016

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.86%	2
International NGO	14.29%	1	28.57%	2	14.29%	1	28.57%	2	14.29%	1	10.00%	7
Academia/Research institutes	12.50%	3	20.83%	5	50.00%	12	16.67%	4	0.00%	0	34.29%	24
Private Sector	23.08%	3	23.08%	3	15.38%	2	23.08%	3	15.38%	2	18.57%	13
Public Sector	9.09%	2	45.45%	10	36.36%	8	9.09%	2	0.00%	0	31.43%	22
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.86%	2
Total	15.71%	11	28.57%	20	32.86%	23	18.57%	13	4.29%	3	100%	70

In general, a large proportion (44%) of the respondents asserted that their level of knowledge and understanding about the National Policy on Food and Nutrition in Nigeria produced by Ministry of Budget and National Planning in 2016 is below average, 32 percent rated it average, while the remaining 23 percent rated it above average (Table 23). In terms of sectors, about 54 percent of the respondents in the public sector agreed that their level of knowledge and understanding about the National Policy on Food and Nutrition in Nigeria is below average, 36 percent rated it average; only 9 percent asserted that their level of knowledge and understanding about the National Policy on Food and Nutrition in Nigeria is above average. This finding is worrisome because most of these public sector respondents were drawn from the Ministries of Agriculture and Health (Nutrition unit). These are core actors in the policy implementation process – their tasks include public enlightenment on policy issues. Their responses agree with the view of the key informants (as obtained during the face-to-face interviews). Among the major challenges identified by the key

informants are lack of training and retraining of staff especially on new policy documents, poor funding of policy implementation, and poor awareness campaigns and policy dissemination. Thus, there seems to be an obvious gap between policy-makers and policy implementers in food system-related policies in Nigeria.

Table 24. Level of institution's reference to National Policy on Food and Nutrition in Nigeria produced by Ministry of Budget and National Planning in 2016

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	50.00%	1	0.00%	0	0.00%	0	2.90%	2
International NGO	14.29%	1	42.86%	3	14.29%	1	28.57%	2	0.00%	0	10.14%	7
Academia/Research institutes	13.04%	3	13.04%	3	43.48%	10	30.43%	7	0.00%	0	33.33%	23
Private Sector	30.77%	4	15.38%	2	30.77%	4	15.38%	2	7.69%	1	18.84%	13
Public Sector	13.64%	3	13.64%	3	50.00%	11	13.64%	3	9.09%	2	31.88%	22
Development partners	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	2.90%	2
Total	17.39%	12	18.84%	13	39.13%	27	20.29%	14	4.35%	3	100%	69

Table 24 shows that international NGOs (57%), private sector (46%), and development partners (100%) were among the sectors whose reference to the National Policy on Food and Nutrition in Nigeria was below average. A greater proportion of the respondents among academia/research institutes (44%) and public sector (50%) rated it merely as average. Furthermore, on aggregate, the result indicates that only about 25 percent rated its reference to the policy document above average, 39 percent rated it average, while 36 percent asserted that its reference was below average.

Table 25. Respondents' level of knowledge and understanding about the National Strategic Plan of Action for Nutrition (2014-2019) produced by Family Health Department in 2014

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.86%	2
International NGO	14.29%	1	14.29%	1	28.57%	2	28.57%	2	14.29%	1	10.00%	7
Academia/Research institutes	20.83%	5	41.67%	10	37.50%	9	0.00%	0	0.00%	0	34.29%	24
Private Sector	38.46%	5	15.38%	2	30.77%	4	7.69%	1	7.69%	1	18.57%	13
Public Sector	36.36%	8	27.27%	6	31.82%	7	4.55%	1	0.00%	0	31.43%	22
Development partners	50.00%	1	0.00%	0	50.00%	1	0.00%	0	0.00%	0	2.86%	2
Total	30.00%	21	27.14%	19	32.86%	23	7.14%	5	2.86%	2	100%	70

In general, a greater proportion (57%) of the respondents affirmed that their level of knowledge and understanding about the National Strategic Plan of Action for Nutrition (2014-2019) produced by the Family Health Department in 2014 is below average, 32 percent rated it average, while the

remaining 10 percent rated it above average (Table 25). In terms of sectors, about 64 percent of the respondents in the public sector and 62 percent of the respondents among academia/research institutes agreed that their level of knowledge and understanding about the National Strategic Plan of Action for Nutrition (2014-2019) in the last 12 months is below average. The international NGOs (43%) is among the sectors whose respondents rated their level of knowledge and understanding about the National Strategic Plan of Action for Nutrition (2014-2019) above average.

Table 26. Respondents' opinion on level of institution's reference to National Strategic Plan of Action for Nutrition (2014 – 2019) produced by Family Health Department in Federal Ministry of Health in 2014

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	2.94%	2
International NGO	0.00%	0	14.29%	1	71.43%	5	14.29%	1	0.00%	0	10.29%	7
Academia/Research institutes	13.04%	3	34.78%	8	47.83%	11	4.35%	1	0.00%	0	33.82%	23
Private Sector	25.00%	3	33.33%	4	16.67%	2	16.67%	2	8.33%	1	17.65%	12
Public Sector	27.27%	6	31.82%	7	18.18%	4	22.73%	5	0.00%	0	32.35%	22
Development partners	50.00%	1	50.00%	1	0.00%	0	0.00%	0	0.00%	0	2.94%	2
Total	20.59%	14	30.88%	21	32.35%	22	14.71%	10	1.47%	1	100%	68

Collectively, a majority (51%) of the respondents indicates that their institutes' reference to the National Strategic Plan of Action for Nutrition (2014 – 2019) produced by the Family Health Department in the Federal Ministry of Health is below average, whereas only 16 percent rated it above average (Table 26). On sector basis, greater proportions of the actors among academia/research institutes (95%), private sector (75%), public sector (77%) and development partners (100%) affirmed that their institutes' reference to the National Strategic Plan of Action for Nutrition (2014 – 2019) in the last 12 months is not above average. This could be an additional evidence that food system-related policies are poorly disseminated and implemented.

4.2 Specific questions about food and nutrition security

Table 27. Respondents' evaluation of the current food insecurity in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
	%	n	%	n	%	n	%	n	%	n	%	n
National NGO	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	3.51%	2
International NGO	0.00%	0	40.00%	2	20.00%	1	40.00%	2	0.00%	0	8.77%	5
Academia/Research institutes	8.33%	2	8.33%	2	8.33%	2	45.83%	11	29.17%	7	42.11%	24
Private Sector	12.50%	1	25.00%	2	12.50%	1	50.00%	4	0.00%	0	14.04%	8
Public Sector	18.75%	3	18.75%	3	12.50%	2	43.75%	7	6.25%	1	28.07%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.51%	2
Total	12.28%	7	15.79%	9	12.28%	7	45.61%	26	14.04%	8	100%	57

Table 27 depicts that, on aggregate, about 60 percent asserts that food insecurity is high. The majority of the respondents among the academia/research institutes (75%), private sector (50%), and public sector (50%) affirmed that food insecurity is high. As identified by the key informants, the quest to end hunger has had a crowding out effect on the need to maintain nutrition and healthy diets in most households in Nigerian.

Table 28. Respondents' perception on influence of science and research on federal government policy agenda on food system

	1 = Lowest		2		3		4		5 = Highest		Total	
	%	n	%	n	%	n	%	n	%	n	%	n
National NGO	0.00%	0	100%	2	0.00%	0	0.00%	0	0.00%	0	3.51%	2
International NGO	20.00%	1	40.00%	2	40.00%	2	0.00%	0	0.00%	0	8.77%	5
Academia/Research institutes	12.50%	3	54.17%	13	29.17%	7	4.17%	1	0.00%	0	42.11%	24
Private Sector	0.00%	0	50.00%	4	37.50%	3	12.50%	1	0.00%	0	14.04%	8
Public Sector	0.00%	0	56.25%	9	31.25%	5	12.50%	2	0.00%	0	28.07%	16
Development partners	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	3.51%	2
Total	7.02%	4	56.14%	32	29.82%	17	7.02%	4	0.00%	0	100%	57

Collectively, 63 percent agreed that influence of science and research on federal government policy agenda on food system is below average (Table 28). In fact, only about 13 percent of those in private and public sectors believed that science and research have influence on the federal government policy agenda on food system; among the academia/research institutes only 4 percent agreed to such influence. Clearly, respondents from national NGOs, international NGOs, and development partners believed that science and research do not have an influence on the federal

government policy agenda on food systems – and if at all, such influence is negligible. This further suggests a lack of synergy between the government and the academia/research institutes.

Table 29. Perception of the influence of food and nutrition security concerns on federal government policy agenda on food system

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	100%	2	0.00%	0	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	60.00%	3	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	12.50%	3	41.67%	10	45.83%	11	0.00%	0	0.00%	0	42.11%	24
Private Sector	0.00%	0	50.00%	4	50.00%	4	0.00%	0	0.00%	0	14.04%	8
Public Sector	6.25%	1	37.50%	6	50.00%	8	6.25%	1	0.00%	0	28.07%	16
Development partners	50.00%	1	50.00%	1	0.00%	0	0.00%	0	0.00%	0	3.51%	2
Total	8.77%	5	42.11%	24	45.61%	26	3.51%	2	0.00%	0	100%	57

On aggregate, about 51 percent opined that food and nutrition security concerns do not influence the federal government policy agenda on food systems, about 46 percent rated such influence to be average; only about 4 percent maintained the view that food and nutrition security concerns have an influence on the federal government policy agenda on food systems (Table 29). In terms of sectors, only a few actors among international NGOs (20%) and public sector (6%) rated the influence of food and nutrition security concerns on the federal government food system policy agenda above average. As for national NGOs, academia/research institutes, private sector and development partners, the influence of food and nutrition security concerns on federal government food system policy agenda was rated either average or below. This suggests a lack of commitment to food and nutrition security concerns on the part of the federal government of Nigeria.

Table 30. Evaluation of the role of the private sector in the achievement of food and nutrition security in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
International NGO	0.00%	0	0.00%	0	20.00%	1	80.00%	4	0.00%	0	8.77%	5
Academia/Research institutes	0.00%	0	8.33%	2	20.83%	5	50.00%	12	20.83%	5	42.11%	24
Private Sector	0.00%	0	0.00%	0	12.50%	1	50.00%	4	37.50%	3	14.04%	8
Public Sector	0.00%	0	6.25%	1	31.25%	5	50.00%	8	12.50%	2	28.07%	16
Development partners	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	3.51%	2
Total	0.00%	0	5.26%	3	22.81%	13	52.63%	30	19.30%	11	100.00%	57

According to Table 30, the majority (72%) of the respondents rated the contribution of the private sector towards the achievement of food and nutrition security above average, only 5 percent rated such contribution below average. Virtually all the sectors acknowledged the role of the private sector with regard to food and nutrition security in Nigeria. For instance, national NGOs (100%), international NGOs (80%), academia/research institutes (71%), private sector (87%) and public sector (62%) all rated the contributions of private sector towards the achievement of food and nutrition security above average. With proper regulation and an enabling business environment, the private sector could be a major force towards the achievement of food and nutrition security in Nigeria.

Respondents were asked to share their views on the contribution of NGOs towards the achievement of food security in Nigeria. The summary of their responses is presented in Table 31.

Table 31. Evaluation of roles of NGOs in achievement of food security in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	3.64%	2
International NGO	0.00%	0	0.00%	0	80.00%	4	0.00%	0	20.00%	1	9.09%	5
Academia/Research institutes	0.00%	0	40.91%	9	31.82%	7	22.73%	5	4.55%	1	40.00%	22
Private Sector	0.00%	0	12.50%	1	50.00%	4	37.50%	3	0.00%	0	14.55%	8
Public Sector	0.00%	0	31.25%	5	50.00%	8	12.50%	2	6.25%	1	29.09%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.64%	2
Total	0.00%	0	27.27%	15	43.64%	24	21.82%	12	7.27%	4	100%	55

According to Table 31, almost the same proportion (approximately 27%) rated the contributions of NGOs to food security below and above average. Greater proportion (44%) rated them merely average. Most of the sectors, international NGOs (80%), private sector (50%) and public sector (50%), affirmed that the contribution of NGOs towards the achievement of food security in Nigeria is neither below nor above average. However, development partners opined that their contributions is clearly above average.

Table 32. Level of involvement in food security discussion in Nigeria in the last 12 months

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.57%	2
International NGO	0.00%	0	20.00%	1	40.00%	2	40.00%	2	0.00%	0	8.93%	5
Academia/Research institutes	4.35%	1	4.35%	1	39.13%	9	43.48%	10	8.70%	2	41.07%	23
Private Sector	25.00%	2	12.50%	1	37.50%	3	0.00%	0	25.00%	2	14.29%	8
Public Sector	0.00%	0	12.50%	2	56.25%	9	31.25%	5	0.00%	0	28.57%	16
Development partners	0.00%	0	50.00%	1	0.00%	0	50.00%	1	0.00%	0	3.57%	2
Total	7.14%	4	10.71%	6	41.07%	23	33.93%	19	7.14%	4	100%	56

On aggregate, same proportions (41%) of respondents rated their involvement in food security discussions in the last 12 months as average and above average; only about 11 percent agreed that their involvement is below average (Table 32). Similarly, most respondents in international NGOs (80%), academia/research institutes (91%), private sector (62%) and public sector (87%) rated their involvement in food security discussion in the last 12 months as either average or above average. It could, therefore, be deduced that the majority of the respondents were persons who were actively involved in food security discussion.

Table 33. Level of knowledge about food security issues leading to healthy diets in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	20.00%	1	40.00%	2	20.00%	1	8.77%	5
Academia/Research institutes	0.00%	0	0.00%	0	29.17%	7	50.00%	12	20.83%	5	42.11%	24
Private Sector	0.00%	0	12.50%	1	37.50%	3	25.00%	2	25.00%	2	14.04%	8
Public Sector	0.00%	0	6.25%	1	37.50%	6	50.00%	8	6.25%	1	28.07%	16
Development partners	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.51%	2
Total	1.75%	1	5.26%	3	33.33%	19	43.86%	25	15.79%	9	100%	57

The overall assessment by respondents indicates that about 60 percent rated their level of knowledge about food security related to healthy diets in Nigeria above average; only about 7 percent agreed that their level of knowledge on the subject is below average (Table 33). A greater proportion of respondents among international NGOs (60%), academia/research institutes (70%), private sector (50%) and public sector (56%) rated their level of knowledge about food security related to healthy diets above average. Thus, we can infer that most of the actors are not ignorant about food security issues related to healthy diets.

Table 34. Level of knowledge and understanding within institution on food security issues leading to healthy diets in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	20.00%	1	40.00%	2	20.00%	1	8.77%	5
Academia/Research institutes	0.00%	0	8.33%	2	33.33%	8	29.17%	7	29.17%	7	42.11%	24
Private Sector	0.00%	0	25.00%	2	25.00%	2	25.00%	2	25.00%	2	14.04%	8
Public Sector	0.00%	0	0.00%	0	50.00%	8	37.50%	6	12.50%	2	28.07%	16
Development partners	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.51%	2
Total	1.75%	1	8.77%	5	36.84%	21	31.58%	18	21.05%	12	100%	57

Similar to the individual level of knowledge, the overall assessment by respondents indicates that about 53 percent rated the level of knowledge and understanding within their institution about food security related to healthy diets in Nigeria above average; only about 10 percent agreed that the level of knowledge within their institution on the subject is below average (Table 34). A greater proportion of the respondents rated this level of knowledge and understanding within their institution above average; particularly, international NGOs (60%), academia/research institutes (58%), private sector (50%) and public sector (50%) were rated above average.

Table 35. Level of supportiveness of the federal government food security related policies to healthy diet

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	100.00%	2	0.00%	0	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	40.00%	2	40.00%	2	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	0.00%	0	29.17%	7	66.67%	16	4.17%	1	0.00%	0	42.11%	24
Private Sector	0.00%	0	25.00%	2	62.50%	5	12.50%	1	0.00%	0	14.4%	8
Public Sector	0.00%	0	18.75%	3	56.25%	9	25.00%	4	0.00%	0	28.07%	16
Development partners	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	3.51%	2
Total	0.00%	0	29.82%	17	57.89%	33	12.28%	7	0.00%	0	100%	57

According to Table 35, only few respondents rated the level of supportiveness of federal government food security related policies to healthy diets above average. These include international NGOs (20%), academia/research institutes (4%), private sector (12%) and the public sector (25%). A majority of the respondents in academia/research institutes (67%) private sector (62%) and public sector (56%) rated this level of supportiveness of federal government food security related policies to healthy diets as average. On aggregate, about 58 percent rated it as average; while about 30 percent rated it below average. The respondents seem not to be impressed

by the level of support accorded to healthy diets from federal government food security related policies.

Table 36. Extent to which Federal Government Policy Agenda on Food Security is based on adequate understanding of realities in the Country

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	50.00%	1	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	80.00%	4	0.00%	0	0.00%	0	8.77%	5
Academia/Research institutes	20.83%	5	25.00%	6	54.17%	13	0.00%	0	0.00%	0	42.11%	24
Private Sector	0.00%	0	37.50%	3	62.50%	5	0.00%	0	0.00%	0	14.04%	8
Public Sector	6.25%	1	43.75%	7	43.75%	7	6.25%	1	0.00%	0	28.07%	16
Development partners	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	3.51%	2
Total	12.28%	7	31.58%	18	54.39%	31	1.75%	1	0.00%	0	100%	57

As shown in Table 36, apart from the public sector (6%), no other sector rated above average the Federal Government policy agenda on food security as based on adequate understanding of realities in the country. The majority of the respondents in international NGOs (80%), academia/research institutes (54%) and private sector (62%) rated it average. On aggregate, 54 percent rated it average; while about 43 percent rated it below average.

Table 37. Extent to which trade restrictions has helped Nigeria to achieve food security

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.57%	2
International NGO	0.00%	0	60.00%	3	40.00%	2	0.00%	0	0.00%	0	8.93%	5
Academia/Research institutes	17.39%	4	34.78%	8	26.09%	6	13.04%	3	8.70%	2	41.07%	23
Private Sector	12.50%	1	25.00%	2	25.00%	2	37.50%	3	0.00%	0	14.29%	8
Public Sector	12.50%	2	18.75%	3	31.25%	5	25.00%	4	12.50%	2	28.57%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	0.00%	0	50.00%	1	3.57%	2
Total	14.29%	8	28.57%	16	30.36%	17	17.86%	10	8.93%	5	100%	56

Table 37 depicts that, on aggregate, 43 percent asserts that the trade restrictions have not helped the country to achieve food security, while 25 percent affirmed that it has helped. In terms of sectors, while other sectors seem to be evenly distributed on their views, a majority of the respondents from international NGOs (60%) and academia/research institutes (52%) clearly affirmed that trade restrictions has not helped the country to achieve food security. This calls for a critical evaluation of the trade restriction policy of the Nigerian government especially in light of food security. Of course,

the policy alone cannot achieve food security. As emphasized by the key informants, there should be deliberate effort to increase domestic food production in Nigeria.

Table 38. Major Policy challenges related to access to sufficient, safe and healthy food in Nigeria

	Development partners	Public Sector	Private Sector	Academia/ Research institutes	International NGO	National NGO	
80.36%	50.00%	87.50%	87.50%	75.00%	100%	50.00%	No proper monitoring of policy implementation
45	1	14	7	18	4	1	
23.21%	100%	12.50%	12.50%	33.33%	0.00%	0.00%	Lobbying against the formulation of proper policy framework
13	2	2	1	8	0	0	
14.29%	0.00%	18.75%	0.00%	12.50%	25.00%	50.00%	Inadequate welfare for policy implementation workers
8	0	3	0	3	1	1	
28.57%	50.00%	25.00%	37.50%	29.17%	25.00%	0.00%	Non-availability of tools for workers involved in policy implementation
16	1	4	3	7	1	0	
89.29%	50.00%	87.50%	100.00%	91.67%	75.00%	100%	Inadequate implementation of policy (due to poor funding, corruption practices, etc.)
50	1	14	8	22	3	2	
55.36%	0.00%	50.00%	50.00%	58.33%	100%	50.00%	Inadequate policy communication and awareness among implementing agencies
31	0	8	4	14	4	1	
32.14%	50.00%	31.25%	37.50%	29.17%	25.00%	50.00%	No set standard for controlling the quality of street food in Nigeria
18	1	5	3	7	1	1	
25.00%	50.00%	25.00%	25.00%	25.00%	0.00%	50.00%	High cost of registration of processed food products with regulators (NAFDAC, SON, etc.)
14	1	4	2	6	0	1	
33.93%	50.00%	31.25%	25.00%	37.50%	50.00%	0.00%	Low adoption of new technologies by the farmers and food processors
19	1	5	2	9	2	0	
41.07%	50.00%	31.25%	25.00%	50.00%	50.00%	50.00%	Non-inclusion of key stakeholders in the process of policy formulation
23	1	5	2	12	2	1	
100.0%	3.57%	28.57%	14.29%	42.86%	7.14%	3.57%	Total
56	2	16	8	24	4	2	

The participants were asked to identify what they considered as the four major policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in the country. A list was provided based on the findings from the pre-survey investigation and face-to-face interviews. According Table 38, the four major policy challenges with respect to sufficient, safe and healthy food for all consumers in Nigeria are list below in order of importance:

1. Inadequate implementation of policy (largely due to poor funding and corrupt practices)
2. No proper monitoring of policy implementation (including feedback mechanism)
3. Inadequate policy communication and awareness among implementing agencies
4. Non-inclusion of key stakeholders in the process of policy formulation

Challenges 1, 2 and 3 revolves around post-policy formulation activities. Thus, it can be inferred that policy implementation generally is the key challenge with respect to access to sufficient, safe and healthy food for all consumers.

4.3 Specific questions for land and water use

To understand the views of the key policy actors on land and water use policies in relation to food and nutrition security in the country, they were asked questions on the seriousness of land and water use as policy concern in the country, supportiveness of the federal government policy on land and water use to the national agenda on food and nutrition security, and the extent to which the federal government policy agenda on land and water use is addressing poor water resources management for the achievement of food and nutrition security. The summaries of their responses are presented and discussed in this section.

Table 39. Perception of seriousness of land and water use as policy concern in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	100%	2	0.00%	0	3.45%	2
International NGO	0.00%	0	40.00%	2	40.00%	2	20.00%	1	0.00%	0	8.62%	5
Academia/Research institutes	12.50%	3	20.83%	5	16.67%	4	12.50%	3	37.50%	9	41.38%	24
Private Sector	11.11%	1	11.11%	1	33.33%	3	22.22%	2	22.22%	2	15.52%	9
Public Sector	6.25%	1	43.75%	7	37.50%	6	6.25%	1	6.25%	1	27.59%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.45%	2
Total	8.62%	5	25.86%	15	25.86%	15	17.24%	10	22.41%	13	100%	58

On aggregate, it could be concluded that land and water use are serious policy concerns in Nigeria given that about 40 percent rated it above average (Table 39). Sectors that clearly considered it as a serious issue include national NGOs (100%), academia/research institutes (50%), the private sector (44%), and development partners (100%). However, the majority among the public sector (50%) did not perceive land and water use as a serious policy concern in Nigeria.

Table 40. Respondents' level of involvement in policy discussion related to land and water use in Nigeria in the last 12 months

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	100%	2	0.00%	0	0.00%	0	0.00%	0	0.00%	0	3.45%	2
International NGO	40.00%	2	40.00%	2	20.00%	1	0.00%	0	0.00%	0	8.62%	5
Academia/Research institutes	29.17%	7	29.17%	7	33.33%	8	0.00%	0	8.33%	2	41.38%	24
Private Sector	44.44%	4	33.33%	3	22.22%	2	0.00%	0	0.00%	0	15.52%	9
Public Sector	25.00%	4	37.50%	6	37.50%	6	0.00%	0	0.00%	0	27.59%	16
Development partners	0.00%	0	50.00%	1	0.00%	0	0.00%	0	50.00%	1	3.45%	2
Total	32.76%	19	32.76%	19	29.31%	17	0.00%	0	5.17%	3	100%	58

Table 40 shows that, on aggregate, the majority (65%) of the respondents did not participate much in discussions related to the land and water use policy in the last 12 months; only about 5% rated their involvement above average. Specifically, none of the respondents from international NGOs, the private sector and the public sector rated his or her involvement above average. Among the academia/research institutes, only about 8 percent rated its involvement above average. This suggests that policies related to land and water use are currently not an area of priority in Nigeria. Little wonder it was not listed among the major policy challenges in Nigeria with respect to access to sufficient, safe and healthy food as identified by key informants during the face-to-face interview.

Table 41. Level of supportiveness of federal government policy on land and water use to national agenda on food and nutrition security

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	50.00%	1	0.00%	0	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	60.00%	3	40.00%	2	0.00%	0	0.00%	0	8.77%	5
Academia/Research institutes	17.39%	4	47.83%	11	34.78%	8	0.00%	0	0.00%	0	40.35%	23
Private Sector	11.11%	1	33.33%	3	55.56%	5	0.00%	0	0.00%	0	15.79%	9
Public Sector	6.25%	1	25.00%	4	56.25%	9	12.50%	2	0.00%	0	28.07%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	0.00%	0	50.00%	1	3.51%	2
Total	14.04%	8	38.60%	22	42.11%	24	3.51%	2	1.75%	1	100%	57

According to Table 41, only about 5 percent of the respondents rated the level of supportiveness of the federal government policy on land and water use to the national agenda on food and nutrition security above average; 42 percent rated it average, while the rest rated it below average. Across the sectors, only about 12 percent from the public sectors rated federal government support to land and water use towards national agenda on food and nutrition security above average. All the respondents among international NGOs, academia/research institutes and private sector rated it either average or below average.

Table 42. Extent to which federal government policy agenda on land and water use is addressing poor water resources management for the achievement of food and nutrition security in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	50.00%	1	0.00%	0	50.00%	1	0.00%	0	3.57%	2
International NGO	20.00%	1	40.00%	2	40.00%	2	0.00%	0	0.00%	0	8.93%	5
Academia/Research institutes	27.27%	6	54.55%	12	18.18%	4	0.00%	0	0.00%	0	39.29%	22
Private Sector	0.00%	0	66.67%	6	22.22%	2	0.00%	0	11.11%	1	16.07%	9
Public Sector	0.00%	0	50.00%	8	43.75%	7	6.25%	1	0.00%	0	28.57%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.57%	2
Total	14.29%	8	51.79%	29	26.79%	15	5.36%	3	1.79%	1	100%	56

On aggregate, the majority (66%) of the respondents rated below average the extent to which the federal government policy agenda on land and water use is addressing poor water resources management for the achievement of food and nutrition security (Table 42). Majority from different sectors also rated it below average. For instance, international NGOs (60%), academia/research institutes (81%) and the private sector (89%) rated it below average. In other words, these respondents opined that the federal government policy agenda on land and water use in addressing

poor water resources management for the achievement of food and nutrition security is below average.

Table 43. Perception of the extent to which an integrated water management and coordinated development program on land, water and relevant resources helps to overcome food and nutrition security concerns in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	3.45%	2
International NGO	0.00%	0	0.00%	0	20.00%	1	80.00%	4	0.00%	0	8.62%	5
Academia/ Research institutes	0.00%	0	4.17%	1	16.67%	4	45.83%	11	33.33%	8	41.38%	24
Private Sector	0.00%	0	11.11%	1	33.33%	3	33.33%	3	22.22%	2	15.52%	9
Public Sector	6.25%	1	0.00%	0	43.75%	7	25.00%	4	25.00%	4	27.59%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100%	2	3.45%	2
Total	1.72%	1	3.45%	2	27.59%	16	39.66%	23	27.59%	16	100%	58

A greater proportion (67%) of the participants in the online survey affirmed that an integrated water management and coordinated development program on land, water and relevant resources help to overcome food and nutrition insecurity in Nigeria (Table 43). Virtually all the sectors, such as international NGOs (80%), academia/research institutes (79%), private sector (55%), public sector (50%), national NGOs (50%), and development partners (100%), asserted that an integrated water management and coordinated development program on land, water and relevant resources will help overcome food and nutrition insecurity in Nigeria.

4.4 Specific questions for climate change

It is well-known that agriculture, which is the bedrock of the food system, is vulnerable to climate variability and that extreme weather events are among the leading causes of food system failure (Mueller and Osgood, 2009; Challinor *et al.*, 2010; Vermeulen *et al.*, 2012). Therefore, it becomes expedient to measure the level of knowledge and involvement in the discussion on climate change among key players in the food system in Nigeria as well as the extent to which the federal government policy agenda on climate change reflects an adequate understanding of the realities in the country. The responses obtained on climate change issues during the online survey are summarized in Tables 44 to 48.

Table 44. Respondents' level of involvement in discussion on climate change in relation to food systems in Nigeria

	1 = Lowest		2		3		4		5= Highest		Total	
National NGO	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.51%	2
International NGO	40.00%	2	40.00%	2	20.00%	1	0.00%	0	0.00%	0	8.77%	5
Academia/Research institutes	13.04%	3	13.04%	3	47.83%	11	17.39%	4	8.70%	2	40.35%	23
Private Sector	33.33%	3	0.00%	0	44.44%	4	22.22%	2	0.00%	0	15.79%	9
Public Sector	12.50%	2	37.50%	6	25.00%	4	18.75%	3	6.25%	1	28.07%	16
Development partners	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	3.51%	2
Total	17.54%	10	21.05%	12	40.35%	23	15.79%	9	5.26%	3	100%	57

As depicted in Table 44, on aggregate, the majority (79%) of the participants agreed that their level of involvement in the discussion on climate change in relation to food systems in Nigeria cannot be rated above average. In terms of sectors, a majority among international NGOs (80%) and the public sector (50%) affirmed that their level of involvement was below average. The three sectors where some participants rated their level of involvement in discussion on climate change in relation to food systems above average are academia/research institutes (26%), the private sector (22%) and the public sector (25%). To further reduce or eliminate the adverse effects of climate variability and extreme weather events on food systems in Nigeria, this result suggests that a conscious effort should be made to stir up more discussions on the subject among policy actors in the domain of food system governance.

Table 45. Respondents' level of knowledge about relationship between climate change and healthy diets in Nigeria.

	1 = Lowest		2		3		4		5= Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
International NGO	0.00%	0	20.00%	1	40.00%	2	40.00%	2	0.00%	0	8.77%	5
Academia/Research institutes	0.00%	0	13.04%	3	34.78%	8	43.48%	10	8.70%	2	40.35%	23
Private Sector	11.11%	1	22.22%	2	22.22%	2	44.44%	4	0.00%	0	15.79%	9
Public Sector	0.00%	0	25.00%	4	50.00%	8	25.00%	4	0.00%	0	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
Total	1.75%	1	17.54%	10	35.09%	20	38.60%	22	7.02%	4	100%	57

Generally, Table 45 shows that a large proportion (45%) of the respondents rated their level of knowledge on the relationship between climate change and healthy diets in Nigeria above average; about 35 percent rated it as average. The majority among national NGOs (100%), international

NGOs (80%), academia/research institutes (87%), private sector (67%), public sector (75%) and development partners (100%) rated their level of knowledge on the relationship between climate change and healthy diets in Nigeria above average. It is interesting to note that with this level of knowledge among these actors, the level of discussion is still relatively low (Table 44).

Table 46. Level of knowledge and understanding within institution on the relationship between climate change and healthy diets in Nigeria.

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	50.00%	1	50.00%	1	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	60.00%	3	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	0.00%	0	13.04%	3	26.09%	6	47.83%	11	13.04%	3	40.35%	23
Private Sector	11.11%	1	33.33%	3	22.22%	2	33.33%	3	0.00%	0	15.79%	9
Public Sector	0.00%	0	31.25%	5	31.25%	5	31.25%	5	6.25%	1	28.07%	16
Development partners	0.00%	0	50.00%	1	0.00%	0	50.00%	1	0.00%	0	3.51%	2
Total	1.75%	1	22.81%	13	29.82%	17	38.60%	22	7.02%	4	100%	57

On aggregate, 46 percent of the respondents rated the level of knowledge and understanding within their institutions on the relationship between climate change and healthy diets in Nigeria above average; 29 percent rated it average (Table 46). In terms of sectors, the majority of the participants from academia/research institutes (61%) and the public sector (37%) rated this level of knowledge and understanding above average; while the greater proportion among the private sector (44%) rated it below average.

Table 47. Extent to which federal government policy agenda on climate change reflects adequate understanding of the realities in the country

	1 = Lowest		2		3		4		5= Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	0.00%	0	100%	5	0.00%	0	0.00%	0	8.77%	5
Academia/Research institutes	13.04%	3	47.83%	11	34.78%	8	4.35%	1	0.00%	0	40.35%	23
Private Sector	11.11%	1	33.33%	3	44.44%	4	11.11%	1	0.00%	0	15.79%	9
Public Sector	0.00%	0	43.75%	7	50.00%	8	6.25%	1	0.00%	0	28.07%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	0.00%	0	50.00%	1	3.51%	2
Total	8.77%	5	38.60%	22	45.61%	26	5.26%	3	1.75%	1	100%	57

Only 7 percent, on aggregate, rated the extent to which the federal government policy agenda on climate change reflects an adequate understanding of the realities in the country above average;

the majority (45%) rather rated it below average (Table 47). A greater proportion among academia/research institutes (61%) rated it below average, while a majority from the public sector opined that the extent to which the federal government policy agenda on climate change reflects an adequate understanding of the realities in the country is merely average.

Table 48. Extent to which climate change is expected to affect food production (food and nutrition security) in Nigeria in the next 5 years

	1=Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	100%	2	0.00%	0	3.51%	2
International NGO	0.00%	0	0.00%	0	40.00%	2	60.00%	3	0.00%	0	8.77%	5
Academia/Research institutes	0.00%	0	0.00%	0	8.70%	2	56.52%	13	34.78%	8	40.35%	23
Private Sector	0.00%	0	11.11%	1	33.33%	3	22.22%	2	33.33%	3	15.79%	9
Public Sector	0.00%	0	0.00%	0	43.75%	7	31.25%	5	25.00%	4	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
Total	0.00%	0	1.75%	1	24.56%	14	45.61%	26	28.07%	16	100%	57

From the Table 48, it is obvious that most of the participants (74%) shared the concern that climate change will most likely affect food production (food and nutrition security) in Nigeria in the next 5 years. In terms of sectors, only the private sector (11%) rated this below average. A greater proportion in all the sectors [national NGOs (100%), international NGOs (60%), academia/research institutes (91%), private sector (55%), public sector (56%) and development partners (100%)] affirmed that climate change will most likely affect food production (food and nutrition security) in Nigeria in the next 5 years.

Extreme weather events are responsible for great loss of crops, livestock, livelihood, and life in many countries across Africa. As a result, it is important that key players in food systems are well-informed and actively involved in the discussion on climate change especially as it affects national food and nutrition security. If otherwise, the result will be visible in the formulation of food system policies that are not climate change sensitive.

4.5 Specific questions for agri-marketing and value chain

This section presents the responses of the participants in the online survey on agri-marketing and the value chain in relationship to food system related policies in Nigeria. They were asked to

evaluate the effectiveness of the present development level of agri-marketing and value chain organization in the country, their level of involvement in agri-marketing and value chain discussion, and the sensitivity of federal government agri-marketing and value chain related policies to food system issues. The summaries of their responses are captured in Tables 49 – 58.

Table 49. Effectiveness of the present development level of agri-marketing and value chain in Nigeria

	1 = Lowest		2		3		4		5 =Highest		Total	
	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count
National NGO	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.57%	2
International NGO	0.00%	0	20.00%	1	80.00%	4	0.00%	0	0.00%	0	8.93%	5
Academia/Research institutes	8.70%	2	52.17%	12	26.09%	6	13.04%	3	0.00%	0	41.07%	23
Private Sector	11.11%	1	22.22%	2	55.56%	5	11.11%	1	0.00%	0	16.07%	9
Public Sector	6.67%	1	33.33%	5	33.33%	5	26.67%	4	0.00%	0	26.79%	15
Development partners	0.00%	0	50.00%	1	0.00%	0	0.00%	0	50.00%	1	3.57%	2
Total	7.14%	4	37.50%	21	39.29%	22	14.29%	8	1.79%	1	100%	56

A large proportion of the respondents (44%) rated the effectiveness of the present development level of agri-marketing and value chains in Nigeria below average; about 39 percent rated it average (Table 49). Similarly, the majority from academia/research institutes (61%) and public sector (40%) rated the effectiveness of the present development level of agri-marketing and value chains in the country below average; while the majority from international NGOs (80%) and the private sector (55%) rated it as average. This suggests that agri-marketing and value chains management in Nigeria requires improvement to meet the expectations of key policy actors in the country.

Table 50. Respondents' level of involvement in agri-marketing and value chain discussion in Nigeria in the last 12 months

	1 = Lowest		2		3		4		5 =Highest		Total	
	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count
National NGO	0.00%	0	100%	2	0.00%	0	0.00%	0	0.00%	0	3.57%	2
International NGO	0.00%	0	20.00%	1	80.00%	4	0.00%	0	0.00%	0	8.93%	5
Academia/Research institutes	9.09%	2	27.27%	6	18.18%	4	31.82%	7	13.64%	3	39.29%	22
Private Sector	22.22%	2	22.22%	2	11.11%	1	22.22%	2	22.22%	2	16.07%	9
Public Sector	6.25%	1	18.75%	3	37.50%	6	31.25%	5	6.25%	1	28.57%	16
Development partners	0.00%	0	50.00%	1	0.00%	0	0.00%	0	50.00%	1	3.57%	2
Total	8.93%	5	26.79%	15	26.79%	15	25.00%	14	12.50%	7	100%	56

Table 50 depicts that, on aggregate, almost the same proportion of respondents rated their level of involvement in agri-marketing and value chains discussions in Nigeria in the last 12 months below average (36%) and above average (37%), while the rest rated their involvement as average. Similarly, actors in the private sector had a form of normal distribution as 44% rated below average, 11% average and 44% above average. Most respondents (80%) from international NGOs rated their involvement as average. A relatively large proportion of actors among academia/research institutes (45%) rated their involvement in agri-marketing and value chains discussions in Nigeria in the last 12 months above average. Among the public sector actors, the same proportion (37%) rated their involvement as average and above average.

Table 51. Respondents' level of knowledge about agri-marketing and value chain issues affecting food systems in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	50.00%	1	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	40.00%	2	40.00%	2	0.00%	0	8.77%	5
Academia/Research institutes	4.35%	1	8.70%	2	26.09%	6	30.43%	7	30.43%	7	40.35%	23
Private Sector	11.11%	1	0.00%	0	33.33%	3	22.22%	2	33.33%	3	15.79%	9
Public Sector	6.25%	1	6.25%	1	43.75%	7	31.25%	5	12.50%	2	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
Total	7.02%	4	7.02%	4	33.33%	19	29.82%	17	22.81%	13	100%	57

Generally, the majority (52%) of the respondents rated their level of knowledge about agri-marketing and value chain issues affecting food systems in Nigeria above average, only 14% agreed that their level of knowledge is below average (Table 51). Most of the respondents among academia/research institutes (61%) and private sector (55%) rated their level of knowledge about agri-marketing and value chain issues affecting food systems in Nigeria above average. A majority (80%) among the public sector rated their involvement either average or above average.

Table 52. Level of knowledge and understanding within institution on agri-marketing and value chain issues affecting food system in Nigeria

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.51%	2
International NGO	0.00%	0	20.00%	1	40.00%	2	20.00%	1	20.00%	1	8.77%	5
Academia/Research institutes	0.00%	0	8.70%	2	30.43%	7	26.09%	6	34.78%	8	40.35%	23
Private Sector	11.11%	1	11.11%	1	11.11%	1	44.44%	4	22.22%	2	15.79%	9
Public Sector	6.25%	1	6.25%	1	31.25%	5	50.00%	8	6.25%	1	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
Total	5.26%	3	8.77%	5	26.32%	15	36.84%	21	22.81%	13	100%	57

The level of knowledge and understanding within institution on agri-marketing and value chain issues affecting food systems in Nigeria is rated above average by a majority (59%) of the respondents, about 26 percent rated it as average; while only about 14 percent below average (Table 52). The majority of the respondents from academia/research institutes (61%), private sector (67%), and public sector (56%) rated the level of knowledge and understanding (within their institutions) on agri-marketing and value chain issues affecting food systems in Nigeria above average. Generally, the policy actors seem to be well-informed about agri-marketing and value chain issues affecting food systems in the country.

Table 53. Sensitivity of Federal Government agri-marketing and value chain related policies to food system issues

	1 = Lowest		2		3		4		5=Highest		Total	
National NGO	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.57%	2
International NGO	0.00%	0	20.00%	1	40.00%	2	40.00%	2	0.00%	0	8.93%	5
Academia/Research institutes	4.55%	1	22.73%	5	45.45%	10	18.18%	4	9.09%	2	39.29%	22
Private Sector	11.11%	1	33.33%	3	22.22%	2	33.33%	3	0.00%	0	16.07%	9
Public Sector	6.25%	1	12.50%	2	62.50%	10	12.50%	2	6.25%	1	28.57%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.57%	2
Total	7.14%	4	19.64%	11	46.43%	26	21.43%	12	5.36%	3	100%	56

In general, a very large proportion (73%) of the respondents did not rate the sensitivity of the federal government agri-marketing and value chain related policies to food system issues above average (Table 53). In terms of sectors, a majority among the public sector (62%) and academia/research institutes (45%) rated it average. This is unlike the private sector where the

majority (44%) asserts that the sensitivity of the federal government agri-marketing and value chain related policies to food system issues is below average. Food system-related policies in Nigeria seem to pay little or no attention to the marketing and value chain issues affecting food system.

Table 54. Extent to which Federal Government policy agenda on agri-marketing and value chain reflect the realities in the country.

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	100%	2	0.00%	0	0.00%	0	3.51%	2
International NGO	0.00%	0	60.00%	3	20.00%	1	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	8.70%	2	43.48%	10	39.13%	9	8.70%	2	0.00%	0	40.35%	23
Private Sector	22.22%	2	22.22%	2	44.44%	4	0.00%	0	11.11%	1	15.79%	9
Public Sector	6.25%	1	43.75%	7	43.75%	7	6.25%	1	0.00%	0	28.07%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	50.00%	1	0.00%	0	3.51%	2
Total	10.53%	6	38.60%	22	40.35%	23	8.77%	5	1.75%	1	100%	57

According to Table 54, on aggregate, nearly half (49%) of the respondents rated the extent to which the federal government policy agenda on agri-marketing and value chain issues reflects the realities in the country below average; only 10 per cent rated it above average. Very large proportions among international NGO (80%), academia/research institutes (91%), private (89%) and public sector (94%) rated the federal government policy agenda on agri-marketing and value chains in reference to the realities in the country below average. This aspect of food system-related policy needs to be strengthened.

Table 55. Level of knowledge and understanding among food system-related policy actors on agri-marketing and value chain issues and their potential effect on food systems in Nigeria

	1 = Lowest		2		3		4		5= Highest		Total	
National NGO	0.00%	0	50.00%	1	50.00%	1	0.00%	0	0.00%	0	3.57%	2
International NGO	0.00%	0	40.00%	2	60.00%	3	0.00%	0	0.00%	0	8.93%	5
Academia/Research institutes	4.55%	1	36.36%	8	36.36%	8	22.73%	5	0.00%	0	39.29%	22
Private Sector	0.00%	0	11.11%	1	66.67%	6	22.22%	2	0.00%	0	16.07%	9
Public Sector	6.25%	1	18.75%	3	43.75%	7	31.25%	5	0.00%	0	28.57%	16
Development partners	50.00%	1	0.00%	0	0.00%	0	0.00%	0	50.00%	1	3.57%	2
Total	5.36%	3	26.79%	15	44.64%	25	21.43%	12	1.79%	1	100%	56

Generally, the level of knowledge and understanding among food system-related policy actors on agri-marketing and value chain issues and their potential effect on food systems in Nigeria was rated below average by an important proportion of the respondents (45%). Similarly, the greater proportions of respondents from international NGO (60%), private sector (67%) and public sector (44%) rated it average; while an important group (41%) from academia/research institutes rated these policy actors below average with reference to their level of knowledge and understanding on agri-marketing and value chain issues and their potential effect on food systems in Nigeria (Table 55). For instance, generally, there is no systematic way of tracing the sources or origins of most farm produce in Nigeria; only a few food processors in the country have such mechanism for tracking sources of their inputs from the farm. This, therefore, could make it difficult to isolate and treat any contamination identified in the food value chain.

Table 56. Extent to which the unsatisfactory conditions of rural market and unregulated market practices hinder the smooth agri-marketing and value chain which impact the broader food system

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
International NGO	0.00%	0	20.00%	1	60.00%	3	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	4.35%	1	0.00%	0	26.09%	6	47.83%	11	21.74%	5	40.35%	23
Private Sector	0.00%	0	0.00%	0	44.44%	4	33.33%	3	22.22%	2	15.79%	9
Public Sector	0.00%	0	6.25%	1	18.75%	3	56.25%	9	18.75%	3	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100%	2	3.51%	2
Total	1.75%	1	3.51%	2	28.07%	16	43.86%	25	22.81%	13	100%	57

According to Table 56, the extent to which the unsatisfactory conditions of rural markets and unregulated market practices hinder the smooth agri-marketing and value chain impact the broader food systems in Nigeria was rated above average by most of the respondents (67%), only about 3% rated it below average. In other words, it can be inferred that unsatisfactory conditions of rural markets and unregulated market practices negate agri-marketing and value chains which impact the broader food systems in Nigeria.

Table 57. Extent to which the uncoordinated agri-import and movement of agricultural products distort the smooth agri-marketing and value chain and thus impact food systems in Nigeria

	1=Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	0.00%	0	100%	2	3.51%	2
International NGO	0.00%	0	60.00%	3	20.00%	1	20.00%	1	0.00%	0	8.77%	5
Academia/Research institutes	4.35%	1	4.35%	1	30.43%	7	26.09%	6	34.78%	8	40.35%	23
Private Sector	0.00%	0	0.00%	0	33.33%	3	44.44%	4	22.22%	2	15.79%	9
Public Sector	0.00%	0	6.25%	1	18.75%	3	50.00%	8	25.00%	4	28.07%	16
Development partners	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
Total	1.75%	1	8.77%	5	24.56%	14	35.09%	20	29.82%	17	100%	57

The uncoordinated agri-import and movement of agricultural products distort smooth agri-marketing and value chain performance and thus impact food systems in Nigeria was rated above average (65%). Likewise, a majority among academia/research institutes (61%), private sector (66%) and public sector (75%) rated the extent to which the uncoordinated agri-import and movement of agricultural products distort the smooth agri-marketing and value chain performance and thus impacts food systems in Nigeria above average (Table 57). In other words, a majority of the respondents maintained that the uncoordinated agri-import and movement of agricultural products adversely impact food systems in Nigeria.

Table 58. Importance of the government agricultural agenda towards empowering farmers in building a healthy agri-marketing and value chain with broad impact on food systems in Nigeria.

	1 = Lowest		2		3		4		5 = Highest		Total	
National NGO	0.00%	0	0.00%	0	0.00%	0	50.00%	1	50.00%	1	3.51%	2
International NGO	0.00%	0	20.00%	1	20.00%	1	40.00%	2	20.00%	1	8.77%	5
Academia/Research institutes	0.00%	0	13.04%	3	30.43%	7	30.43%	7	26.09%	6	40.35%	23
Private Sector	0.00%	0	22.22%	2	33.33%	3	11.11%	1	33.33%	3	15.79%	9
Public Sector	6.25%	1	0.00%	0	50.00%	8	18.75%	3	25.00%	4	28.07%	16
Development partners	0.00%	0	0.00%	0	50.00%	1	0.00%	0	50.00%	1	3.51%	2
Total	1.75%	1	10.53%	6	35.09%	20	24.56%	14	28.07%	16	100%	57

Table 58 illustrates that, on aggregate, 53 percent rated the importance of the government agricultural agenda towards empowering farmers in building a healthy agri-marketing and value chain performance above average while about 35 percent rated it average. Greater proportions among international NGOs (80%), academia/research institutes (87%), private sector (78%) and public sector (94%) rated it either average or above average. This suggests that the government

agricultural agenda towards empowering farmers should be designed with the aim of building healthy agri-marketing and value chain performance which can create a positive impact on food systems in the country.

5 Conclusions

The food and nutrition situation in Nigeria has given rise to different policies and intervention programs aimed at addressing food system-related concerns in the country. This study presents the results of interactions with stakeholders drawn from different sectors related to food and nutrition security in Nigeria. Semi-structured questionnaires were administered with the aim to understand their personal views and perceptions on different issues related to food systems for healthy diets. Face-to-face interviews and online survey were used to obtain information. The seemingly absence of civil society organizations and the views from such key sector are regrettably acknowledged. A greater proportion (about 36%) of the participants in the online survey was from academia/research institutes. These research institutes included National Root Crops Research Institute, Unudike; Federal Institute of Industrial Research, Oshodi, Lagos; Nigerian Institute of Social and Economic Research, Ibadan; and National Horticultural Research Institute, Ibadan. In the academia/research institutes category, participants from academia (university) consists of only 29 percent; the rest were from the afore-mentioned research institutes. Other major groups of participants were drawn from the public sector (31%) and the private sector (15%). Thus, about 83 percent of the views expressed in the online survey is based on actors from these three sectors - academia/research institutes, public sector and private sector. The findings of this study are mixed at best. However, some major conclusions stand out.

- There is consensus among the participants that access to sufficient, safe and healthy food is important to Nigeria. In any case, the need for sufficient food to end hunger tends to crowd out the quest for safe and healthy food in the country.
- Identified as more vulnerable to the challenge of access to sufficient, safe and healthy food are the pregnant and lactating women, children below 5 years and urban poor households.
- The four most important food system issues in Nigeria as identified by the participants are:
 - i. Post-harvest loss and storage
 - ii. Food production

- iii. Access to sufficient and healthy food
- iv. Food safety and water quality

These issues require the attention of key policy players involved in food systems' governance in the country. Though a lot of research investments have been made in these areas; coordinated efforts are needed to translate these research outputs into realities through the vehicle of proper policies executed in the light of best practices.

- Nigeria has good food nutrition policies. These policies are often recycled or repackaged by different government regimes and called different names. However, government participation in food policy support to healthy diet is considered to be disappointingly low. In particular, the large majority (86%) of the participants (in the online survey) did not rate the federal government supportiveness to healthy diets above average. In addition, a majority of the respondents (63%) affirmed that the federal government policy agenda on food systems does not reflect realities in the country.
- There are policy challenges in the country with respect to access to sufficient, safe and healthy food. The major identified policy challenges are:
 - i. The need to increase domestic agricultural production to end hunger.
 - ii. Inadequate implementation of policies due to poor funding and corruption practices; monitoring and evaluation of policy implementation are hardly provided for.
 - iii. Inadequate policy communication and awareness among implementing agencies and other stakeholders.
 - iv. Lack of synergy among food system-related policy stakeholders (especially among government agencies, and between government agencies and other related organizations).
- Nevertheless, government agencies, private sector actors, NGOs, development partners and other related organizations are making efforts to address these challenges. However, the uncoordinated nature of these efforts due to a lack of synergy among these actors seems to be the most urgent challenge militating against access to sufficient, safe and healthy food in Nigeria. Therefore, a red flag has been raised by the participants on government's role in policy communication, implementation, and evaluation. The drive of the federal

government towards the establishment of a food safety management committee in each State of the federation is commendable.

- The major food and nutritional concern discussed among different related sectors is food security. The quest for healthy diets will most likely remain a mirage without sustainable access to food. The level of food insecurity is aggravated by high level of post-harvest losses.
- The majority (about 83%) of the participants in the online survey assert that food system policies in Nigeria are not sensitive to environmental issues. Domestic production of food is highly vulnerable to climate change and altered patterns of land use. Most of the participants (74%) shared the concern that climate change will adversely affect food and nutrition security in the country in the next 5 years if there are no deliberate and coordinated efforts to mitigate such possible effect.

6 Recommendations

- The drive of the federal government towards the establishment of food safety management committee in each State of the federation is commendable.
- Food system-related programs and activities should be carried out in collaboration with key players in a manner that entrenches public sector, private sector, research institutes and NGOs synergy.
- An integrated ecosystem management and good ecosystem governance in food system-related policy will enhance food and nutrition security in the country.
- A multi-sectoral National Committee on Food and Nutrition (NCFN) chaired cum facilitated by the Ministry of Budget and National Planning coordinates activities of inter-agencies on food and nutrition in the country. The federal government has asked the state governments to replicated NCFN at State level. However, the committees in many States are either not operational or ineffective. This affects coordination between the National Committee and the State counterparts; implementation of most food system-related policies happens at state and local government levels. The distribution of responsibilities among the federal, state and local governments does not appear to be optimal, both in the areas of intervention and resources allocated. It is suggested that NCFN should be chaired

by the Vice President and should include representatives of other key partners such as coordinators at State level and development partners. The NCFN should pay special attention to the provision of healthier diets for all especially the vulnerable groups.

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Annex A

The questionnaire set for face to face interview



WAGENINGEN
UNIVERSITY & RESEARCH



Outline for Key Informant Interview: Food System-Related Policy in Nigeria

Duration: 30 – 45 minutes

Break: It is possible to include 5 minutes break. The interviewer (and enumerator) can decide if this is necessary.

Each question below is described in terms of aim, description of approach, and actual questions for discussion. Each part of the questionnaire gives additional questions that can be used if needed to stimulate the respondent to elaborate on his/her answer.

Task 1	
Warming up	
Aim	Introduction and warming up
Approach	<ul style="list-style-type: none">• Welcome and introduction of interview team (Interviewer and associate [who takes record]).• Objective of the study: Wageningen University of Research is undertaking food system policy study in Nigeria in collaboration with Federal University Ndufu-Alike Ikwo (FUNAI) in Ebonyi State. The objective of the study is to conduct a policy baseline survey of the food system-related policies in Nigeria which will form a benchmark for a longer-term policy impact evaluation for the FSHD (Food System for Healthier Diet) program. The results of this baseline will provide a snapshot of the current policy context around food system in Nigeria and the idea is to document the perceptions of the key-actors in food system-related policies and changes in views. You were selected because we considered your organization/agency (and position) a key-actor in this aspect of public policy. The questions are few to ensure quality interaction during the interview. <ul style="list-style-type: none">• Respondent is asked to tell more about him/she self (to create a safe atmosphere in which they can freely discuss).• Informed consent and agreement with recording (in writing and audio)
Questions to participants	<ul style="list-style-type: none">• Note: Interviewer introduces himself and his professional background; and his associate will do the same.• Kindly tell us more about yourself – Name and professional background? (If the name of the respondent is known, we will skip name).• For comprehensive report, kindly permit us record this interview using audio device – though my associate will try to capture in writing as much as possible.• <i>Your responses to our questions will be kept confidential and will be used only for research purposes without reference to your name and position.</i>

Task 2 Entry Questions	
Aim	To ascertain the general view of the respondent on the importance of access to sufficient, safe and healthy food to Nigeria. To ascertain the respondent's interest on access to sufficient, safe and healthy food to Nigeria.
Approach	A lot of research works have emphasized the important of access to sufficient, safe and healthy food.
Questions to participant	<ol style="list-style-type: none"> 17. Do you consider access to sufficient, safe and healthy food important to Nigeria? 18. Why do you consider (or do not consider) access to sufficient, safe and healthy food important to Nigeria? 19. Are there peculiarities around Lagos and Ibadan areas? If yes, why – what informed your classification? <i>(Note: focus here is on all the different reasons for considering Lagos and Ibadan peculiar areas in the light of access to sufficient, safe and healthy food).</i> 20. Are there particular categories in the population more vulnerable in respect to access to sufficient, safe and healthy food important to Nigeria?

Task 3 Entry Questions	
Aim	To determine if there are urgent policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria. To identify such urgent policies and why they are considered urgent.
Approach	The principal targets of SDG 2 are ending hunger and ensuring access to safe, nutritious, and sufficient food; ending all forms of malnutrition by 2030.
Questions to participant	<ol style="list-style-type: none"> 1. In your opinion, what do you consider as the most urgent policy <u>challenges</u> in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria? 2. Why do you consider them as the most urgent policy challenges? 3. Are you aware of any effort by government (including government agencies) or other organizations towards addressing these challenges in Nigeria?

Task 4 Identification of key actors	
Aim	<ol style="list-style-type: none"> 1. To identify key actors relevant for food policy in Nigeria 2. To ascertain the focus of these actors 3. To understand if most of the key actors relevant for food policy in Nigeria are based in Lagos and Ibadan and why?
Approach	Beside Abuja which is the Federal Capital of Nigeria, most of the key actors relevant for food policy in Nigeria seem to base in Lagos and Ibadan. Do you agree? Why do you agree (or disagree)?
Questions to participants	<ol style="list-style-type: none"> 1. What different (groups of) actors relevant for food policy in Nigeria have you interacted with and what are their focus areas and practices/actions? 2. Which of them is based in Lagos or Ibadan? 3. What do you think led to many of these organizations establishing offices in Lagos or Ibadan?

Task 5 Identification of food system-related policies

Aim	To get insights in the major food system-related policies in Nigeria. The relevance of these policies and perceptions of the actors.
Approach	<p>To be sure we are on the same page, kindly note that in this study, food system includes all of the activities and elements – environment, people, inputs, processes, knowledge, infrastructure, and institutions – involved in getting food from farms to consumers’ plates. It also includes the outputs of these activities, such as socioeconomic and environmental outcomes.</p> <p>Do you know any food system-related policies in Nigeria? We will like to discuss some of these policies now.</p>
Questions	<ol style="list-style-type: none"> 1. Could you mention and discuss some of the major food system-related policies in Nigeria? 2. Are there such policies with special focus on <i>Food System for Healthier Diet (FSHD)</i>? <i>[Please note: FSHD is not focussing on health only. The focus of the project is on a food systems approach and the effects of a well-functioning food system as found in the dietary and environmental outcomes. Beyond health, dietary outcomes involve the triple burden of malnutrition: hunger, obesity and nutrient deficiencies].</i> 3. Is there any food system-related policy in Nigeria that is particularly related to your organization/agency? 4. If yes, what is your view or perception about these policies? 5. What informed your view or perception? <p><i>(Note: beyond the answer, interest here is on what the respondent thinks motivated the policy such as political, need for food security, need for food safety, need for healthier diet, price, employment, to improve availability of food, to improve accessibility of food, to improve utilization of food, to improve stability of food supplies, national income, popular demand, demand from members of business organizations (MBOs), research findings, need for guiding framework, for the establishment of agency, need to strengthen existing strategies and policies related to food system, and so no).</i></p> <ol style="list-style-type: none"> 6. Are there changes in view on these policies? 7. If yes, kindly discuss (including: Who is driving this change and why? Why do you think the change is being introduced? Do you consider the change necessary and why? When is the change likely to happen?) 8. Are you aware of any food system-related policy that was formulated in response to the need of <i>Healthier Diet</i> in Nigeria? 9. If yes, how would you evaluate this policy in terms of its strength, weakest, opportunity, and threat?

Task 6 Interests of key actors	
Aim	To get insights in the interests of key actors in food system-related policy in Nigeria.
Approach	Most of the key actors in food system-related policy in Nigeria seem to be pursuing organizational interest in relation to these policies. Do you agree?
Questions	<ol style="list-style-type: none"> 1. What are the roles (<i>and what do you think should be the actual roles</i>) of the following actors in relation to food policy in Nigeria – especially, in the light of Food System for Healthier Diet (FSHD)? 2. What do they believe and do about food policy issues in light of their interests? (cite example if possible): <ol style="list-style-type: none"> i. Federal Government (the executive) and its agencies ii. State Government (the executive) and its agencies iii. Federal Legislators iv. State Legislators v. Local NGOs and civil society organizations vi. International NGOs vii. International development agencies and donors (e.g.: UN, World Bank, ADB, etc.) viii. Research institutions and organizations ix. Pressure groups (including unions of business organizations) x. Private sectors (e.g. owners of some of the local supermarkets). xi. Consumers (<i>It is essential to also pay attention to the role of consumers in food policy and steering food systems</i>) 3. Given your experience and interactions with different actors (groups) relevant for food policy in Nigeria, what are some of the assumptions and prescriptions assumed by people when talking about food policy issues? <u>Kindly be specific where possible. Mention any peculiar case(s) in Lagos or/ & Ibadan.</u> <ul style="list-style-type: none"> - Are there any specific example relating to Food System for Healthier Diet (FSHD)? <p><i>(The interviewer would have ascertained that the respondent have had such interactions with relevant actors).</i></p>

Annex B

The questionnaire set for the online survey



Introductory explanation on the context and purpose of the survey

Thank you for your time.

Federal University Ndufu-Alike Ikwo (FUNAI) in Ebonyi State, on behalf of Wageningen University Netherlands, is conducting a research, in collaboration with the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH), led by the International Food Policy Research Institute (IFPRI). The objective of the study is to shed light on your view on specific food system issues in Nigeria. This process will allow us to get a better understanding of you (as a key-actor) as well as other relevant stakeholders in the policy decision making process related to food systems that promote healthier diets in Nigeria.

In this questionnaire **‘food system’** is broadly understood as the set of different processes, activities, infrastructures, and institutions/individual and collective actors that are directly involved in the production, processing, distribution, and consumption of food, and the outputs of these activities, including socioeconomic and environmental outcomes. A **diet** is considered as healthy if it contains adequate amounts of all the necessary nutrients required for healthy growth and activity and to protect against malnutrition in all its forms, as well as non-communicable diseases, including diabetes, heart disease, stroke and cancer. It also considers food hygiene.

You have been invited to participate in this survey because you and/or your organization is considered a key ‘player’ with regard to food system related issues in Nigeria. The information you will provide in this survey could help governments, development partners, civil society and non-profit organizations working in Nigeria to make more informed decisions that could help to strengthen food systems and improve diets.

We will not use your name or the name of your institution/organization in any publication with the information collected but may use your affiliation (that is, the type of organization but without mentioning specifically the name of your institution/organization). You are of course free not to answer any questions if you are not comfortable. Your views and experiences are very important to us. The information we are collecting will help to improve agricultural research, food policy and development activities in Nigeria and in other countries. By completing the survey, you consent to FUNAI, Wageningen University, IFPRI and partners using your anonymous responses for the purposes of this and related future research.

This survey will take between 10 and 15 minutes to complete. Your time and inputs are much appreciated. If you would like further information or have any questions about this research, please contact Dr Makuachukwu Ojide on makuachukwu.ojide@funai.edu.ng or +234-08037785251

Thank you for your contribution.

QUESTIONNAIRE

A. Basic information about the respondent:

1. Gender (please give \surd): Male Female
2. Which of the options best describes your sector?
 - National & International NGO
 - Academia/Research institute
 - Civil Society
 - Private Sector
 - Public Sector
 - Development partners
 - Others
3. Which of the options best describes the main focus of your work in the last two years?
 - Food security
 - Nutrition
 - Agriculture development
 - Development/poverty alleviation
 - Health
 - Trade
 - Land and water use
 - Urbanization
 - Institutional and Capacity Development
 - Agriculture Marketing
 - Climate change
 - Others

B. Generic Questions (please give \surd in the appropriate box):

1. What has been your level of involvement in food system discussions and debates in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5 = Highest
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2. What has been the level of your institution's involvement in food system discussions and debates in Nigeria in the last 12

1 = Lowest	2	3	4	5 = Highest
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 months?
3. In your own opinion, what is your own level of knowledge and understanding about food systems?

1 = Lowest	2	3	4	5 = Highest
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4. What is the level of knowledge and understanding within your own institution (i.e. among your colleagues) about food

1 = Lowest	2	3	4	5 = Highest
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 systems?
5. In your opinion what are the three major food system issues (discussed and debated in the last 12 months) in Nigeria (please put 1, 2 and 3, in order of priority)?
- Environmental health
 - Postharvest loss and storage
 - Inorganic waste
 - Food safety and water quality
 - Food production
 - Food diversity and consumption pattern
 - Food processing and distribution
 - Access to sufficient and healthy food
 - Socio-political context
 - Socio-economic context
 - Nutrition and hidden hunger
 - Effect of climate change on food
 - Other (if any): _____
6. How would you evaluate the level of collaboration among the different governmental organizations/agencies to deal with issues related to food systems in Nigeria?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
7. In your view, how supportive to healthy diets are the Federal Government food system policies?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
8. To what extent is the Federal Government policy agenda on food systems shaped and influenced by advocacy and lobbying (by private and/or public actors)?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
9. To what extent is the Federal Government policy agenda on food system reflecting the realities in the country?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
10. How sensitive, in your view, is overall food system policy to environmental issues in Nigeria?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
11. What do you think about the following statement: “The right/adequate policies are already in place to assure that the Nigerian food system provides healthy diets”?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|
12. How active are NGOs and Non Profit Organizations in relation to food system issues (policies) in Nigeria?
- | | | | | |
|------------|---|---|---|-------------|
| 1 = Lowest | 2 | 3 | 4 | 5 = Highest |
|------------|---|---|---|-------------|

13. How would you agree with the following statement: “The appropriate practices exist in Nigeria to steer food system towards healthy diets”?

1 = Lowest	2	3	4	5 = Highest
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14. How do you consider the capacity and technical ability within your own institution to deal with issues related to food systems?

1 = Lowest	2	3	4	5 = Highest
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15. In your opinion, what is the level of awareness of the policy-makers about the food system issues and about the changes needed to lead to healthier diets?

1 = Lowest	2	3	4	5 = Highest
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16. In your view, what is the level of awareness of consumers about healthy diets?

1 = Lowest	2	3	4	5 = Highest
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17. What has been your level of involvement in discussions and debates on **healthy diets** in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5 = Highest
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18. What has been the level of your institution’s involvement in discussions and debates on **healthy diets** in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5 = Highest
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19. In your opinion which are the four major categories in the population more vulnerable with respect to access to **healthy diets** in Nigeria (**please put 1, 2, 3 and 4, in order of priority, in the box**)?

- Children 6 to 17 years
- Children 0 to 5 years
- Pregnant women
- Nursing (lactating) mother
- Men 18 to 65 years
- Women 18 to 65 years
- Women 66 years and above
- Men 66 years and above
- Rural women
- Urban poor households
- Rural poor households
- Illiterate households
- Other (if any): _____

20. How would you agree with the following statements about Nigeria:

i. How would you agree with this statement about Nigeria: “There are inadequate safety nets and food emergency management systems to provide for all those who are unable to meet their immediate food needs or to mitigate the impact of natural and non-natural disasters on food security?”

1 = Lowest	2	3	4	5 = Highest
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- ii. How would you agree with this statement about Nigeria: “Citizens have inadequate access to knowledge and resources to make optimal choices for nutritious and healthy diets?”

1 = Lowest	2	3	4	5 = Highest
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- iii. How would you agree with this statement about Nigeria: “In cases where productive land is available, it is not always optimally utilised for food production, often for want of inputs (including finance, equipment and water), or skills.”

1 = Lowest	2	3	4	5 = Highest
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- iv. How would you agree with this statement about Nigeria: “There are management systems, in Nigeria, to ensure that overproduction in the agricultural sector does not drive down prices to the point that farming becomes unprofitable.”

1 = Lowest	2	3	4	5 = Highest
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- v. How would you agree with this statement about Nigeria: “There is limited access to processing facilities for small-scale agricultural producers, including fishers and foresters?”

1 = Lowest	2	3	4	5 = Highest
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- vi. How would you agree with this statement about Nigeria: “Climate change and altered patterns of land use pose a threat to domestic production?”

1 = Lowest	2	3	4	5 = Highest
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- vii. How would you agree with this statement about Nigeria: “There is no adequate, timely and relevant information on unsafe food in Nigeria?”

1 = Lowest	2	3	4	5 = Highest
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21. What is your level of knowledge and understanding about the *National Policy on Food and Nutrition in Nigeria* produced by Ministry of Budget and National Planning in 2016?

1 = Lowest	2	3	4	5 = Highest
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22. In the last 12 months, what in your own opinion has been the level of your institution’s reference to *National Policy on Food and Nutrition in Nigeria* produced by Ministry of Budget and National Planning in 2016?

1 = Lowest	2	3	4	5 = Highest
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23. What is your level of knowledge and understanding about the *National Strategic Plan of Action for Nutrition (2014 – 2019)* produced by Family Health Department in the Federal Ministry of Health in 2014?

1 = Lowest	2	3	4	5 = Highest
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24. In the last 12 months, what in your own opinion has been the level of your institution’s reference to *National Strategic Plan of Action for Nutrition (2014 – 2019)* produced by Family Health Department in the Federal Ministry of Health in 2014?

1 = Lowest	2	3	4	5 = Highest
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C. Specific questions for food and nutrition security (please give \sqrt in the appropriate box):

1. How would you rate the current **food insecurity** situation in Nigeria?

1 = Lowest	2	3	4	5 = Highest
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2. To what extent, in your opinion, is the Federal Government policy agenda on food system shaped and influenced by science and research?

1 = Lowest	2	3	4	5= Highest
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3. In your opinion, to what extend is the **food and nutrition security concerns** influencing the Federal Government policy agenda on food system?

1 = Lowest	2	3	4	5= Highest
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4. Do you believe the government alone can achieve food and nutrition security?

1 = Lowest	2	3	4	5= Highest
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5. It is said that the private sector has a very important role in the achievement of food and nutrition security in Nigeria. To what extent?

1 = Lowest	2	3	4	5= Highest
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6. The NGOs, with their humanitarian assistance programme, have played a significant role in the achievement of food security in Nigeria. To what extent?

1 = Lowest	2	3	4	5= Highest
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7. What has been the level of your involvement in food security consideration/discussion in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5= Highest
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8. What is your own level of knowledge about food security issues leading to healthy diets in Nigeria?

1 = Lowest	2	3	4	5= Highest
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9. In your opinion, what is the level of knowledge and understanding within your institution (i.e. among your colleagues) on food security issues leading to healthy diets in Nigeria?

1 = Lowest	2	3	4	5= Highest
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10. How supportive to a healthy diet, in your opinion, are Federal Government food security-related policies?

1 = Lowest	2	3	4	5= Highest
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11. To what extent is the Federal Government policy agenda on food security in Nigeria based on adequate understanding of the realities in the country?

1 = Lowest	2	3	4	5= Highest
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12. To what extent has trade restrictions (on food importation) helped Nigeria to achieve food security?

1 = Lowest	2	3	4	5= Highest
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13. In your opinion, what do you consider as the four major policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria?(**Please put 1, 2, 3, and 4, in order of priority, in the box**).

- No proper monitoring of policy implementation
- Lobbying against the formulation of proper policy framework

- Inadequate welfare for policy implementation workers
- Non-availability of tools for workers involved in policy implementation
- Inadequate implementation of policy (due to poor funding, corruption practices, etc.)
- Inadequate policy communication and awareness among implementing agencies
- No set standard for controlling the quality of street food in Nigeria
- High cost of registration of processed food products with regulators (NAFDAC, SON, etc.)
- Low adoption of new technologies by the farmers and food processors
- Non-inclusion of key stakeholders in the process of policy formulation
- Other (if any): _____

D. Specific questions for Land and water use (please give \surd in the appropriate box)

1. How serious a policy concern, in your view, is the current situation about land and water use in Nigeria?

1 = Lowest	2	3	4	5= Highest
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2. What has been the level of your involvement in policy consideration/discussion directly or indirectly related to land and water use in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5= Highest
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3. How important, in your opinion, is land and water use policy for improving food system in Nigeria?

1 = Lowest	2	3	4	5= Highest
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4. To what extent does the interrelationship between land and water use policy affect food and nutrition security in Nigeria?

1 = Lowest	2	3	4	5= Highest
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5. What is your own level of knowledge and understanding about the ways in which land and water use policy impacts on food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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6. What is the level of knowledge and understanding within your institution (i.e. among your colleagues) about the ways in which land and water use policy impacts on food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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7. How well, in your opinion, is the Federal Government policy on land and water use supportive of the National agenda on Food and Nutrition security?

1 = Lowest	2	3	4	5= Highest
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8. To what extent, in your opinion, is the Federal Government policy agenda on land and water use addressing poor water resources management for the achievement of food and nutrition security in the country?

1 = Lowest	2	3	4	5= Highest
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9. Do you agree that an integrated water management and coordinated development program embracing land, water and relevant resources would help to overcome the food and nutrition security concerns in Nigeria?

1 = Lowest	2	3	4	5= Highest
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E. Specific questions for Climate Change:

1. What has been the level of your involvement in the consideration/discussion on Climate Change related to food systems in Nigeria in the last 12 month?

1 = Lowest	2	3	4	5= Highest
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2. To what extent is the interrelationship among Climate Change, food security and healthy diets works smoothly in Nigeria?

1 = Lowest	2	3	4	5= Highest
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3. What is your own level of knowledge about relationship between Climate Change and healthy diets in Nigeria?

1 = Lowest	2	3	4	5= Highest
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4. What is the level of knowledge and understanding within your institution (i.e. among your colleagues) about the relationship between Climate Change and healthy diets in Nigeria?

1 = Lowest	2	3	4	5= Highest
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5. To what extent, in your opinion, does the Federal Government policy agenda on Climate Change reflect an adequate understanding of the realities in the country?

1 = Lowest	2	3	4	5= Highest
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6. In your opinion, to what extent is climate change going to affect the food production and thus food and nutrition security in Nigeria in the next 5 years?

1 = Lowest	2	3	4	5= Highest
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7. In your view, to what extent will food and nutrition security of the vulnerable groups in Nigeria area be affected by climate change in the next 5 years?

1 = Lowest	2	3	4	5= Highest
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G. Specific questions for Agri-marketing and Value Chain

1. How would you rate the effectiveness of the present development level of agri-marketing and Value Chain in Nigeria?

1 = Lowest	2	3	4	5= Highest
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2. What has been the level of your involvement in agri-marketing and Value Chain consideration/discussion in Nigeria in the last 12 months?

1 = Lowest	2	3	4	5= Highest
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3. What is your own level of knowledge about agri-marketing and Value Chain issues affecting food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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4. In your opinion, what is the level of knowledge and understanding within your institution (i.e. among your colleagues) on agri-marketing and Value Chain issues affecting food system in Nigeria?

1 = Lowest	2	3	4	5= Highest
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5. In your view, how sensitive to food system issues are Federal Government agri-marketing and Value Chain related policies?

1 = Lowest	2	3	4	5= Highest
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6. In your own view, to what extent is the Federal Government policy agenda on agri-marketing and Value Chain reflect the realities in the country?

1 = Lowest	2	3	4	5= Highest
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7. In your opinion, what is the level of knowledge and understanding of food system-related policy actors about agri-marketing and Value Chain issues and their potential effect on food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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6. How important, in your view, is the lack of adequate power (electric) supply to farmers and access to effective storage and credit facilities in the agri-marketing/Value Chain negatively affecting the food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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7. To what extent, in your view, are the unsatisfactory conditions of rural market and unregulated market practices hindering the smooth agri-marketing and Value Chain which impact the broader food system in Nigeria?

1 = Lowest	2	3	4	5= Highest
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8. To what extent, in your view, are the uncoordinated agri-import and movement of agricultural products distorting the smooth agri-marketing and Value Chain thus impacting food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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9. In your view, is the government agricultural agenda an important factor towards empowering farmers in building a healthy agri-marketing and Value Chain with broad impact on food systems in Nigeria?

1 = Lowest	2	3	4	5= Highest
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10. Name of your institution/organization (this is for validation purposes only; it will not appear in any of our publications): _____

11. Your current position (this is for validation purposes only; it will not appear in any of our publications): _____

12. In which State is your office? (this is for validation purposes only; it will not appear in any of our publications): _____

Annex C

List of key Informants

Office	Name and Designation	Sector
Nigeria Agricultural Quarantine Services, Moor Plantation, Ibadan	Dr Kazeem Sakiru Adewale, <i>Principal Agricultural Officer. He inspects and certify plant materials that are coming into the country, Nigeria. He certifies them safe and free of mycotoxins and aflatoxins and other harmful micro-organisms.</i>	National Research Institute
Ministry of Agriculture, Oyo state	Alhaji Kolawole Rasaq, <i>Director of Fisheries</i>	Government
Ministry of Agriculture, Oyo state	Dr Adegunwa Adegbite, <i>Director of Veterinary services</i>	Government
Ministry of Health, Oyo state	Pastor Yinka Babatunde, <i>Acting Deputy director, Food, water and laboratory services (Background: Food and water technologist)</i>	Government
IITA	Mr Oguntade Oluwole, <i>Laboratory Manager, Germplasm Health Unit</i>	International NGO
ATA (Agricultural Transformation Agenda), Oyo state	Mr Popoola .R.A, <i>Zonal Director ATA (Agricultural Transformation Agenda), Oyo state</i>	Government
HarvestPlus Nigeria	Dr Paul Ilona, <i>Country Head</i>	International Development Partner
Quality Foods Manufacturing Limited, Monatan, Ibadan	Rev Paul Jegede, <i>General Manager (Background: He is Nigerian by birth. His mother is a Briton. His father is the owner of the Quality foods Manufacturing Limited. The company is 50yrs old this year and she was incorporated in 1980. The products of the company includes tomato sauce, Myonase, Cocoa powder. They supply raw materials to companies and retailer shops)</i>	Private Food processor
National Horticultural Research Institute (NIHORT), Ibadan	Dr (Mrs) Olaide Aderibigbe, <i>Head, Product Development Program (PDP) - Nutritionist</i>	National Research Institute
Ministry of Health, Oyo state	Mrs Obayemi Titilayo, <i>Acting Director, Food, water and laboratory services (Background: Food and water technologist)</i>	Government
Mac Veq Enterprises, UI, Ibadan	Mrs Victoria Madu, <i>Managing Director Mac Veq Enterprises (Background: Mrs vitoria Madu was formerly the head of business development unit with Fan Milk Nigeria plc before she resigned to start her own business and registered her company name as Mac Veq Enterprises. Mac Veq Enterprises has the franchise of Fan Milk Nigeria Plc and deals in sales of ice and creams, fresh farm fruits and other food items that can be found in notable supermarkets.)</i>	Private food dealer

University of Ibadan	Prof. Kolawole Falade, <i>Professor of Food technology and HOD Food technology department</i>	Academia
Lagos State		
National Agency for food and Drug Administration Control (NAFDAC)	Dr. Mrs. Eva Edward, <i>Food Safety Regulation</i>	Government
Federal Institute of Industrial Research (FIRO)	Dr Mrs. Funmi O. Oladunmoye, <i>Deputy Director NNIFST, MNSN</i>	National Research Institute
Pz Cussons	Uchenna Nwakanma, <i>Head of R&D –Africa.</i> Michael Nwachukwu, <i>R&D development Manager (Deo &Spray).</i>	Private
Ministry of Health	Adebisi Ajayi, <i>Occupational Therapist, Hazard Analysis Critical point</i>	Government
Ministry of Health	Dr. K.E Layini Adeyimi, <i>Director Occupational Health Staff, Health Service</i>	Government
Ministry of Agriculture	Olushina Shobande, <i>Assistant Director, Agriculture Business Department</i>	Government
Ministry of Agriculture	Mrs. Ayoade Abiola, <i>Director, Agricultural services</i>	Government
Ministry of Agriculture	George Tanimowu, <i>Extension services</i>	Government
Centre for Public Policy Alternatives (CPPA)	Prof. Melvin Ayogu, <i>Consultant</i>	Thank Tank
Food processor	Elder Olajide Mathew, <i>Bakery</i>	Private
Food market Arena (wholesale), Lagos	Mr Latif, <i>Local Regulator</i>	Private
Food market Arena (wholesale), Lagos	Mr Aminu Usman, <i>Secretary Watermelon Association</i>	Private
TINCAN (Lagos Ship Port)	Comrade Edi Mofi, <i>Logistic and transport sector key player.</i> Mr Ifeanyi Emeroye, <i>importer and exporter</i>	Transport

Annex D

Responses on the indicators captured during the face-to-face interviews



Report of Key Informant Interview: Food System-Related Policy in Nigeria

Note: To maintain the confidentiality of the respondents, they have been represented with codes. In this report, we tried to retain the comments of each respondents as original as possible.

Task 1 Warming up	
Aim	Introduction and warming up
Approach	<ul style="list-style-type: none"> Welcome and introduction of interview team (Interviewer and associate [who takes record]). Objective of the study: Wageningen University of Research is undertaking food system policy study in Nigeria in collaboration with Federal University Ndufu-Alike Ikwo (FUNAI) in Ebonyi State. The objective of the study is to conduct a policy baseline survey of the food system-related policies in Nigeria which will form a benchmark for a longer-term policy impact evaluation for the FSHD (Food System for Healthier Diet) programme. The results of this baseline will provide a snapshot of the current policy context around food system in Nigeria and the idea is to document the perceptions of the key-actors in food system-related policies and changes in views. You were selected because we considered your organization/agency (and position) a key-actor in this aspect of public policy. The questions are few to ensure quality interaction during the interview. Respondent is asked to tell more about him/she self (to create a safe atmosphere in which they can freely discuss). Informed consent and agreement with recording (in writing and audio)
Questions to participants	<ul style="list-style-type: none"> Note: Interviewer introduces himself and his professional background; and his associate will do the same. Kindly tell us more about yourself – Name and professional background? (If the name of the respondent is known, we will skip name). For comprehensive report, kindly permit us record this interview using audio device – though my associate will try to capture in writing as much as possible. <i>Your responses to our questions will be kept confidential and will be used only for research purposes without reference to your name and position.</i>

Task 2	Entry Questions
Aim	To ascertain the general view of the respondent on the importance of access to sufficient, safe and healthy food to Nigeria. To ascertain the respondent's interest on access to sufficient, safe and healthy food to Nigeria.
Approach	A lot of research works have emphasized the important of access to sufficient, safe and healthy food.
Questions to participant	<p data-bbox="440 453 1349 485">21. Do you consider access to sufficient, safe and healthy food important to Nigeria?</p> <p data-bbox="391 485 659 516">IB1: It is very important</p> <p data-bbox="391 548 659 579">IB2: It is very important.</p> <p data-bbox="391 611 716 642">IB3: It is not really important.</p> <p data-bbox="391 674 659 705">IB4: It is very important.</p> <p data-bbox="391 737 699 768">IB5: It is not very important.</p> <p data-bbox="391 800 659 831">IB6: It is very Important</p> <p data-bbox="391 863 659 894">IB7: It is very Important</p> <p data-bbox="391 926 773 957">IB8: Food safety is very important.</p> <p data-bbox="391 989 659 1020">IB9: It is very important</p> <p data-bbox="391 1052 781 1083">IB10: Food safety is very important.</p> <p data-bbox="391 1115 675 1146">IB11: It is very Important</p> <p data-bbox="391 1178 675 1209">IB12: It is very important.</p> <p data-bbox="391 1220 529 1251">R1: Yes it is</p> <p data-bbox="391 1262 480 1293">R2: yes</p> <p data-bbox="391 1304 480 1335">R3: Yes</p> <p data-bbox="391 1346 480 1377">R4: Yes</p> <p data-bbox="391 1388 480 1419">R5: Yes</p> <p data-bbox="391 1430 480 1461">R6: Yes</p> <p data-bbox="391 1472 480 1503">R7: Yes</p> <p data-bbox="391 1514 480 1545">R8: Yes</p> <p data-bbox="391 1556 480 1587">R9: Yes</p> <p data-bbox="391 1598 496 1629">R10: Yes</p> <p data-bbox="391 1640 545 1671">R11: For sure</p> <p data-bbox="391 1682 496 1713">R12: Yes</p> <p data-bbox="391 1724 496 1755">R13: Yes</p> <p data-bbox="383 1787 1325 1818">22. Why do you consider (or do not consider) access to sufficient, safe and healthy food important to Nigeria?</p> <p data-bbox="391 1829 1349 1856">IB1: The major reason is that <u>unsafe food is a death trap</u>. If someone wants to die quickly he should eat contaminated fish. Most fish hawkers are not selling good and quality fish</p>

generally because most are already contaminated due to exposure to dusts and methods through which those fishes were killed.

IB2: It is very important and that is the reason why the department of Veterinary services is very active in ensuring that there is enough food of animal throughout the state and at the same time are healthy and safe for consumption of our teeming populace. We are assiduously working to make sure that all animal food are healthy and there is no outbreak of diseases in the state.

IB3: The awareness is coming up but we are not there yet. Most of our interest lies in increasing production from my point of view. Nigerians are yet to see the importance of nutrition as against quantity consumed.

IB4: The reason is because the way we handle our foods especially the farmers from the farm to the point of sale where the market women take over is not too healthy and that is why different types of ailments are emerging in the society. So we are consuming a lot of food materials that are not safe. The farmers are not to be blamed anyway because there is no processing facilities to preserve the food, even the road network is very poor too. There is a research we conducted a while ago on Fish, groundnut and Melon being brought from the Northern side of the country. We checked the mycotoxin level of these products and we found out that the aflatoxin level is very high. So awareness needs to be created for people to be well informed of how safe what they consume is; this will make people to comply with food safety rules. The EU is doing great job in this aspect.

IB5: People are not considering the quality of what they eat but the quantity because the government is not doing enough for the citizenry.

IB6: We are in an era where everyone is very careful with what they eat and so every food must be certified by a body who is charged with the responsibility and we have NAFDAC in Nigeria which is doing a great job as regards this. SON is also trying.

IB7: There is clear difference among the terms: sufficient food, safe food and healthy food. Food is not food if it can't supply what the body needs. Food security should focus on the micronutrients the body needs. People can be eating without having the nutrients the body needs. We need the right nutrients to grow and develop to our full capacity as human beings. When we are well developed, we can contribute towards the development of our society. This is what is holding Africa down. Until we give food its rightful place, we will not make progress. If you look at a nation that is not growing, you can trace it to their food system. Every country that has developed today, started from the food sector. You need the right capacity to develop. You can't have the right capacity if your brain and body cannot function effectively. We need to look at food beyond just filling up the stomach. Food should lead to capacity development.

Food safety and food security are not the same. Food safety may not consider the content of your food. It may be looking at how hygienic the food is, the contents that helps for proper digestion and assimilation into the body system.

Healthy food is not all about being safe. Healthy food is the one that guarantees that your body cells are healthy. It is the food that has those essential components that drive health. But within the ambit of healthy food, you can discuss food safety. Your healthy food must be safe before it can add full value to the body.

Unfortunately, what we call food today is only in respect to hunger – what fills up the stomach. Today, we look at food from a layman’s view of hunger. But we know that the stomach doesn’t get hungry. What gets hungry are those parts and cells of the body that need micronutrients to function optimally; examples: the eyes, brain, organs, and all the cells; they get hungry. It’s often the case that when these cells get hungry, they send message to the brain. The brain respond by sending message to the stomach walls. The stomach walls will wobble; then, you think you are hungry. It’s never the stomach that gets hungry. But what has happened to us? The stomach walls wobble and once you put in something into it, the wobbling will end because it doesn’t distinguish between classes of food. So, what you put there may not necessarily be what the cells need (or, are asking for). Unfortunately, we have lost all sense of what food should be. That’s why some people get hungry today and buy a bottle of Coke, drink and the hunger stops. The stomach walls stop wobbling, but the cells are left hungry. This is what is called hidden hunger.

There is a school of thought, today, that Africa is suffering from hidden hunger. Our type of civilization has made us loss those traditional eating habits that ensures we get little of all the nutrients needed by our body cells. Except we begin to address the problem of hidden hunger, Africa may remain less developed.

IB8: Food safety is very important; this is the more reason why Nigeria relies on NAFDAC to enforce food safety. But the truth of the matter is finance. People know the good food to eat to feel nourished but availability of money is the problem.

There is no enabling environment for private manufacturing companies to function well; that is why most of them have stopped production. The hungry government officials collects multiple taxes from poor companies that are just evolving thereby killing them and sending them out of market. Corruption, lack of infrastructure and insecurity are order of the day in Nigeria.

IB9: Because we need safe and healthy food for healthy living. But in Nigeria, we don’t take this serious – maybe due the poverty level of people or literacy level.

IB10: “We are what we eat”. This is important to the existence of human being. There is need for this in Oyo state because most people in Oyo state are illiterate and they do everything the way they wanted it. They don’t follow normal hygiene procedures. In Oyo state, we realized that if sufficient surveillance is not done people are ready to sell anything to people at any price even at a give-away price and this could be a source of problem. So government must take her stand to see that everyone especially people handling foods are complying with stated rules and this is the essence of this department. We are for preventive health hence we make sure foods are safe for human consumption in Oyo state.

IB11: Many people are not fully educated or aware of importance of good and healthy food which is very key to healthy living. So awareness is of paramount importance to this too. People die of cancer nowadays which was not so in the olden days and this could be traced to our food we eat now. Also provision and availability of safe and healthy food is most paramount.

IB12: Because the Nigerian population is increasing daily, access to safe and healthy food is very important and food security is also important. Also, food has to be nutritious too not just being healthy only.

R1: Because it reduces wastage, helps healthy and safe food, helps reduce expired product and helps in the revalidation of products.

R2: Fruit are very important to our system. It's an appetizer and helps in reducing constipation.

R3: It [fruit] is very important because it enhances development in both human and animal's bodybuilding. Doctors also prescribes it pregnant women.

R4: Because food is scares and expensive, raw materials used for production are all expensive. No more quality nutrients like it is before.

R5: In terms of preference, safety food is not negotiable because you can't put poison on the table and ask someone to eat it. That is one of those things that NAFDAC and other agencies are handling.

R6: It is very important but there is no enough fund in that area; and we have to look seriously on it.

R7: Because the level of malnutrition is too high. Child malnutrition are on the increase and can be seen in three forms: underage (children too thin for their age), stunt and waste. Nutritious index of food is necessary.

R8: We need to emphasize that but the methodology is what we may not agree on. From the background of sufficient food, for instance, Lagos has population which translate into a huge market. We are limited by availability of land and we have been struggling with the percentage of what we produced internally over our total consumption. We moved from 10% to 15% and then to 18%. We are targeting 25% by the year 2022. With various programs, reforms, government intervention, we started moving from 10%, 15% and now we are hovering around 18%. Even from within there are some hiccups. Two or three years back, those in charge of logistic hard it tough. We had to start importing tomatoes from Togo, Benin Republic and we had to use paste, cans and pepper. You can see the level of vulnerability.

In terms of safety we have been struggling with handling, sorting, and standardization. We have a lot of policies but adopting and implementation are the issues. In term of produce marketing, the state has created a way to handle perishable goods like tomatoes by providing crate and min-van vehicle customized for conveying fresh meat from abattoir to the markets.

R9: We need abundant food so that we can feed our population which is approximately 22 million people in Lagos. We are not into production per say but we encourage farmers to setup their production and how they can go about their activities in an efficient and effective manner; we assist in ensuring that their production increase. On safe and healthy food, we have collaboration with various organizations. The ministry has since 2015 tried to look into the issue of perishable produce like tomatoes. We have project like the introduction of plastic crates which we have sent out to farmers and traders to ensure that they discontinue the use of raffia baskets which does not support the maintenance of healthy vegetables. We did a lot of sensitization on specialized vehicle for conveying perishable produce. We collaborate with other organizations to sensitize traders. We also have a radio program called "Boliyu" a yoruba program to convey information to farmers.

There is an inter-ministerial body that involves ministry of agriculture, ministry of health, ministry of economic planning and budget that has to do with nutrition; that is, a joint committee. All are interrelated and inter woven and very important.

R10: Reason is that food is one vital component that the body requires. If food is not handled properly, it predisposes the body to diseases. In terms of safe food, we look into the nutritional value. Access to food is also important because of its monetary value. Other factors militated against safe to healthy food are poor infrastructural facilities such as bad roads and lack of effective storage facilities leading to post-harvest losses. Nutrition looks into fertilizer, chemical in terms of preservation and production. Food handling must be in the best practices.

R11: First, food security is very important because it is only when you are secure that you can actually get on with the rest of your life. If you are thinking of where your next meal is going to come from, it is a big worry. While considering food security, we must lay emphasis on food safety. Food needs to be safe to be consumable. The food that is available, access, affordable need to be safe. Then we draw a parallel between having the food to eat, nutrition and development. There is a link between nutrition and development; and that's a big issue.

R12: Because of its direct impact on the individuals and environment. Some of these impacts are short and long term. Rather than tackling issues, sometimes it is important to manage the source of these problems. The impact of contaminated food on children is high. It is, therefore, important to monitor production and distribution practices to ensure that people who come in contact of food produce do not contaminate it before it gets to the end user.

R13: We have enough food in Nigeria.

23. Are there peculiarities around Lagos and Ibadan areas? If yes, why – what informed your classification?

(Note: focus here is on all the different reasons for considering Lagos and Ibadan peculiar areas in the light of access to sufficient, safe and healthy food).

IB1: Oyo state is number one in the production of aqua-cultural fishes. For this reason there may some associated problem like disease outbreak and other issues. If there is a major disease outbreak, it will affect national production and it can easily spread to other States receiving supplies from Ibadan in Oyo State.

IB2: Oyo state is a place where all these herders seek rest and refuge because of its green vegetation and plenty grazing land. About 85% of Oke Ogun area in Oyo state are full of green grass that the Fulani herdsman like to stay; the place is very good for their cattle. But the sufficiency of this grass land is a risk to the people of living there because troubles ensue between farmers and herders most time due to grazing of farm lands.

So there is need for government to intervene in order to protect the farmers and the herders at the same time. As a result of this, many intervention programs are designed and are being implemented by the State government. Among these programs are:

1. The grazing reserve model: we have two reserve areas in the State that are official published in the gazette. One is at Ibarapa North (about 5.5 hectares) and the other one is at Opara in Iwajowa Local Government Area (about 8 hectares). We keep the herders in these

areas in order to avoid farmland being destroyed through grazing activities.

2. The Sahel model: it's a form of partnership between a private organization and WAMCO (makers of Peak Milk) where farmers plant grasses and sell to herders for animals to feed while the milk company buys the milk produced by the cattle. So, this synergy provides a kind of security in the system.

3. Peace committee model: is a short term model we deploy when there is problem between the farmers and the herders. We set up committee to settle misunderstandings and to ensure there is good rapport between the farmers and the herders.

IB3: Ibadan is an ancient city and the level of development cannot be compared to big cities like Lagos and Abuja; so the awareness about food safety and healthy food is very low. The Food system is so traditional. Ibadan people generally do not appreciate quality but quantity. Even the farmers sell the best harvest in order to earn good money while they eat the bad ones themselves. The situation is as bad as that.

IB4: No response.

IB5: People consider themselves to be poor so they don't eat quality and nutritious food that will do their body a lot of good. Their belief is that you must have large sum of money to eat healthily which is not so. Some people prefer to drink beer instead of eating food.

IB6: There is no control in the market place on the quality of food we buy. They even prefer to lower the prices of some food commodities just because those items have been degraded. So, it's like consuming low quality food has become a norm in our society.

IB7: No response

IB8: No response

IB9: The low level of literacy in Ibadan is what I think is the cause of nonchalance attitude of many market women because the way they handle our foods in a non-hygienic manner is worrisome.

IB10: No response

IB11: In Yoruba land here, I observed that there are lots of oil in their soup which is not so healthy. They also consume lots of meat.

IB12: I think this axis requires more attention because of the land tenure system. In the northern Nigeria, one can acquire many hectares of land at a time but in the south-west here it is a bit difficult. Large quantity of food we eat in Nigeria is produced in the North and that is why they are called the food basket of the nation. Hence the need for more emphasis to be made here, in the southwest, on empowerment and knowledge asset. Although there are structures on ground that have been provided by some institutions, especially the NGOs, but all of these need to be harnessed. Processing of agricultural commodities must also be emphasized. In essence, nutritional-sensitive processing of food is of great importance too because many of our processes change [degrade] the nutritional content and value of our food.

R1: Considering Lagos as a peculiar location is important because it will reduce wastage, helps to ensure availability of healthy and safe food, helps reduce the sales of expired

products and helps in the revalidation of product which is the key. These are challenges in Lagos: wastage, shortage of healthy and safe food, and sales of expired products.

R2: Lagos is a capital city that values food more than other States.

R3: Lagos is more developed than many other States and has high population.

R4: Lagos is a busy State with a lot of business activities.

R5: In terms of demography, population index, congestion, etc., Lagos is a city State where you have land but no major farm lands. It's a large urban city where you have a lot of people in the same place and that makes food safety becomes paramount. There is nothing unique about Lagos except that it is a city State.

R6: Lagos is a large city.

R7: Lagos is a commercial State and it has high population index.

R8: Lagos has a centralized market. Has a target market.

R9: Enabling environment and closeness to raw materials.

R10: Large market

R11: I won't be able to say.

R12: Lagos is a commercial State, highly populated. It has only little agricultural space but high industrial activities. It's a port State. It lacks enough varieties of food like other States.

24. Are there particular categories in the population more vulnerable in respect to access to sufficient, safe and healthy food important to Nigeria?

IB1: I think all of us are vulnerable but the young ones and pregnant women are most vulnerable.

IB2: The most vulnerable group are the women (especially pregnant and lactating women) and children.

IB3: The most vulnerable are the rural women because of their low knowledge level, exposure and high poverty level.

IB4: The poor people in the society are the most vulnerable. Another class are those that do not have access to information on safety consumption of foods. So there should be a set standard for farmers and those involved in the handling of food to be met in order for their products to be accepted in the market pool. In essence effective regulation should be enforced by the appropriate government body.

IB5: The less privileged. My definition of less privileged is those that earn less than 1000 Naira (about US\$2.78¹) a month.

¹ Exchange rate of US\$1 = 360 in December 2018

IB7: The children are the most vulnerable because it affects their brain and mentality.

IB9: The urban poor and the rural poor are the most vulnerable group. The urban poor is much more vulnerable than the rural poor.

IB10: The illiterate are the most vulnerable. The literate are very conscious of what they eat.

IB11: The poor class are most vulnerable because they eat what is available and what their pocket can afford.

IB12: The most vulnerable are the children especially between the ages of 0-5 years; the reason being that it is during the early stage of children that vital organs are formed. The brain, the immune system and growth as a whole are affected if children are not getting the required nutrient needed.

Another class that is vulnerable are the pregnant and lactating mothers.

R1: The level of people who buy from the roadside; because if there is any crisis, it gets to them first.

R4: Men, because of the psychological effects of not providing enough for their children.

R5: Women are more venerable especially single parent, children, and street children.

R6: Pregnant women, elderly and the children especially babies under five years of age.

R7: Children are prone to malnutrition. Elderly adults that need increase in their fibre intake.

R8: The marginalized people, every day people; That is, the poor masses, grassroots, low income earners. This is followed by the middle class and then the higher class which may not be affected.

R9: The poor, rural dwellers, low income earners.

R10: The poor (less to do in the society), women, and children.

R11: Those who cannot do much about their situation - infant and children and the poorest of the poor.

R12: Children, reason is because of the impact it creates on their early development. Again, pregnant women, the reason is because of their state of health. Another group is the elderly /aged consumers. In general, everybody.

Task 3	
Entry Questions	
Aim	To determine if there are urgent policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria. To identify such urgent policies and why they are considered urgent.
Approach	The principal targets of SDG 2 are ending hunger and ensuring access to safe, nutritious, and sufficient food; ending all forms of malnutrition by 2030.

Questions to participant

25. In your opinion, what do you consider as the most urgent policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria?

IB1: - The most urgent policy challenge I see here is in the area of production. Our fish and aquaculture industries are not properly regulated and monitored. There is no legal framework to back up the policies that we have. Inland fisheries law regulates the activities of water operators in Oyo State but the best management practices in fisheries are not been followed. Also, there are sabotage in the industry especially the cabals that do not want things to work the way it should thereby making policies very hard to be implemented.

- State specific policy on fishery and aquaculture. State needs to enact its own law to address specific issues within the State.
- It is not every policy been process into law that should be subjected to public hearing. Experience has shown that sometimes, such policies get so distorted that the main essence is defected.
- Advocacy and lobbying against policy designed to ensure best practices.

IB2: The welfare of the workers is the main challenge of policies. Staff that is not well taken care of cannot enforce policy and make it work. For example the government is not ready to pay the 30,000 Naira (about US\$84) minimum wage which is not even enough to take care of worker for a whole month.

Another challenge is the non-availability of tools for workers to work hence policy cannot be implemented as it was proposed.

IB3: To me, the most policy challenge is the implementation. Nigeria has good policies and strategies but it all ends on paper. No implementation. How it flows from the Federal to State and to Local Government is the main issue. For example, the school feeding program which is a strategy aimed at giving nutritious food to little school children which is not properly implemented. This is obvious in the low quality of food given to the children. The strategy behind this is to use the local food items found in the areas so as to empower the market women and other stakeholders in the scheme.

IB4: The policy of government is already set but the implementation of those policies is the problem. Most of these policies are not given the awareness they deserved so the concerned class of the society especially the small holders farmers that are producing foods are ignorant of these polices. So frantic effort should be made in creation of awareness. For example, the introduction of Yellow cassava which is to take care of vitamin A has not gained wide acceptance because farmers do not even have access to it in the first place. So, how can they produce vitamin A fortified cassava when they don't have access?

IB5: No response.

IB6: There is no set standard for controlling the standard of food in our country. Even if there are standards, there is no effective implementation strategy to accomplish them. The reason for this lack of control is because of the large pool of farmers that produce our foods unlike Israel where just about 7-9% of the population grows the food the whole country eats. Hence, it is very easy for them to set standard and control the quality of food being produced.

IB7: Generally, there is no policy challenge in Nigeria. The country has well-thought through policies. Check the policies of different government regimes, they are essentially

the same. All we need is to implement what we have. If we solve the problem of hidden hunger and begin to think effectively, our problems will end.

The other issue is inconsistency. Each government regime wants to make a name and claim ownership by truncating previous policies – policy ‘in-continuity’! The nation still lacks the right leadership. Our leaders lack commitment to national (common) goals. Producing a good policy to a leader who doesn’t believe in the policy is useless. Even the citizens are not aware of most policies.

In this country, there is no M&E [monitoring & Evaluation] framework attached to our policies. None had been evaluated before. When you implement and evaluate your policies, you can identify the existing gaps. Our political structure doesn’t permit policy consistency. Why can’t we have, like many other developed nations, long term policy that new government regime cannot change until it runs to the end?

IB8: The challenge is NAFDAC in the food industry. So, NAFDAC should be overhauled. The staff of NAFDAC are the hindrance to the growth of food industry. The cost of registration with them is very high. The average time it takes to register a product is 6 years. It’s as bad as that. They make several excuses when you ask for the status of your registration. They may even say they could not find your file.

IB9: The issue of production should be taken seriously. The production of crops should be increased so that more food will be available for consumption. Another challenge is the adoption of new technologies by the farmers. Many of them are late adopter due to the fact that the environment in which they (producers or farmers) find themselves does not celebrate quality. So, their consideration is like: “why waste effort on quality when people still eat the ones that are available?” In this kind of environment, policy cannot thrive.

IB10: There are many policies in Nigeria but execution of these policies is the problem. This may be due to political will or bureaucracy on the part of government workers. So, I can say there are challenges. For example, we received a communique from Abuja in January this year that Senate committee on food are coming to Oyo State and are going to visit some restaurants and food selling stalls in Oyo State in order to have data on the safety status of the foods we eat in Oyo state. But till now [November], we have never seen them. So you can now see that implementation is the problem. It is high time we got serious with our policies.

IB11: The foods are not available which means production is low; so farmers should be encouraged in terms of finance and other elements that will aid their production because when food is surplus the price of food items will come down. Again, awareness should be created to let individuals have garden at their backyard; that is, you should grow what you eat especially vegetables.

IB12: The major challenge here is that most stakeholders are not carried along when policy is being made and this makes it difficult for many policies to see the light of the day which in turn leads to policy somersault.

R1: Training and retraining of staff.

R2: High cost of transportation, government revenue fee, and the effect of the use of preserving chemical agents.

R3: Bad road, and government revenue fee.

R4: Nigerian Agencies for Food and Drug Administration Control (NAFDAC).

R5: Rural infrastructure, and public health system.

R6: Inadequate fund to send message across to the grassroots, weak enforcement of food policy, lack of enabling environment, and no well-spelt out laws. People don't know that there is a temperature for food. There is need to formulate a regulation on food screening process, make food processors undergo some basic food training process to know the hygiene practices they have to adopt. Look at the caterers, these are the aspect of food we are not looking at and the business they control are quite enormous. What we look at are the organised food vendors and the local government sees to the local food vendors.

R7: We direct all focus on agriculture without looking paying attention to processing. Our processing sector has been neglected. Thus, bumper harvest is bumper wastage because we neglected the period in-between of food which is processing. Transportation problem from the farm and the need for standardized farm gates should be considered seriously. The gap between policy makers and policy implementer should be bridged. There's need for proper communication. Policies should be well circulated both inter-ministerial and inter-State. On adulterated food, SON should set the standard while NAFDAC takes the actions.

R8: The challenges include lack of preparation in policies and information dissemination, monitoring issues, no right synergy with the market leaders, lack of managerial skills, over centralization of regulation, over militarization and unitary government. Other issue bothers on productivity, transportation, storage, packaging and value chain. Government can seat somewhere, development beautiful templates but what we don't know is the methodology on how to go about its implementation which is the key.

Cassava production, for example, has been going up but productivity has been on decline. We need to address the issue of productivity.

National Agricultural investment policy, it's a nice policy. But what is the effect? Over-centralization, it is done by the federal ministry of Agriculture just like the failed green initiative. There are endless policies for the same reason.

We need continuity of project, enlightenment, advocating for national building. It doesn't matter who brings the idea.

R9: Ageing farmers. We need to encourage our young ones to go into Agriculture; introduce youth empowerment scheme in agriculture.

R10: Implementation, monitoring and evaluation, discontinuity of government policies are the key policy challenges. We have a lot of policies enforcement agencies like NAFDAC, SON and the new revolution of the minister in this present regime but implementation is weak. There is nothing we want to write down that has not been written.

Monitoring and evaluation: Agriculture is on concurrent list (that is, it the responsibility of both the Federal and the State governments).

Many States believe that the Federal government should determine to them what to do. In Lagos, we have our own policy.

R11: Implementation is the main policy challenge; lack of fund for implementation.

We have beautiful policies that seat on the shelves. So, it is not enough to have policies but there is need to ensure implemented. What makes most policies not to be implicated is lack of funding. Implementer may be ready but may not be empowered with required fund. When policies are made there is usually what we call the action plan; for example, National Food Safety Policy is now National Food Policy and Implementation. This is because we have now seen the need for implication. Thus, we have the National Strategic Plan and Action.

R12: Lack of storage facility, wastage of food, lack of encouragement on agricultural production, lack of modern technological advancement as well as initiative, creativity and innovation.

R13: Bad road network effects the market scale. Others are federal agencies that require documentations of products and their corrupt practices – officials of custom are particularly guilty in this area. Their corrupt practices increase prices which affect the masses. We need to help ourselves; NAFDAC should do their work especially on exposed food. We need law enforcement agencies that can penalize actual offenders. Agencies need to be checked to ensure they do their job.

A lot of transporters are not willing to convey exportable perishable food items because when there is any delay resulting from bad road and corrupt officials, the products will parishes; the exporter losses and the white man will send the products back.

26. Why do you consider them as the most urgent policy challenges?

IB1: Without a legal framework, it will be difficult to prosecute defaulters.

IB2: No response.

IB3: No response.

IB4: No response.

IB5: The execution of our policy is the major challenge. For example, there is a program organized by the government which is tagged “save 1 million lives”. The government is releasing money for this program and it’s been sponsored by the World Bank every year but the money is not getting to the masses.

IB6: No response.

IB7: No cogent response.

IB9: No response.

IB11: No cogent response.

R1: Because there are new laws, regulations and policies that changes every year so that what we learnt last year may become obsolete this year. We use the public health laws and there is need to always update the staff of the ministry.

R2: It increases the cost of fruit.

R3: Because it causes damages.

R4: Government policies do not work anymore because of misappropriation of funds, corruption, mistrust, as well as lack of monitoring and evaluation of government policies.

R5: Rural infrastructure should be put in place to avoid food damage and impoverishment. Public health system should be put in place because it is a healthy person that goes to farm.

R6: We can set and formulate good policies but the funds to implement it is a problem.

R7: Encouraging the farmers, encouraging the processor, and providing raw materials.

R10: Organizations are not equipped to make global services; for example, a set of fish was returned to Nigeria recently after exportation. If we want to go into agriculture export, we need cargo flight to improve agriculture in Nigeria. The institution that is supposed to handle this is not doing so and it is a big problem.

R11: Because they are paramount in terms of sustainable and sufficient food in the country.

27. **Are you aware of any effort by government (including government agencies) or other organizations towards addressing these challenges in Nigeria?**

IB1: There is a proposed law that we have forwarded to the State of Assembly and it has passed through the second reading. Government is making efforts to sanitize the industry but the impact has not been felt yet. Fishery Professionals of Nigeria (Oyo States Chapter) is doing their best.

IB2: Many of these have been mentioned in TASK 2.3; but in addition, government effort in engaging youth in agriculture and creation of jobs is commendable – example is the N-power scheme.

IB3: The government, NGOs and private organizations are doing a lot of activities but what seems lacking is the synergy of all these activities and is key to actualization of set objectives.

IB4: I know that the government is making effort to put policies in place and some incentives that will make farmers to work are being provided although there has been sabotage in this aspect where non-farming person claims a full truck of fertilizer and pesticides. But on the NGO aspect, am not aware. In any case, I know some NGOs are working on the issue of malnutrition.

IB5: Although the government always enact good policies but you will never see the impact of these policies trickling down to the grass root. They make announcements on TV [television], radios and mass media as regards programs but at the end of the day you will never see anything on ground. For example, they may say that they earmarked 250 acres for rice plantation but in the end you will not see the land and the rice when it is harvest time.

IB6: Well, I cannot really say about the activities of government in this regard but I know there are many organizations that are involved in making sure things work. For instance, IITA publishes her research findings and creates public awareness that involves difference stakeholders; these create lots of activities along the value chain. By doing this, the general public is enlightened on the importance of best practices planting thereby producing

healthy food. So government should adopt this method to support the efforts of IITA to ensure that the awareness will spread to every part of the country.

IB7: Government policy on the inclusion of iodine in salt; and vitamin A in flours (especially, used by bakers), oil and sugar.

IB8: Am not aware of any move by government to address the issue.

IB9: Government and NGOs are making effort but it will take time before the impact will be felt because the rot in the system is very high.

IB10: Yes. The federal government is trying. For example, there is food safety management committee in our State. It was mandated from the federal for all states to have this committee and we have constituted ours last year. The membership include delegates from Ministries of Health, Agriculture, and Education, restaurant owners, bakers, food sellers and other relevant stakeholders. We meet once in two months and they have been performing. We are to make sure healthy and safe food is consumed in the State. We sensitize our people to do the right thing at the right time as regards food safety and healthy food consumption because the Federal Government food safety management committee may come anytime for inspection and monitoring.

IB11: I don't know. I don't want to criticize government. NGOs are trying and other private organizations too. What I expect government to do is to support them to perform better; example, Bank of Industry is really performing.

Also in the area of program implementation, the support should be given to those who are already in the track of that business; not those that will just bring juicy proposal solely because they have seen that the venture will yield good profit. Such people, at the end, will divert the fund to something else because they don't have passion for what they have entered into thereby getting discouraged easily. This is unlike a poultry farmer that already has some birds in his farm; such farmer will appreciate the support and use the money judiciously because he is a master of his business already.

IB12: We cannot be saying government should do everything all the time. There are organizations that are really trying their best in terms of packaging and processing even in the area of transportation too. For example, there is a package plastic made for transporting tomatoes in lorries so that there would be minimal damage to the product before it gets here. It was an outcome of a research sponsored by a Canadian Foundation. But the packaging plastic didn't get the awareness it needed so people are still using the raffia basket they are used to from inception. A lot of efforts have been channeled into agricultural production but more effort needs to be channeled into preservation of these products as well. I think this is one major aspect we are not doing well. Government should provide an enabling environment from private and individuals who want to go into food processing.

R2: Government and her agencies create awareness on the negative effects of the use of preserving chemical substances and the importance of selling fresh food items. They monitor sellers against the use of harmful goods and punishes offenders.

R3: Government provides loan, incentives and subsidy.

R8: The Anchor borrowers program by the federal government is funding Agriculture value chain putting into consideration the interests of the primary producers.

R9: Agricultural youth empowerment scheme, one at Arega Epe and the other at Badagry, where youth are engaged and equipped to get involved in agriculture. The one at Arega is the modification of Agriculture Training Institute, where secondary school students had to be trained base on the Israeli cubic system and capacity building. The one at Badagry is based on Songhai model [Songhai Farm is based in Porto-Novo in the Republic of Benin]; activities there are based on purely organic agriculture, poultry, vegetable production, fish production, and promotion of organic food. These programs are tagged SAP (School Agricultural Program); where secondary students participate with their teachers in production using greenhouses established for them by the government. These programs are summer agricultural programs which take place during the long vacation.

World food day program which comes up every 16th October, is another event.

Agriculture quiz organized by the government.

School feeding program which is still intended to start.

Exportation and importation, people are encouraged to ensure that what they are into is of high standard so that it can enter the international market.

R10: Providing sustainable food in a healthy environment: in view of this development, we developed state support assisting farm services for food production. We look at the age of working farmers which is categorized by Ageing farmers, and so, we bring in young ones. ARAGA: youth agricultural program: we understand the role of agricultural input and services centres. Thus, there is a plan for a one stop shop in the State. We have in Nigeria good policies but it often suffer setbacks resulting from lack or poor implementation; example is the farm settlement agreement with other States within the western region. It is a very good policy but it suffered setbacks because of poor implementation. There the farmer did aggregate [joint] production, they shared the produce; there was networking and government support. But that was not sustained. According to the Mangutu declaration, 10% of the budget is supposed to be allocated to Agriculture but it is not done. It is just on paper. Government policy on procurement is not good for farmers. Agriculture is a time bound; as a result, government should remove bureaucracy on procurement of agricultural inputs.

ATA (Agricultural Transformation Agenda) recorded a very good success with growth enhancements support scheme but continuity of policy is the issue. National Agricultural Council also had serious challenge with implementation.

R11: National policy of food safety and implementation plan: it focus on streamlining 2014 document. You must know that across the food chain, there are several MDAs [Ministries, Departments, and Agencies] that play along and a lot of overlaps. This is to put everybody where he/she belongs, know your roles - from farm, to process, and to packaging. NAFDAC plays in processing and packaging. This policy is to let everybody to know their action plan. There is what we call inter-rivalries where everybody protects their organisational mandate even when there are overlaps.

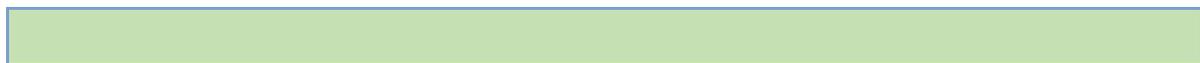
SON takes care of standardization; they set standard specifications.

NAFDAC regulates a group of products like food, drug, cosmetic, medical device, detergent, chemicals and packaged water.

R12: PZ Cussons palm oil plantation have about 27 hectares.

Chi farm are involved in the production of a lot of food items and poultry.

There are many other private organizations involved in the food and nutrition value chain.



Task 4	
Identification of key actors	
Aim	<ol style="list-style-type: none">4. To identify key actors relevant for food policy in Nigeria5. To ascertain the focus of these actors6. To understand if most of the key actors relevant for food policy in Nigeria are based in Lagos and Ibadan and why?
Approach	Beside Abuja which is the Federal Capital of Nigeria, most of the key actors relevant for food policy in Nigeria seem to base in Lagos and Ibadan. Do you agree? Why do you agree (or disagree)?
Questions to participants	<p>4. What different (groups of) actors relevant for food policy in Nigeria have you interacted with and what are their focus areas and practices/actions?</p> <p>R1: Ministries of Agriculture and Health.</p> <p>R3: Agricultural loan Ladipo radio loan. The focus is to provide loan to help human development and self-sustenance with focus on Agriculture.</p> <p>R4: Nigeria Agencies for Food and Drug Administration Control (NAFDAC).</p> <p>R5: Federal Government agencies. The focus area was on poverty eradication, zero hunger. To make sure poverty and hunger is eradicated by 2030.</p> <p>R8: Fadama* 1, Fadama 3, Fadama 3 additional intervention the focus on rice production value chain <i>*The National Fadama Development Project (NFDPP) was incorporated by the federal government to address the challenge of poverty in Nigeria especially among rural farming households. Fadama is simply borrowed from the Hausa language. Loosely defined, the word means 'fertile or rich land.'</i></p> <p>5. Which of them is based in Lagos or Ibadan?</p> <p>IB1: There are more group of actors in the aqua culture industry in Oyo state because of her number one position in the industry. There are local processing companies located in Oyo state.</p> <p>IB2: NIHORT, IITA, NISER, NCRI, FRIN and CRIN.</p> <p>IB3: NIHORT, IITA, NISER, NCRI, FRIN and CRIN.</p> <p>IB5: NIHORT, IITA, NISER, NCRI, FRIN and CRIN.</p> <p>IB6: IITA, NISER, NIHORT, and CRIN.</p> <p>IB7: IITA, NISER, NIHORT, and CRIN.</p> <p>IB9: There are many of them around.</p> <p>IB10: NIHORT, IITA, NISER, NCRI, FRIN and CRIN.</p> <p>IB11: IITA, NISER, and others.</p>

R3: Ladipo radio

R4: Nigeria Agencies for Food and Drug Administration Control (NAFDAC)

R5: Manufacturers Association, consumers protection, SON and NAFDAC should pay attention to road side vendors, teach them the proper way to handle food. Nice [neat] appearance will also go a long way to help.

6. **What do you think led to many of these organizations establishing offices in Lagos or Ibadan?**

IB1: The presence of research institutes have promoted agriculture in Ibadan. On the other hand, agricultural activities in Ibadan have actually attracted some of the agricultural research institutes.

IB2: The reason is not far-fetched. Oyo state was a pacesetter in development during the first political era. Our leader then was mentally sound and valued education more than the rest of the States; so he was able to attract all these development [institutes] to the state.

IB3: Am not sure; but Ibadan was one of the towns that benefited from early development created by the first political leaders. I think this is one of the cause. Also Ibadan has a large mass of land.

IB4: In my own opinion, I think the establishment of First University in Nigeria that was located in Ibadan which serves as a pool for researchers was the reason many other research centers are concentrated in Ibadan - the likes of NIHORT, CRIN, NCRI, IAR&T, just to mention few. Also Ibadan was the regional headquarters then and the likes of Akintola and Awolowo [both of blessed memory] made it so. Hence the rapid development of western states.

IB5: I think it is due to political reasons. You know, Ibadan was the political head of all states during the time of Awolowo. Another reason is that Ibadan is very accessible to all other states in terms of road network.

IB6: The reason is that Ibadan used to be the political region head in the old colonial days and the level of civilization is very high.

IB7: There are good policies in Nigeria but they are badly implemented. Policy incontinuity and selfishness are the bane to effective policy implementation. We are not committed to our common goals. But we should also note that not all documents are policies. Every policy must be backed up by an M&E system in order to go far in Nigeria.

IB9: According to history, Ibadan is a safe haven from war in the olden days which made people to come and inhabit. Apart from this, Ibadan has good vegetation, soil structure and climatic condition that favour almost all crops.

IB10: First, the reason is because Ibadan is like the political head of Nigeria before. Secondly, I think it's because of the vegetation of the State favours many arable crops. Virtually all arable crops are grown here. I believe these are the factors that lead to the influx of these research institutes.

IB11: I don't know what brought them to Ibadan but I know through their operations in Ibadan a lot of development has come.

IB12: I am not too sure of the reason. But I think the reason is that many of the foremost institutions in Nigeria started here. Also the road network between Ibadan and Lagos is also another factor for this; Lagos being the center of commercial activities.

Although these research institutes are many and are concentrated here but there is no serious collaboration among them.

R1: Lagos is a city of commerce irrespective of tribe language. It has a large target market.

R3: Population [is large].

R7: Lagos is a commercial State.

R8: Lagos has population and huge markets. Proximity to port for import and export is another factor.

R11: Large number of people in Lagos. Businesses thrive here given market factors, power supply, and access to so many other services.

Task 5 Identification of food system-related policies	
Aim	To get insights in the major food system-related policies in Nigeria. The relevance of these policies and perceptions of the actors.
Approach	<p>To be sure we are on the same page, kindly note that in this study, food system includes all of the activities and elements – environment, people, inputs, processes, knowledge, infrastructure, and institutions – involved in getting food from farms to consumers' plates. It also includes the outputs of these activities, such as socioeconomic and environmental outcomes.</p> <p>Do you know any food system-related policies in Nigeria? We will like to discuss some of these policies now.</p>
Questions	<p>10. Could you mention and discuss some of the major food system-related policies in Nigeria?</p> <p>IB1: We always advocate adherence to best management practices through awareness creation and association meetings. There are laws that are governing fishing activities in Oyo state. For example, there are sizes of nets to be used for each category of fish. Motorized engines are not allowed on our waters. This is to prevent over-fishing on our lakes and any fisherman that errs will have his license revoked.</p> <p>IB2: There is a program that was initiated when this present administration came in and it is called "Oyo state Agricultural Initiative Program (OYSAIP)" which is a very good food policy. The program integrates all the departments of agriculture into just one unit for effective administration and cohesion of strategy. OYSAIP is one of the food system policies of the State that enhances production and up-taking from the market. So, the producers and the buyers can interact on a leveled platform.</p> <p>IB3: I know that government has some agricultural policies that translates to strategies. We in NIHORT draw our mandate from these policies. Our mandate is to increase the</p>

production of some selected seedlings for farmers to boost productivity. Also we feature in the development of our traditional processing method to accommodate improved ones. Some of our focus crops are plantain, ginger, turmeric, etc.

IB4: ATA (Agricultural Transformation Agenda) programs. There is a man at the affairs of this department. I will help you fix an appointment with him for you to interact with him.

IB6: The policy of printing expiration date on food products in the market is a good one. This is the policy that comes to mind when you mention food safety.

IB8: We are very happy at the ban of importation of tomato ketchup by the government. So, the government can do more on this aspect. All cheap products that come from China and other Asian countries should be banned out rightly for local companies in Nigeria to flourish as this will boost the sales of our locally made products.

IB9: The policy that quickly comes to my mind is the policy of government that seeks to increase the production of crops that are imported but can be produced locally especially rice.

IB11: Most of the raw materials we use in the processing industries are still imported which means our local production cannot supply raw materials that these processing companies needed.

I can't really say that I know of any policy for now but all I know is that government is really involved in ensuring the best management practices are put in place in the manufacturing and processing companies. SON and NAFDAC are really trying in this aspect.

IB12: There are many policies on food in Nigeria but implementation is our problem in Nigeria. Applying those policies to make things work the way it should is my major concern.

The only policy I think am aware of is this issue of addition of 10% cassava in bread and fortification of cassava with Vitamin A. There may be policy to drive raw materials from the local area but am not so sure of any for now.

R4: Nigeria Agencies for Food and Drug Administration and Control (NAFDAC)

R6: National policy on food safety: we use our public health policies to enforce compliance on food safety. The policy is tagged *Hazard Analysis Critical Point (HACCP)*. The policy focuses on healthy, safe and sufficient food.

R8: Anchor borrowers program by the federal government is funding of Agriculture value chain putting in consideration the interests of the primary producers.

Fadama 1, Fadama 3, and Fadama 3 additional intervention focused on rice production value chain.

R11: Food and Nutrition Policy: this has health component.

Food safety policy: ensures food does not harm the consumer. Food is safe and nutritious when it is used according to the manufacturer inscription or specification.

When they are done with formulation of policy, we are the implementer. Be draft regulations. Regulations are subsidiary law. It is a document that guides the industries to know the dos and not don'ts.

11. Are there such policies with special focus on Food System for Healthier Diet (FSHD)?
[Please note: FSHD is not focussing on health only. The focus of the project is on a food systems approach and the effects of a well-functioning food system as found in the dietary and environmental outcomes. Beyond health, dietary outcomes involve the triple burden of malnutrition: hunger, obesity and nutrient deficiencies].

IB1: The policy that is health related is the ban policy on indiscriminate use of antibiotics on fishes. Beating of water during fishing is also prohibited. The reason is that fishes are disturbed psychologically when water is been beaten hence they run for safety towards a direction and the fishermen capitalize on this to have a big catch which is against the law.

IB2: One of the core mandates of this department is that any meat that must be consumed by the citizenry of the state must be safe and healthy. So we made a policy that all butchers should slaughter their meat in a central abattoir for effective monitoring and inspection by our staff and to make sure that the meat slaughtered is safe and healthy for consumption. Also with this arrangement we will be able to control any outbreak of diseases due to improper disposal of animal wastes in the state. And to enforce this policy we have a mobile court that can prosecute any erring trader.

IB3: Most of our researches here center on all factors that can increase productivity ranging from fertilizer application, improved seedlings and best management practices without considering the deformation of nutrients during all these processes. But as a nutritionist, I try to sensitize the research team to be considering the nutritional quality of foods even after all other factors have been taken into consideration.

IB5: There is one [policy] which says that children (0-5years) should be given proteinous food. Also, the ripening of fruit with calcium carbide is prohibited and we are enforcing it here.

R4: Nigeria Agencies for Food and Drug Administration and Control (NAFDAC)

12. Is there any food system-related policy in Nigeria that is particularly related to your organization/agency?

IB1: Laws on fishery.

IB9: I only know that NAFDAC are involved with certification of processed foods items. But I can't really talk much about their operations.

Another policy is the Land allocation policy. Agricultural zones are being created where land is given to interested individuals that wants to go into farming in Oyo State. There are terms and conditions attached; in any case, it's a good one.

IB10: Yes, we have our own work manual which translates to policy and has passed through different stages of amendment and it's what we use in our ministry here. Some of these policies are:

1. We must ensure that cleanliness is maintained in any food processing area and environment

generally.

2. The food handlers must be neat also. They should not be carriers of diseases and be free of any ailment.

3. All pure [sachet] water factories must register with the government and NAFDAC.

4. We run various tests on their products to certify that they are safe and healthy for consumption.

There is a move by BIR (Board of Internal Revenue) to harmonize the revenues generated from all these companies in order to alleviate the issue of multiple taxation so as to ease the financial burden.

R1: Yes. Hazard Analysis and Critical Control Point.

R4: Nigeria Agencies for Food and Drug Administration and Control (NAFDAC).

R6: Hazard Analysis critical point (HACCP): it is adopted in line with national and international best practices aimed at reducing wastage, increase food safety, and so on.

13. If yes, what is your view or perception about these policies?

IB1: The laws are effective. This is because they protect the interest of the fish farmers who are actually the taskforce team. The farmers' association form Dan policemen – a taskforce that regulates the activities of their members and recommends sanctions to the Ministry on erring members.

IB5: The policy is not effective because there are loopholes. For example, we can only assess the ones [food items] brought to the market. But what of those preserved in the farm that we, government workers, do not have access to?

IB10: The food safety management committee is working on the involvement of the grassroots especially the farmers. There are other serious deliberations that concern food safety and security in the state.

R1: We have what we call “HACCP” (Hazard Analysis and Critical Control point). Food nowadays is from the farm to the fork. This is a food safety system that prevents food borne illness, food hazard and all other related food safety challenges. The world health organization (WHO) and the ministry of health worked on it and we adopted it. It is in line with national and international best practices.

HACCP is very effective and has helped in the reduction of wastage, reduction in hazards that come in the food value chain.

R3: To ascertain what we consume, for example, NAFDAC monitors bakery against the bromate in bread because it is detriment to human health.

R7: We compromise safety for selfish interest. Big companies may not compromise because they know the implementation but the small scale firms can and sometimes may not be aware of the implementations or may know but don't care.

R12: The policies have a lot of challenges. Food policy is not the issue but the implications of policies. Some of them are:

1. Monitoring team
 3. Licence and check
 4. Level of regulations
 5. Impromptu check
 6. Lack of manpower
 7. Check at every point
 8. Quality control at the point of manufacturing
- Many of these make the environment unfriendly for producers and traders.

14. What informed your view or perception?

(Note: beyond the answer, interest here is on what the respondent thinks motivated the policy such as political, need for food security, need for food safety, need for healthier diet, price, employment, to improve availability of food, to improve accessibility of food, to improve utilization of food, to improve stability of food supplies, national income, popular demand, demand from members of business organizations (MBOs), research findings, need for guiding framework, for the establishment of agency, need to strengthen existing strategies and policies related to food system, and so no).

IB1: Need for food security, employment, to improve availability of food, to improve accessibility of food and demand from members of business organizations (MBOs).

15. Are there changes in view on these policies?

IB1: Yes. Oyo State Fishery and Aquaculture Legal Framework is about to be passed into law.

IB3: I don't know. But I know there are lots of movements and government is making a lot of efforts in making food policies.

Additional Question: If your voice could be heard by top government officials and you are at the center of policy making, what policy would recommend?

RESPONSE: I would like us to develop our indigenous food. There are many of our crops that are going into extinction now and we need to resuscitate them. These are crops that are not so popular but very nutritious. Let us develop the production of these crops and start processing them to the extent that it will be acceptable in the international market for export.

IB5: I don't know of any.

IB6: I don't know of any. But I am of the opinion that centralizing the food production in Nigeria because is very important. It is through this that we can control the food standard. It may take time but it is very possible. There should be a centralized point where farmers can sell their produce and where the general public can buy. Government can be buying from the farmers while the general public buys from the government sales outlets. With this, there will be a control in place for safe and healthy food.

IB9: Yes. The one I know about is the National Agricultural Investment Program. This is the program that will integrate all ATA and APP programs. Although it has not been launched but very soon it will be rolled out.

IB10: I can't say we are there yet; but we will keep on improving. Government is trying but there are no enough tools to work with. We have qualified personnel that can do the job but there are no tools.

16. If yes, kindly discuss (including: Who is driving this change and why? Why do you think the change is being introduced? Do you consider the change necessary and why? When is the change likely to happen?)

IB2: Oyo state ministry of agriculture, of course.

IB6: Different Ministries of the government are vested with power to implement these policies. For example, [former] President Obasanjo brought Dora Akunyili [of blessed memory] during his regime to drive NAFDAC mandates.

17. Are you aware of any food system-related policy that was **formulated** in response to the need of Healthier Diet in Nigeria?

IB10: There is a general practice of ripening fruits with calcium carbide which is very dangerous to human health. So, we are on red alert to eradicate this in the State through proper monitoring and inspection. Also, the idea of using sniper to preserve beans and other grains, we want to eradicate it too. So, as member of food safety committee, we are working on the modalities to use. We are already sensitizing the people of Oyo State and warning has been sent to the traders that whosoever is caught in this act will be prosecuted.

18. If yes, how would you evaluate this policy in terms of its strength, weakest, opportunity, and threat?

IB1: State Legislators with interest in fishery are frustrating our good intentions.

IB2: Yes. The policy is very effective. I can boldly say we have achieved 90% enforcement. The only threat we are having against this policy before was one of the butchers who established his abattoir in the army barracks but we have been able to arrest and prosecute him.

IB6: Yes. The policy is very effective. There are good policies put in place but there are just on paper due to non-implementation. So, until we have someone who is determined to implementation these policies that is when we can feel the impact.

IB11: Corruption is affecting most of our policies. There are good policies but they are poorly implemented.

Another factor that is affecting policy is poor funding. Research institutes are poorly funded, and universities too.

Also enabling environment should be provided by the government.

Task 6	Interests of key actors
Aim	To get insights in the interests of key actors in food system-related policy in Nigeria.
Approach	Most of the key actors in food system-related policy in Nigeria seem to be pursuing organizational interest in relation to these policies. Do you agree?
Questions	<p data-bbox="431 352 1347 384">4. Are there conflict of interest among the key actors – in terms of personal interest?</p> <p data-bbox="383 388 487 415">IB1: Yes.</p> <p data-bbox="383 451 1370 548">IB6: Yes, I agree. Most drives in the government organizations are towards personal interest not the organization interest. The national borders are porous to different disease carrying materials entering the country due to corruption.</p> <p data-bbox="383 583 1331 646">5. What do they believe and do about food policy issues in light of their interests? (cite example if possible):</p> <p data-bbox="431 667 1370 898">Federal Government (the executive) and its agencies, State Government (the executive) and its agencies, Federal Legislators, State Legislators, Local NGOs and civil society organizations, International NGOs, International development agencies and donors (e.g.: UN, World Bank, ADB, etc.), Research institutions and organizations, Pressure groups (including unions of business organizations), Private sectors (e.g. owners of some of the local supermarkets), Consumers (<i>It is essential to also pay attention to the role of consumers in food policy and steering food systems</i>)</p> <p data-bbox="383 919 1370 1119">IB1: Some of the fishing associations we have are collaborating with those in government to work against some of the policies on ground in order to satisfy their own interest. For example, one of the areas where government can generate a lot of revenue is fishery but some powerful persons are working against it because they are involved in the industry. Most big players in the fish industry are not ready to pay tax. For instance, we propose that they should be paying ₦1 per juvenile fish but they will never pay.</p> <p data-bbox="383 1171 1370 1304">IB2: Well, am not agreeing to that because when someone is working in an organization he would be working according to the mandate of the organization thereby ensuring effective food policy system. The aim of the food policy system is centered on the public but there are some cabals that hijack the system that won't let things work as it supposed to be.</p> <p data-bbox="383 1325 1325 1421">IB3: It is very true; many organizations focus on their discipline not minding others. So, there should be a form of collaboration among the organizations to fine tune policy proposals for a robust outcome to benefit all.</p> <p data-bbox="383 1442 1360 1608">IB4: Yes I totally agree; most organizations are pursuing their own interest at the detriment of common man. It is obvious that most government agencies' mandates overlap which is causing stress on the people. So there should be a kind of synergy among them so that they will be more effective. All agencies should come together and form a joint body to ensure food safety, production and certification.</p> <p data-bbox="383 1629 1347 1692">IB5: I will say the statement is true for some of them. But all I can say is that execution of policy is the problem of the government.</p> <p data-bbox="383 1713 1351 1845">IB8: I agree that every government ministries, departments and agencies as well as organization are pursuing their own interest and this is the reason why most companies are packing up every day. The cost of capital for business is very high up to the tune of 28%. Most importantly, manufacturers are not favoured by banks and financial institutions for</p>

loans. This is the reason most companies are moving to Ghana because of the enabling environment there.

IB9: It's obvious that many of these organizations are operating within their jurisdiction as their work mandate stipulates. But in my own opinion, I think there should be a kind of coordinated efforts among these institutes so that their impact would be felt. So, harmonization of ideas and strategies are needed to achieve the goals and objectives of development programs.

IB10: Yes. I agree, they pursue their own interest. Government should be effective in the implementation of our policies. Since it works in other countries, it should work in Nigeria too.

IB12: Yes. Most organizations pursue their interest because an individual cannot fund a meaningful research. Hence, most foundations that sponsor research dictate the tune to which research is directed which may in turn negate the interest of general public. Sometimes, they [the donors] try to redirect the thinking of the researcher far away from his discipline just because he needed the fund. So, every research mandate is designed to pursue the interest of the sponsor in order to win more grant or to preserve future relationship.

R6: In as much as the organisations have their self-interest, they should ensure that what they are producing for consumption is safe and qualify. There should be a balance in what they do.

6. Given your experience and interactions with different actors (groups) relevant for food policy in Nigeria, what are some of the assumptions and prescriptions assumed by people when talking about food policy issues? Kindly be specific where possible. Mention any peculiar case(s) in Lagos or/ & Ibadan.

*Are there any specific example relating to Food System for Healthier Diet (FSHD)?
(The interviewer would have ascertained that the respondent have had such interactions with relevant actors).*

IB1: The use of unhealthy substances during fishing is prohibited. Yet, some think it should be allowed.

IB2: The OYSAIP is the main program of Oyo State ministry of agriculture for now. If we can improve on this the farmers' income and the general public will be secured; and at the end, we will have a robust synergy of all the stakeholders in the food system of the State.

IB3: One of the assumptions they make now is the food fortification (am talking now from a nutritionist perspective) which is a good development. But I believe that just only one strategy cannot solve the problems of human nutrition. So, we must also consider food diversity and food supplementation. Awareness must be created as regards to this. We need to focus on the entire value chain right from production to processing to consumption.

IB4: What comes to mind when food policy is mentioned in Nigeria is the implementation of the food polices and its awareness. It is assumed that most of these policies were just enacted but not to be implemented; and most times, we are not aware of them.

IB5: What I can say here is that there is no connection [collaboration] among the policy makers. Each department is pursuing its own mandate without considering the interest of the other department or agencies.

What do you think Nigeria can do to improve food system policy in Nigeria? Government should subsidize agro chemicals, farm inputs and farm equipment. Mechanization of agriculture should be seriously encouraged.

IB6: The assumption is that there is no policy anywhere. So people tend to burst into fight when these policies are being enforced. So, my advice is that government should be effective in the area of implementation and awareness creation for the general public to be conscious of their safety.

IB7: Nigerians make good assumptions! Assumptions and theories are not our problems. We believe in documentation. We see policy in terms of paper and not in the perceptiveness of impact. Every policy should have M&E framework. Before any new policy, we ought to evaluate the previous ones. Let me ask you a critical question. How many of our policy documents go with budgets? None! We assume that policies will work without fund.

IB8: Policy suggestions:

1. Farmers should be helped to process their produce; and they should be given incentives in terms of machines, improved seeds and fertilizer to expand production. 2. Road network should be perfect from farm to the market.

3. Multiple taxation should be stopped.

4. The Bank of Industry (BOI) should review their policy on issuing of loans to processors. For example, buying of machines for manufacturers is not good as there is no capital to run them. The manufacturers already have machines; it is the capital they need to buy raw materials and keep the company running.

5. Reduction or ban of importation of products that can be produced in Nigeria.

IB9: Notable points -

1. There is no company processing our major crops, why??

2. Mention three crops that are being processed among our major crops in Nigeria.

3. Farmers are expected to do everything along the value chain including the provision of security for their farmsteads, capital sourcing, supervisory role, and so on. This is not supposed to be so.

IB10: The assumption people make about policy generally is that policies are meant for government alone. Many actors see government as being selfish in their dealings with other stakeholders in the food system.

IB12: In most cases, a lot of people are driven by their background – that is, what they have been exposed to; but I think we need to go beyond this. So, their emphasis is always on the platform from which they grew. I'm an advocate that policy should envisage the future and guide direction which may be adjusted by evolving developments and circumstances as years run by. It's important all stakeholders come together [collaborate] for policies to make impact.

R1: Sometimes, their assumptions are based on what they have in their organisational structure. Some think every policy is an opportunity to make money.

R2: Government should provide waste bin to avoid environment hazard. There is need to manage waste, recycle waste, provide social amenities and finance to support farmers.

R5: There is need for food fortification, and advertisement based on competition.

R6: Lagos is a forward looking State. There are instances when organizations complained that different regulatory agencies come frequently to them for the same reason. So, the organised private sector, manufacturing association of Nigeria, and National Employment Consulting Forum are members of what we called “Harmonized Inspection Team. So, when there is an overlap, the appropriate person in the team handles it.

R7: No response.

R8: Don’t judge people if you don’t have the opportunity to know them. There is this arrogance in us that we don’t listen to others. Everybody has his/her own mind-set. There’s a huge mistrust among us, bias, and prejudice. Everyone wants to be the champion.

R9: Before policies are adopted, there should be a baseline survey to enable evaluation of the policy in future. Capacity building, improved and mechanized farming like the use of tractor are assumed to be the issues in agriculture.

R10: Government is not supporting agriculture in term of accessing finance, which is a key problem. The pattern of doing business is not lucrative; sometimes, farming in Nigeria is a political game. The Anchor borrowers’ scheme tried very well in the north but failed in the south because of the different requirements for the release of funds to farmers which was politically motivated.

Many people in policy value chain do not understand agricultural business not to talk of [let alone] production, processing, marketing and selling.

There are a lot of things that needs government support.

To a certain extent, farmers has some knowledge which help them in what they do. So, planning and policies should complement what farmers do.

To make Agriculture attractive, we need to provide essential agricultural input, remove bureaucracy, provide good transportation system; farmers must enjoy tax exemption. Through Bank of Agriculture, government should provide fund to the farmers directly to remove political hijack of fund.

R11: Policy is like a guidance, the regulation is a law.

We should advocate for a clear line on who is in charge among government agencies, is it your mandate (coordination mechanism), around all the people who need to work harmoniously among themselves.

There seems to be disconnection in the whole policy space. There is need for clarification of policy, working together of agencies, and defining who will be the leader when there is joint task force.

There has been a failure in creating links to bring out figures and a graphic picture of what we lose when nutrition, safety and healthy food is neglected. This negligence opposes threats to the nation.

Breastfeeding of a child in the first 2 year is very encouraged.

R12: Invest heavily in terms of food production and transportation to enrich the farmers as they feed the masses.

The assumptions that we are currently capable of feeding the whole nation from a region is not realistic. More need to be done to make it realistic.

Annex E

Online respondents who indicate their organizations and positions (other did not)

Institution/Organization	Position
Medical Missionaries of Mary/ Biotechnology Innovation & Regulatory Sciences	International Training Coordinator; African Site program Lead
International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria	Program Director
International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria	Country Lead
Initiative for Community Development	Manager
Federal University of Agriculture Abeokuta (FUNAAB)	Professor
Propcom Maikarfi, Abuja	Research Manager
Lagos State Ministry of Agriculture	Veterinary Officer.
Standards Organisation of Nigeria	State coordinator
Lagos State Agricultural Development Authority	Assistant Director
Quality Foods, Oyo State	General Manager
Alex Ekwueme Federal University, Ndufu-Alike (AE-FUNAI), Ebonyi State	Dean of Faculty
Nigerian Institute of Social and Economic Research, Ibadan, Oyo State	Research fellow
Lagos State Ministry of Agriculture	Director
Kaspharyn Solutions, Ogun State	Agribusiness, Greenhouse and Organic Agriculture Expert
Lagos State Ministry of Agriculture	Assistant Director
Lagos State Agricultural Inputs Supply Authority	General Manager
State Ministry of Health, Ibadan, Oyo State	Director
FADAMA 111/FEDERAL MINISTRY OF AGRICULTURE/WORLD BANK, F. C. T Abuja	Project Manager
National Horticultural Research Institute (NIHORT), Ibadan, Nigeria	Senior Research Officer
Olam grains, Crown Flour Mills, Kaduna State	Plant breeder / Senior Seed Technician
National Horticultural Research Institute (NIHORT), Ibadan, Nigeria	Principal Research Officer
HarvestPlus, Ibadan, Oyo State	Country Manager
Glory Land Food and Farm, Lagos	Chief Executive Officer (CEO)
Federal College of Animal Health and Production Technology, Oyo State	Lecturer
United Nations Development Programme (UNDP) - Nigeria	Agribusiness Specialist
National Horticultural Research Institute, Nigeria	Public Relation Officer (PRO)
National Horticultural Research Institute, Nigeria	Assistant Director of Research
Federal Institute of Industrial Research Oshodi, Lagos	Deputy Director, Food Science and Technology

National Horticultural Research Institute (NIHORT), Ibadan, Nigeria	Principal Research Officer
National Horticultural Research Institute (NIHORT), Ibadan, Nigeria	Public Relation Officer (PRO)
National Horticultural Research Institute (NIHORT), Ibadan, Nigeria	Principal Research Officer
Tantalizers Plc., Lagos	Deputy Managing Director
International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria	Scientist
Olido Health Centre, Olido, Enugu	Nutritionist/ Dietitian
Nigerian Institute of Social and Economic Research, Ibadan, Oyo State	Research Fellow
Nigerian Institute of Social and Economic Research, Ibadan, Oyo State	Junior Research Fellow
Monsanto, Lagos	Market Development Agronomist
Nigerian Institute of Social and Economic Research, Ibadan, Oyo State	Junior Research Fellow
Lagos State Ministry of Agriculture, Lagos State	Assistant Director
Federal Institute of Industrial Research Oshodi, Lagos	Principal Research Officer
University of Nigeria Nsukka	Acting Head of Department
Kopod Agro Allied Services, Ogun	Project Manager
GAIN, Abuja	Senior Associate
Federal Institute of Industrial Research Oshodi, Lagos	Director
Oyo State Ministry of Agriculture, Oyo State	Assistant chief veterinary medical officer
Ebonyi Agricultural Development Programme (EBADEP), Ebonyi State	ACAS
Federal University Oye Ekiti, Oyo State	Professor
Eat N Go Limited, Lagos	General Manager
Nigeria Agricultural Quarantine Service, Oyo	Principal Agricultural Officer
Ministry of Agriculture/Agricultural Development Project, Yobe state	Monitoring and Evaluation Officer
Kingsway Quality Foods (Int'l) Ltd, Lagos and Oyo States	Managing Director/Chief Executive Officer (MD/CEO)
Ministry of Health, Edo State	Assistant Director
Dietitians Association of Nigeria	Immediate Past President and Country Rep. International Confederation of Dietetic Associations
National Root Crops Research Institute Umudike	Assistant Director
Food Industry, Western Part of Nigeria	Manager
Prefam Educational and Consulting Services, Ibadan, Oyo State	Consultant

Annex F

Summaries of responses on the indicators captured during online survey

What is your gender?

Answer Choices	Responses	
Female	30.48%	32
Male	69.52%	73
	Answered	105

Which of the options best describes your sector?

Answer Choices	Responses	
National NGO	2.86%	3
International NGO	7.62%	8
Academia/Research institute	36.19%	38
Private Sector	15.24%	16
Public Sector	31.43%	33
Development partners	3.81%	4
Other (please specify)	2.86%	3
	Answered	105

Which of the options best describes the main focus of your work in the last two years?

Answer Choices	Responses	
Food security	28.04%	30
Food security	9.35%	10
Agriculture development	18.69%	20
Development/poverty alleviation	4.67%	5
Health	13.08%	14
Trade	3.74%	4
Land and water use	0.93%	1
Urbanization	0.00%	0
Institutional and Capacity Development	6.54%	7
Institutional and Capacity Development	0.00%	0
Agriculture Marketing	4.67%	5
Climate change	1.87%	2
Other (please specify)	8.41%	9
	Answered	107

What has been your level of involvement in food system discussions and debates in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	2.90%	2
2	14.49%	10
3	40.58%	28
4	30.43%	21
5= Highest	11.59%	8
	Answered	69

What has been the level of your institution's (i.e. among your colleagues) involvement in food system discussions and debates in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	2.90%	2
2	8.70%	6
3	21.74%	15
4	46.38%	32
5= Highest	20.29%	14
	Answered	69

In your own opinion, what is your own level of knowledge and understanding about food systems?

Answer Choices	Responses	
1 = Lowest	0.00%	0
2	4.29%	3
3	24.29%	17
4	55.71%	39
5= Highest	15.71%	11
	Answered	70

What is the level of knowledge and understanding within your own institution (i.e. among your colleagues) about food systems?

Answer Choices	Responses	
1 = Lowest	2.86%	2
2	5.71%	4
3	21.43%	15
4	42.86%	30
5= Highest	27.14%	19
	Answered	70

In your opinion, what are the four (4) major food system issues (discussed and debated in the last 12 months) in Nigeria (please put 1 for the most important, followed by 2, 3, and 4 in order of priority)?

Answer Choices	Average Number	Total Number	Responses	
Environmental health	2.133333333	32	22.06%	15
Postharvest loss and storage	2.235294118	114	75.00%	51
Inorganic waste	2	6	4.41%	3
Food safety and water quality	2.464285714	69	41.18%	28
Food production	1.608695652	74	67.65%	46
Food diversity and consumption pattern	2	20	14.71%	10
Food processing and distribution	2.523809524	106	61.76%	42
Access to sufficient and healthy food	2.736842105	52	27.94%	19
Socio-political context	2.142857143	15	10.29%	7
Socio-economic context	3	27	13.24%	9
Nutrition and hidden hunger	2.470588235	42	25.00%	17
Effect of climate change on food	2.913043478	67	33.82%	23
Inadequate or inefficient policy implementation	3.294117647	56	25.00%	17
			Answered	68

How would you evaluate the level of collaboration among the different governmental organizations/ agencies to deal with issues related to food systems in Nigeria?

Answer Choices	Responses	
1 = Lowest	15.94%	11
2	24.64%	17
3	44.93%	31
4	13.04%	9
5 = Highest	1.45%	1
	Answered	69

In your view, how supportive to healthy diets are the Federal Government food system policies?

Answer Choices	Responses	
1 = Lowest	22.22%	16
2	26.39%	19
3	37.50%	27
4	11.11%	8
5 = Highest	2.78%	2
	Answered	72

To what extent is the Federal Government policy agenda on food systems shaped and influenced by advocacy and lobbying (by private and/or public actors)?

Answer Choices	Responses	
1 = Lowest	9.86%	7
2	40.85%	29
3	28.17%	20
4	18.31%	13
5 = Highest	2.82%	2
	Answered	71

To what extent is the Federal Government policy agenda on food system reflecting the realities in the country?

Answer Choices	Responses	
1 = Lowest	16.44%	12
2	47.95%	35
3	27.40%	20
4	8.22%	6
5 = Highest	0.00%	0
	Answered	73

How sensitive, in your view, is overall food system policy to environmental issues in Nigeria?

Answer Choices	Responses	
1 = Lowest	12.33%	9
2	42.47%	31
3	30.14%	22
4	10.96%	8
5 = Highest	4.11%	3
	Answered	73

What do you think about the following statement: “The right/adequate policies are already in place to assure that the Nigerian food system provides healthy diets”?

Answer Choices	Responses	
1 = Lowest	17.81%	13
2	32.88%	24
3	26.03%	19
4	19.18%	14
5 = Highest	4.11%	3
	Answered	73

How active are NGOs and Non-Profit Organizations in relation to food system issues (policies) in Nigeria?

Answer Choices	Responses	
1 = Lowest	15.28%	11
2	25.00%	18
3	37.50%	27
4	18.06%	13
5 = Highest	4.17%	3
	Answered	72

How would you agree with the following statement: “The appropriate practices exist in Nigeria to steer food system towards healthy diets”?

Answer Choices	Responses	
1 = Lowest	15.07%	11
2	50.68%	37
3	24.66%	18
4	8.22%	6
5 = Highest	1.37%	1
	Answered	73

How do you consider the capacity and technical ability within your own institution to deal with issues related to food systems?

Answer Choices	Responses	
1 = Lowest	1.37%	1
2	13.70%	10
3	31.51%	23
4	34.25%	25
5 = Highest	19.18%	14
	Answered	73

In your opinion, what is the level of awareness of the policy-makers about the food system issues and about the changes needed to lead to healthier diets?

Answer Choices	Responses	
1 = Lowest	17.81%	13
2	23.29%	17
3	41.10%	30
4	17.81%	13
5 = Highest	0.00%	0
	Answered	73

In your view, what is the level of awareness of consumers about healthy diets in Nigeria?

Answer Choices	Responses	
1 = Lowest	11.11%	8
2	44.44%	32
3	29.17%	21
4	11.11%	8
5 = Highest	4.17%	3
	Answered	72

What has been your level of involvement in discussions and debates on healthy diets in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	2.74%	2
2	17.81%	13
3	41.10%	30
4	28.77%	21
5 = Highest	9.59%	7
	Answered	73

How would you agree with this statement about Nigeria: “Citizens have adequate access to knowledge and resources to make optimal choices for nutritious and healthy diets?”

Answer Choices	Responses	
1 = Lowest	19.18%	14
2	52.05%	38
3	23.29%	17
4	5.48%	4
5 = Highest	0.00%	0
	Answered	73

How would you agree with this statement about Nigeria: “Climate change and altered patterns of land use pose a threat to domestic production?”

Answer Choices	Responses	
1 = Lowest	2.82%	2
2	8.45%	6
3	15.49%	11
4	42.25%	30
5 = Highest	30.99%	22
	Answered	71

How would you agree with this statement about Nigeria: “Often, there is adequate, timely and relevant information on unsafe food in Nigeria?”

Answer Choices	Responses	
1 = Lowest	21.92%	16
2	43.84%	32
3	23.29%	17
4	8.22%	6
5 = Highest	2.74%	2
	Answered	73

What is your level of knowledge and understanding about the National Policy on Food and Nutrition in Nigeria produced by Ministry of Budget and National Planning in 2016?

Answer Choices	Responses	
1 = Lowest	15.07%	11
2	27.40%	20
3	32.88%	24
4	20.55%	15
5 = Highest	4.11%	3
	Answered	73

In the last 12 months, what in your own opinion has been the level of your institution’s reference to National Policy on Food and Nutrition in Nigeria produced by Ministry of Budget and National Planning in 2016?

Answer Choices	Responses	
1 = Lowest	16.67%	12
2	19.44%	14
3	38.89%	28
4	19.44%	14
5 = Highest	5.56%	4
	Answered	72

What is your level of knowledge and understanding about the National Strategic Plan of Action for Nutrition (2014 – 2019) produced by Family Health Department in the Federal Ministry of Health in 2014?

Answer Choices	Responses	
1 = Lowest	28.77%	21
2	28.77%	21
3	31.51%	23
4	8.22%	6
5 = Highest	2.74%	2
	Answered	73

In the last 12 months, what in your own opinion has been the level of your institution's reference to National Strategic Plan of Action for Nutrition (2014 – 2019) produced by Family Health Department in the Federal Ministry of Health in 2014?

Answer Choices	Responses	
1 = Lowest	19.72%	14
2	30.99%	22
3	32.39%	23
4	15.49%	11
5 = Highest	1.41%	1
	Answered	71

How would you rate the current food insecurity situation in Nigeria?

Answer Choices	Responses	
1 = Lowest	11.67%	7
2	15.00%	9
3	11.67%	7
4	45.00%	27
5 = Highest	16.67%	10
	Answered	60

To what extent, in your opinion, is the Federal Government policy agenda on food system shaped and influenced by science and research?

Answer Choices	Responses	
1 = Lowest	8.33%	5
2	55.00%	33
3	30.00%	18
4	6.67%	4
5 = Highest	0.00%	0
	Answered	60

In your opinion, to what extent is the food and nutrition security concerns influencing the Federal Government policy agenda on food system?

Answer Choices	Responses	
1 = Lowest	8.33%	5
2	43.33%	26
3	45.00%	27
4	3.33%	2
5 = Highest	0.00%	0
	Answered	60

It is said that the private sector has a very important role in the achievement of food and nutrition security in Nigeria. To what extent?

Answer Choices	Responses	
1 = Lowest	0.00%	0
2	5.00%	3
3	21.67%	13
4	53.33%	32
5 = Highest	20.00%	12
	Answered	60

The NGOs, with their humanitarian assistance programme, have played a significant role in the achievement of food security in Nigeria. To what extent?

Answer Choices	Responses	
1 = Lowest	0.00%	0
2	27.59%	16
3	43.10%	25
4	20.69%	12
5 = Highest	8.62%	5
	Answered	58

What has been the level of your involvement in food security consideration/discussion in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	6.78%	4
2	10.17%	6
3	40.68%	24
4	32.20%	19
5 = Highest	10.17%	6
	Answered	59

What is your own level of knowledge about food security issues leading to healthy diets in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.67%	1
2	5.00%	3
3	31.67%	19
4	43.33%	26
5 = Highest	18.33%	11
	Answered	60

In your opinion, what is the level of knowledge and understanding within your institution (i.e. among your colleagues) on food security issues leading to healthy diets in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.67%	1
2	10.00%	6
3	36.67%	22
4	30.00%	18
5 = Highest	21.67%	13
	Answered	60

How supportive to a healthy diet, in your opinion, are Federal Government food security-related policies?

Answer Choices	Responses	
1 = Lowest	3.33%	2
2	30.00%	18
3	55.00%	33
4	11.67%	7
5 = Highest	0.00%	0
	Answered	60

To what extent is the Federal Government policy agenda on food security in Nigeria based on adequate understanding of the realities in the country?

Answer Choices	Responses	
1 = Lowest	13.33%	8
2	31.67%	19
3	53.33%	32
4	1.67%	1
5 = Highest	0.00%	0
	Answered	60

To what extent has trade restrictions (on food importation) helped Nigeria to achieve food security?

Answer Choices	Responses	
1 = Lowest	13.56%	8
2	28.81%	17
3	30.51%	18
4	18.64%	11
5 = Highest	8.47%	5
	Answered	59

In your opinion, what do you consider as the four major policy challenges in Nigeria with respect to access to sufficient, safe and healthy food for all consumers in Nigeria? (Please put 1, 2, 3, and 4, in order of priority, in the box).

Answer Choices	Average Number	Total Number	Responses	
No proper monitoring of policy implementation	2.083333333	100	81.36%	48
Lobbying against the formulation of proper policy framework	2.214285714	31	23.73%	14
Inadequate welfare for policy implementation workers	2.375	19	13.56%	8
Non-availability of tools for workers involved in policy implementation	2.375	38	27.12%	16
Inadequate implementation of policy (due to poor funding, corruption practices, etc.)	2.150943396	114	89.83%	53
Inadequate policy communication and awareness among implementing agencies	2.71875	87	54.24%	32
No set standard for controlling the quality of street food in Nigeria	2.8	56	33.90%	20
High cost of registration of processed food products with regulators (NAFDAC, SON, etc.)	2.928571429	41	23.73%	14
Low adoption of new technologies by the farmers and food processors	2.6	52	33.90%	20
Non-inclusion of key stakeholders in the process of policy formulation	2.166666667	52	40.68%	24
			Answered	59

How serious a policy concern, in your view, is the current situation about land and water use in Nigeria?

Answer Choices	Responses	
1 = Lowest	8.33%	5
2	26.67%	16
3	25.00%	15
4	16.67%	10
5 = Highest	23.33%	14
	Answered	60

What has been the level of your involvement in policy consideration/discussion directly or indirectly related to land and water use in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	31.67%	19
2	33.33%	20
3	28.33%	17
4	0.00%	0
5 = Highest	6.67%	4
	Answered	60

How well, in your opinion, is the Federal Government policy on land and water use supportive of the National agenda on Food and Nutrition security?

Answer Choices	Responses	
1 = Lowest	13.56%	8
2	38.98%	23
3	42.37%	25
4	3.39%	2
5 = Highest	1.69%	1
	Answered	59

To what extent, in your opinion, is the Federal Government policy agenda on land and water use addressing poor water resources management for the achievement of food and nutrition security in the country?

Answer Choices	Responses	
1 = Lowest	15.52%	9
2	51.72%	30
3	25.86%	15
4	5.17%	3
5 = Highest	1.72%	1
	Answered	58

Do you agree that an integrated water management and coordinated development programme embracing land, water and relevant resources would help to overcome the food and nutrition security concerns in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.67%	1
2	3.33%	2
3	28.33%	17
4	40.00%	24
5 = Highest	26.67%	16
	Answered	60

What has been the level of your involvement in the consideration/discussion on Climate Change related to food systems in Nigeria in the last 12 month?

Answer Choices	Responses	
1 = Lowest	16.95%	10
2	20.34%	12
3	40.68%	24
4	15.25%	9
5 = Highest	6.78%	4
	Answered	59

What is your own level of knowledge about relationship between Climate Change and healthy diets in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.69%	1
2	16.95%	10
3	33.90%	20
4	38.98%	23
5 = Highest	8.47%	5
	Answered	59

What is the level of knowledge and understanding within your institution (i.e. among your colleagues) about the relationship between Climate Change and healthy diets in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.69%	1
2	23.73%	14
3	30.51%	18
4	37.29%	22
5 = Highest	6.78%	4
	Answered	59

To what extent, in your opinion, does the Federal Government policy agenda on Climate Change reflect an adequate understanding of the realities in the country?

Answer Choices	Responses	
1 = Lowest	10.17%	6
2	37.29%	22
3	44.07%	26
4	6.78%	4
5 = Highest	1.69%	1
	Answered	59

In your opinion, to what extent is climate change going to affect the food production and thus food and nutrition security in Nigeria in the next 5 years?

Answer Choices	Responses	
1 = Lowest	0.00%	0
2	1.69%	1
3	23.73%	14
4	45.76%	27
5 = Highest	28.81%	17
	Answered	59

How would you rate the effectiveness of the present development level of agri-marketing and Value Chain in Nigeria?

Answer Choices	Responses	
1 = Lowest	6.90%	4
2	37.93%	22
3	39.66%	23
4	13.79%	8
5 = Highest	1.72%	1
	Answered	58

What has been the level of your involvement in agri-marketing and Value Chain consideration/discussion in Nigeria in the last 12 months?

Answer Choices	Responses	
1 = Lowest	10.34%	6
2	25.86%	15
3	25.86%	15
4	24.14%	14
5 = Highest	13.79%	8
	Answered	58

What is your own level of knowledge about agri-marketing and Value Chain issues affecting food systems in Nigeria?

Answer Choices	Responses	
1 = Lowest	6.78%	4
2	8.47%	5
3	32.20%	19
4	28.81%	17
5 = Highest	23.73%	14
	Answered	59

In your opinion, what is the level of knowledge and understanding within your institution (i.e. among your colleagues) on agri-marketing and Value Chain issues affecting food system in Nigeria?

Answer Choices	Responses	
1 = Lowest	6.78%	4
2	10.17%	6
3	25.42%	15
4	35.59%	21
5 = Highest	22.03%	13
	Answered	59

In your view, how sensitive to food system issues are Federal Government agri-marketing and Value Chain related policies?

Answer Choices	Responses	
1 = Lowest	6.90%	4
2	20.69%	12
3	46.55%	27
4	20.69%	12
5 = Highest	5.17%	3
	Answered	58

In your own view, to what extent is the Federal Government policy agenda on agri-marketing and Value Chain reflect the realities in the country?

Answer Choices	Responses	
1 = Lowest	13.56%	8
2	37.29%	22
3	38.98%	23
4	8.47%	5
5 = Highest	1.69%	1
	Answered	59

In your opinion, what is the level of knowledge and understanding among food system-related policy actors about agri-marketing and Value Chain issues and their potential effect on food systems in Nigeria?

Answer Choices	Responses	
1 = Lowest	5.17%	3
2	27.59%	16
3	44.83%	26
4	20.69%	12
5 = Highest	1.72%	1
	Answered	58

To what extent, in your view, are the unsatisfactory conditions of rural market and unregulated market practices hindering the smooth agri-marketing and Value Chain which impact the broader food system in Nigeria?

Answer Choices	Responses	
1 = Lowest	3.39%	2
2	3.39%	2
3	27.12%	16
4	42.37%	25
5 = Highest	23.73%	14
	Answered	59

To what extent, in your view, are the uncoordinated agri-import and movement of agricultural products distorting the smooth agri-marketing and Value Chain thus impacting food systems in Nigeria?

Answer Choices	Responses	
1 = Lowest	1.69%	1
2	8.47%	5
3	25.42%	15
4	35.59%	21
5 = Highest	28.81%	17
	Answered	59

In your view, is the government agricultural agenda an important factor towards empowering farmers in building a healthy agri-marketing and Value Chain with broad impact on food systems in Nigeria

Answer Choices	Responses	
1 = Lowest	1.69%	1
2	10.17%	6
3	33.90%	20
4	25.42%	15
5 = Highest	28.81%	17
	Answered	59