EatSafe - Evidence and Action Towards Safe, Nutritious Food

Review of Food Safety Policy in Nigeria

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This EatSafe report presents evidence that will help engage and empower consumers and market actors to better obtain safe nutritious food. It will be used to design and test consumer-centered food safety interventions in informal markets through the EatSafe program.

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ACRONYMS

Below is a list of all acronyms and abbreviations used in the report.

APP	Agricultural Promotion Policy
CAC	Codex Alimentarius Commission
CBOs	Community-Based Organizations
CSOs	Civil Society Organizations
EAs	Executing Agencies
FCCPC	Federal Competition and Consumer Protection Council
FEC	Federal Executive Council
FIIRO	Federal Institute for Industrial Research Oshodi
FMARD	Federal Ministry of Agriculture and Rural Development
FME	Federal Ministry of Environment
FMITI	Federal Ministry of Industry, Trade and Investment
FMOH	Federal Ministry of Health
FMST	Federal Ministry of Science and Technology
FPIS	Federal Produce Inspection Services
FSAN	Food Safety and Applied Nutrition
FSMA	Food Safety Modernization Act
FSS	Food Safety System
FSQB	Food Safety and Quality Bill.
GAPs	Good Agricultural Practices
GFSI	Global Food Safety Initiatives
GMPs	Good Manufacturing Practices
HACCP	Hazard Analysis and Critical Control Point
IEC	Information, Education and Communication
IMCFS	Inter-Ministerial Committee on Food Safety
IPAs	Implementing Agencies
IPM	Integrated Pest Management
LGAC	Local Government Area Council
LGAs	Local Government Areas
M&E	Monitoring and Evaluation
MBNP	Ministry of Budget and National Planning
MDAs	Ministries, Departments and Agencies
MDGs	Millennium Development Goals
MSMEs	Micro, Small and Medium Enterprises
NABDA	National Biotechnology Development Agency
NAFDAC	National Agency for Food and Drug Administration and Control
NAQS	Nigeria Agricultural Quarantine Service
NARS	National Agricultural Research System

NASC	National Agricultural Seed Council
NBMA	National Biosafety Management Agency
NCC	National Codex Committee
NCFN	National Committee on Food and Nutrition
NESREA	National Environmental Standards and Regulations Enforcement Agency
NFSMC	National Food Safety Management Committee
NFSS	National Food Safety System
NGOs	Non-Governmental Organizations
NPC	National Planning Commission
NPFSIS	National Policy on Food Safety and Implementation Strategy
NPHCDA	National Primary Health Care Development Agency
OIE	World Organization for Animal Health
ORS	Oral Rehydration Salt
QWFP	Quality, Weight, Fumigation and Packaging
SHESTCO	Sheda Science and Technology Complex
SON	Standards Organization of Nigeria
SPS	Sanitary and Phyto-sanitary Standards
SUN	Scaling Up Nutrition
WDC	Ward Development Committees
WHO	World Health Organization
WTO	World Trade Organization

EXECUTIVE SUMMARY

This report is a review of existing food safety policy documents in Nigeria undertaken as part of Phase I activities of the EatSafe: Evidence and Action Towards Safe, Nutritious Food project, funded by the United States Agency for International Development (USAID). The review of existing food safety policy documents in Nigeria was undertaken to:

- Assess the content, scope, structure, and institutional landscape of existing food safety policy
- Identify gaps in the food safety policy and the implementation strategy
- Provide considerations for strengthening the policy and its implementation strategy

The report is also intended to provide relevant information to guide the EatSafe project to design and implement appropriate intervention activities to enable lasting improvements in the safety of nutritious foods in informal markets in Nigeria.

Four national policy documents were reviewed, namely:

1. The Agriculture Promotion Policy (2015-2020) of the Federal Ministry of Agriculture and Rural Development (FMARD)
2. The National Food and Nutrition Policy (2016) of the Ministry of Budget and National Planning (MBNP)
3. The National Policy on the Environment (Revised 2016) of the Federal Ministry of Environment (FME)
4. The National Policy on Food Safety and Its Implementation Strategy (NPFSIS 2014) of the Federal Ministry of Health (FMOH)

While the first three policy documents only had sections on food safety, the NPFSIS 2014 (National Policy on Food Safety in Nigeria) (13) outlined the policy and implementation strategies that would improve food safety oversight and drive its effectiveness. The policy documents were also reviewed for alignment with the national food control system requirements recommended by the FAO/WHO Guidelines for Strengthening National Food Control Systems published in 2003. Although several Ministries, Departments and Agencies (MDAs) have policies with some components of food safety, NPFSIS 2014 is the most comprehensive and addressed all the building blocks for a strong national food control system as outlined in the above FAO/WHO Guidelines. Thus, NPFSIS 2014 is the central food safety policy document reviewed in detail in this review.

The review found that the Federal Ministries of Agriculture, Environment, Health, Science and Technology together with some state governments currently have over 30 Food Safety Enabling Acts in place. Thus, the administration of food safety is complicated by the fact that food safety has many facets covered by different agencies. NPFSIS 2014 showed that Nigeria currently operates a multi-agency food safety system with responsibilities split across

national agencies that focus on different sectors, such as Health, Agriculture, Food Industry, Environment and Trade. This is consistent with observations that national food control systems within the African Region often have a sectorial or fragmented structure. Moreover, findings from the NPFSIS 2014 document also showed that previous efforts to develop food safety implementation strategies had been mostly sectorial in nature. As such, they were generally uncoordinated, inadequately funded, limited in scope and did not achieve the desired outcomes. In addition to the segmentation at the national level, food safety policy legislation and implementation is also shared between the three tiers of Government (Federal, State and Local Government Area Council); this means that implementation depends on the competence and efficiency of the agencies responsible at each level. Consequently, consumers may not receive the same level of protection throughout the country and it may be difficult to properly evaluate the effectiveness of interventions at national, state and local government levels.

NPFSIS 2014 identified the key challenges facing the enhancement of food safety in Nigeria to include:
- Lack of awareness of the socio-economic importance of food safety
- Paucity of data and information on health burden, including but not limited to surveillance data on the incidence of foodborne disease
- Lack of understanding of food safety and quality standards as outlined in international agreements
- Inability to enforce compliance with local, regional, international standards and global best practices
- Inadequate infrastructure and resources to support scientific risk analysis and upgrading of food safety regulatory system
- Inefficient food supply chains and poor traceability system

There is an urgent need to strengthen the existing food safety system at the Federal, State and Local Government level to achieve a safe and reliable food supply chains in Nigeria.

The NPFSIS 2014 provided the framework to establish the national food safety objectives and requirements. It addressed the lack of coordination and cooperation arising from the overlap of functions of the food regulatory bodies which results in ineffective control and inefficient performance. While Nigeria clearly understands the importance of food safety, and with food safety mandates covering 13 agencies, a coordinated approach is needed and has been developed by the NPFSIS 2014 for implementation by the Federal Ministry of Health (FMOH). In January 2015, as a first step in the implementation of the food safety policy document, Nigeria inaugurated two national committees on food safety, namely: the Inter-ministerial

Committee on Food Safety (IMCFS), and the National Food Safety Management Committee (NFSMC), as proposed in the NPFSIS.

The policy implementation further advanced with the development of a Draft Food Safety and Quality Bill (FSQB) in July 2016, which was sent to the National Assembly in 2018 for enactment. While the government's interest and intent to implement the national food safety policy is clear, the FSQB has not been presented by the National Assembly for a Public Hearing to "gazette" the bill, according to the legislative process. This step gives members of the public, concerned persons and relevant stakeholders notice and the opportunity to provide written comment either in favor of the proposed law or against it. Further delay in the passage of this bill into law is a setback to the advancement of the food safety system in Nigeria. Advocacy for the passing of the Food Safety and Quality Bill into law is required but amendments may also be considered since it is about four years old. The opportunity for amendments can be harnessed during the public hearing where concerned stakeholders can make additional input into the content of the bill before enactment of the FSQB.

Passage of FSQB will facilitate situating food safety and quality activities under the FMOH, which is needed to prevent bureaucratic bottlenecks and inefficiencies. In addition to passing the bill into law, guidance is needed to coordinate improvements in infrastructure; training and capacity building; communication and managing responsibilities across agencies; surveillance; inspection; etc.

In conclusion, the food safety policy document review showed that food safety affects everyone and that consumers demand and deserve access to safe, hygienically produced food, whether fresh from the farm, food processing companies or the food service sector. The NPFSIS addressed the national objectives for the food safety system and is mostly focused on the formal sector. The policy document also recognized that the Micro, Small and Medium Enterprises (MSMEs) food processing sub-sector has great potential to create employment and wealth for the rural and urban poor. This potential can be harnessed with improved hygienic practices and adequate infrastructure for enhancing food safety system for the consumers.

Current awareness of the NPFSIS among actors at State and Local Government levels that interface with the informal food sector seems to be highly limited. As such, the Food Safety Policy and its implementation strategy should address the following gaps:

- The general understanding and needs of the informal sector for food safety
- Education of the informal sector on the National Policy on Food Safety; what it is and why it matters
- Training on how to comply with the policy
- Appropriate stakeholder coordination

- Regular and transparent communication between stakeholders, implementers, and the grass root community population
- The process for States and local government authorities to adapt the policy to their needs

The NPFSIS document needs to be adapted at the State and Local Government Area Council levels to enable effective implementation and achievement of its set goals and objectives across the informal food sector as well. There is the need to revise the NPFSIS 2014 document based on the gaps and limitations identified for this population of food system actors.

This review also provides relevant information to guide the EatSafe project to design and implement appropriate intervention activities to enable lasting improvements in the safety of nutritious foods in informal markets.

1. INTRODUCTION

1.1. Background

In 2010, the global burden of foodborne disease (FBD) was estimated at 600 million illnesses and 420,000 premature deaths. Most of the burden of illness is shouldered by children under five years of age (38%) and people living in low- and middle-income countries (53%) (1), illustrating its social and public health significance and societal relevance. Africa faces the highest burden of foodborne illnesses per capita, with an estimated 137,000 deaths and 91 million acute illnesses per year (1). The United Nations International Children Emergency Fund (UNICEF) reported that diarrhea is a leading killer of children, accounting for approximately 8 per cent of all deaths among children under age 5 worldwide in 2017 (2). This translates to over 1,300 young children dying each day, or about 480,000 children a year, despite the availability of simple effective treatment.

Food safety, defined as the assurance that food will not cause harm to the consumer when it is prepared or eaten according to its intended use (3), is an integral part of food and nutrition security. Food safety systems can apply to private sector approach to controlling food safety hazards within a food chain or business in order to ensure that food is safe for consumption (4). This system encompasses the scientific discipline of handling, preparing, distribution and storage of food in a way that will prevent foodborne diseases outbreaks and illnesses. The foundation of food safety is built around quality-safety culture, compliance with food laws, regulation and policy, traceability and food safety management system, and includes documentation, training, auditing and reporting, corrective action.

FBDs are common in Nigeria because of the prevailing poor food handling and sanitation practices, tokenistic and inadequate food safety laws, weak regulatory systems, lack of financial resources to invest in safer equipment and infrastructure, and lack of education for food handlers (5, 6, 8). Food safety concerns in Nigeria include biological, physical and chemical contamination, adulteration, misbranding, aflatoxin contamination, illegal food trading, and weak control over imported and exported foods (5, 6, 8). Poor food hygiene and limited oversight along the value chain leads to widespread FBD: there are an estimated 173 million cases of diarrhea caused by foodborne illness annually in Nigeria, and about 33,000 deaths from these illnesses (6). Children under five are particularly at risk. The costs of treating these illnesses are estimated at USD 1.7 billion annually—with a considerably larger economic toll if the cost of lost labor and productivity are considered (6).

Nigerian food safety policy sets out the principles, values, priorities, and strategies necessary to enable the development of actions to address the main concerns of the sector. In order to advance food safety in Nigeria, it requires a robust, comprehensive and sustainable food safety interconnected system with coherent national food safety policies and strategic action plans. However, the food safety policy situation in Nigeria has not been moving in the expected direction despite efforts of policy redress over the years including the formulation of the NPFSIS in 2014. NPFSIS 2014 can be regarded as Nigeria's master road map and action plan on food safety.

Nigeria's agricultural sector is a major producer of food and industrial products. In order to ensure the quality of food produced and sold, the national food safety system is important to regulating and enforcing food safety laws and standards in line with international best practices. Nigeria, as a member of the United Nations (UN) and signatory to all Conventions and Declarations on Health, Agriculture, Environment and Trade, is committed to meeting international food safety requirements.

Improving food safety and protecting the health of Nigeria's citizens would be enhanced via the enactment of food legislation. While the regulation, control, monitoring and evaluation of food safety in Nigeria was described in the NPFSIS 2014 policy document, legislation is needed to implement this policy. Review of the national policy has disclosed challenging issues in the areas of communication, collaboration, cooperation and funding among stakeholders and MDAs. It also described the emerging adoption of poor eating habits, poor food hygiene awareness and poor food handling practices due to an increase in the number of MSMEs due to urbanization. Thus, the need for a robust and functional food safety policy in Nigeria is imperative and urgent.

A food safety policy provides the framework for the establishment of national food safety objectives and requirements and offers guidance for application to specific sectors of the food

supply chain (production, processing, storage, transportation and marketing). A coordinated approach to food control could be achieved by establishing a national food safety policy that assigns roles and responsibilities to all stakeholders and coordinates all food safety activities. This would reduce the conflicts arising from the overlapping functions of the food regulatory bodies which can lead to ineffective control and inefficient performance.

It is pertinent to note that safe food supplies support national economies, trade and tourism, contribute to food and nutrition security, and underpin sustainable development. Food safety involves not only the avoidance of foodborne pathogens, chemical toxicants, and physical hazards, but also issues such as nutrition, food quality, labeling, and education (7). The issue of food safety and foodborne toxicants in sub-Saharan Africa, including Nigeria, is exacerbated by an uncoordinated approach to food control, inadequate investments and budget priorities, poor enforcement of legislation and regulatory limits, public ignorance on the subject, lack of technical expertise and an insufficient number of adequately equipped laboratories for analysis in some cases (8). Other factors include introduction of contaminated food into the food supply chain which has become inevitable due to shortage of food supply caused by drought, wars, socioeconomic and political insecurity.

1.2. Purpose of the Review

The USAID funded **EatSafe - Evidence and Action Towards Safe, Nutritious Food** project is being implemented in Nigeria and aims to enable lasting improvement in the safety of nutritious foods in informal markets by focusing on consumers. As part of the project inception activities, a review of existing food safety policy in Nigeria was undertaken to:
1. assess the content, scope, structure, and institutional landscape of existing food safety policy
2. identify gaps in the food safety policy and the implementation strategy
3. provide considerations for improvements in the policy and its implementation strategy
4. provide relevant information to guide EatSafe to design appropriate intervention activities on food safety

The review focuses on the situational and analytical concepts of the policy framework of the National Food Safety System (NFSS) in Nigeria. It also examines the status of the implementation of the NPFSIS 2014 and its alignment with international best practices.

A well-articulated food safety policy and action plan should provide a framework for redirection to enhance coordination among related regulatory agencies. It should consolidate fragmented initiatives and actions in food safety, while also establishing mechanisms for cooperation and communication between stakeholders to address existing and emerging food safety challenges. Hence, this review:

- underscores the objectives at the conception of NPFSIS
- tracks the policy landscape and institutional structures behind food safety in Nigeria
- identifies gaps and suggests modifications to improve and enhance the completeness of NPFSIS 2014 for effective implementation

1.3. Methodology

The review involved obtaining and assessing the four relevant policy documents as published by the various Ministries, Departments and Agencies (MDAs) in Nigeria. Those documents were reviewed against international and regional documents on food safety policies, food control and food safety systems, and implementation strategies obtained through internet searches. Those resources provided benchmarks for best global practice in food safety policy and implementation. International resources included reports and publications on food safety issues, such as peer-reviewed papers, project reports, international and global food safety expert publications and media reports that could be accessed online and/or downloaded and reviewed, consistent with the objective of the review. Limited telephone calls were also used to gather information from relevant stakeholders.

Analysis of perceived deficiencies and gaps in Nigeria's National Food Safety Policy and Its Implementation Strategy (NPFSIS 2014) was undertaken. The policy documents were also reviewed against their alignment with the key food control systems requirements recommended by the FAO/WHO Guidelines for Strengthening National Food Control Systems (9).

The review of NPFSIS 2014 focused on the defined policy scope and identified obstacles that may interfere with Nigeria's ability to adopt and implement a modern and effective National Food Safety System. Specific attention was paid to formulating suitable laws, regulations and guidelines aimed at achieving international best practices across the food supply chain, and developing an effective early warning system with capacity to detect, trace, predict and prevent the foodborne disease (FBD) outbreaks in Nigeria. However, a limitation of the review protocol was that the initial plan to employ physical stakeholders' engagement through workshops and Focused Group Discussions (FGDs) could not be done due to the restrictions on travel, group gatherings occasioned by the COVID-19 Pandemic.

2. NATIONAL POLICY DOCUMENTS WITH FOOD SAFETY COMPONENTS

Multiple government bodies play a role in ensuring the safety of foods along the farm to table continuum. The policies government actors implement are directed at farm production, safe food processing, consumer health protection, food standards, preservation of the environment, and regulations to meet safety and quality requirements in international trade. The three operating national policies with food safety components are listed below:

1. The Agriculture Promotion Policy (2015-2020) of the Federal Ministry of Agriculture and Rural Development (FMARD)
2. The National Food and Nutrition Policy (2016) of the Ministry of Budget and National Planning (MBNP)
3. The National Policy on the Environment (Revised 2016) of the Federal Ministry of Environment (FME)

It should be noted that the three policies above are not food safety policy documents per se, but mainly sectorial policy documents focused on agriculture, food and nutrition, and the environment, with only small sections addressing food safety and health. Therefore, the policies were not individually evaluated for food safety comprehensiveness.

2.1. The Agriculture Promotion Policy (2016-2020)

The Federal Ministry of Agriculture and Rural Development (FMARD) has an important role to play in food safety. It has a dedicated Nutrition and Food Safety Division for this purpose. Food safety begins with the suppliers of agricultural inputs which include seed, fertilizers, pesticides, and veterinary drugs that must be used in accordance with specifications to avoid pesticide and veterinary drug residues in farm produce and the attendant health hazards. Animal feed containing pathogens, including bacteria or toxic chemicals, may also pose specific risks. Special attention to contamination is also required during transportation, slaughtering, and handling of animals at abattoirs or when milk is produced on farms, to prevent the introduction of pathogenic microorganisms and foodborne illness.

The goal of the Agriculture Promotion Policy (APP)(10) is to build a high-quality brand for Nigerian foods based on rigorous data and processes that protect food safety for both domestic and export market consumers. One of the specific objectives is the facilitation of the government's capacity to meet its obligations to Nigerians on food security, food safety and quality nutrition. FMARD's Agriculture Sector Food Security and Nutrition Strategy (ASFSNS, 2016-2025) supports the APP goals.

The Strategy has eight inter-related priority areas with one of them focused on improving food safety along the value chain. This priority area focuses primarily on actions that promote the safety of foods for consumption and eligibility for trade. Kaduna and Lagos States are currently in the process of adapting the ASFSNS to meet their own needs.

2.1.1. Policy Thrust on Food Safety

The policy thrust of the Agriculture Promotion Policy (2016-2020) of the FMARD relating to food safety include:
- Promoting the safe use of agro-chemicals, pesticides, and their alternatives
- Intensifying awareness of public and farmer understanding of food safety protocol
- Creating a standard system for food safety inspections, origin tracking and nutrition labeling
- Harmonizing standards, quality, and other food safety measures for food security,
- Creating polices on food quality and enforcing quality standards, food safety for markets that ensure emergence of modernized, safe processing
- Facilitating the government's capacity to meet its obligations to Nigerians on food security, food safety and quality nutrition
- Enhancing capacity of the Nigeria Agriculture Quarantine Service (NAQS) of the Federal Ministry of Agriculture and Rural Development (FMARD) and the Produce Inspection Department of the Federal Ministry of Industry, Trade and Investment (FMITI) as well as fostering policy synergy between FMARD and FMITI on agricultural commodity trade

The APP provided for programs and activities to introduce and enforce quality standards for inspection, grading, food safety and traceability for both large and small-scale growers. FMARD also recognized the need for submission of the Food Safety and Quality Bill listed within its food safety component to the National Assembly for legislation, in coordination with the Federal Ministry of Health.

2.1.2. Merits

The APP is robust and covers some aspects of a food control system and food safety including the importance of coordination of efforts between concerned government bodies to improve efficiency.

2.1.3. Challenges

Some important components of a strong food control system such as laboratory services and Information, Education, Communication (IEC) and Training, as recommended by the FAO/WHO, were not effectively captured. This is not surprising as APP was not designed to

be a food safety policy document *per se*. The APP document unveiled the underlying challenges in Nigeria's agricultural system. Some of these challenges which may have implications for availability and safety of foods are highlighted below:

i. Policy Structure:
    Policy instability driven by high rates of turnover of programs and personnel makes application of policy instruments unstable. The outcome is an uneven development pathway for agriculture; lack of policy accountability, transparency and due process of law, relating to willful violation of the constitution and subsidiary legislations governing the agriculture sector. This makes the business environment unpredictable and discourages investors. To address this challenge, Nigeria needs to create a policy structure that matches evidence-driven coordination among decision-making authorities with common and public goals for an agricultural transformation of the country.

ii. Political Commitment:
    Non-implementation of international protocols or conventions agreed to with other members of the comity of nations is a challenge that could affect food safety and disease prevention and control. Political commitment at both the Federal and State levels will be required to enforce reforms.

iii. Agricultural Technology:
    Persistent shortcomings exist in the National Agricultural Research System (NARS) capacity to generate and commercialize new agricultural technologies that meet local market needs. Among other NARS's challenges, food safety is not a recognized research priority.

iv. Institutional Reform and Realignment:
    Presently, many federal and state agricultural institutions only seem to exist on paper. Surprisingly, the federal and state institutions appear to ignore local government areas, which is where most agricultural activities take place. There is a need to streamline and clarify mandates and ensure continued accountability for results. Unless these issues are tackled, Nigeria will continue to struggle with the capacity of its agricultural institutions to deliver on their public mandates. In Nigeria today, there are broadly two types of food processing: cottage level and industrial processing. Due to insufficient food inspection and standards enforcement, food processing often involves output of uneven quality, especially at the cottage level. The challenge sometimes emerges from a lack of food safety standards, or when these are present, insufficient enforcement or a lack of enabling systems.

Other challenges identified from the APP that could affect food safety include:

- Poor understanding of the life cycle of contamination of crops from early stage soil preparation to post-harvest handling practices
- Lack of coordination of efforts to improve efficiency between concerned government agencies
- Lack of quality standards for produce inspection, grading, food safety and traceability, customized to Nigerian conditions for both large and small-scale growers
- Absence of quality infrastructure, quality assurance and disease control via traceability
- Policy about quality control and standardization on crops, livestock, fisheries including apiculture
- Ill-timed service delivery. Delivery of Government service are frequently delayed, while contracts and Memorandum of Understandings with MDAs and State Governments can go unfulfilled

All these limitations impact the adequacy of food safety control system that, in term, effects the food supply chain and the prevailing public health issues in Nigeria.

2.1.4. Considerations to advance food safety policy

Based on information obtained under this review, future iterations, the Agricultural Promotion Policy should consider including:

- Emphasis on analytical laboratory capacity development is important for enabling science-based decisions on food safety and generation of relevant data from results of analysis of samples from the field.
- Information, Education, Communication (IEC) and Training are important aspects that should be emphasized, and protocols established and enforced to strengthen the capacity of regulators and the public and private sector operators in the food value chain.
- A structured approach for coordination of efforts between concerned government agencies, state governments, local government areas and public-private sector could improve efficiency and facilitate the implementation of the policy.

2.2. National Food and Nutrition Policy (2016)

A National Committee on Food and Nutrition (NCFN) was set up in 1990 and domiciled in the then Federal Ministry of Science and Technology to coordinate food and nutrition actions and formulate a National Food and Nutrition Policy (11), with a National Plan of Action. The phasing-out of that ministry in 1993 led to its transfer to the Federal Ministry of Health (FMOH). In 1994, because of its unique position as the government agency responsible for

coordination and monitoring of all national policies and programs related to food and nutrition, including budgetary processes, as well as all technical assistance in the country, the NCFN and emerging programs were relocated to the National Planning Commission (NPC) now known as Ministry of Budget and National Planning (MBNP).

2.2.1   Scope

The National Food and Nutrition Policy (NFNP) provides the framework for addressing the problems of food and nutrition insecurity in Nigeria, from the individual, household, community and up to the national level. It guides the identification, design, and implementation of intervention activities across different relevant sectors. The first National Food and Nutrition Policy was developed through a multi-stakeholder process and produced by the National Planning Commission (NPC) in 2001. Emerging concerns in the science, practice and programming of food and nutrition activities informed the review of the policy coupled with an increasing recognition of nutrition as a necessary condition for national development as espoused during the Millennium Development Goals (MDGs).

While the National Policy on Food and Nutrition provides an overarching framework, covering the multiple dimensions of food and nutrition improvement, it was reviewed in 2011 to address the urgent need to scale up high-impact and cost-effective nutrition interventions, demonstrated in part by Nigeria's sign up with the Scaling Up Nutrition (SUN) movement. The Policy has been revised to add value and strengthen synergy among sectors and other initiatives of government and partners. It recognizes the need for public and private sector involvement, and that hunger eradication and nutrition improvement is a shared responsibility of all Nigerians. A holistic approach is envisioned for the implementation of a revised version of this Policy, which involve sectoral Ministries, institutions of higher learning, the private sector, individuals, families, communities, Community-Based Organizations (CBOs), Non-Governmental Organizations (NGOs), Faith-Based Organizations (FBOs), Civil Society Organizations (CSOs), Media, Professional Associations and the International Agencies.

2.2.2   Food Safety Component of the NFNP

The National Food and Nutrition Policy recognizes the importance of promoting food safety during production, processing and storage stages while addressing the issue of increasing availability, accessibility, and affordability of food. It promotes the development and enforcement of minimum standards for food quality and safety both for imported and locally produced foods, including street-vended foods. It also provides for protecting the consumer through improved food quality and safety by setting objectives and intervention activities as listed below:

- Strengthening existing institutional capacity for the effective control of food quality and safety
- Ensuring enforcement of food safety regulation to guarantee food safety and quality
- Strengthening the mechanisms for detection, monitoring, and control of chemical residues in foods; and promote appropriate and safe use of agricultural chemicals
- Establishing standards for nutrition labeling and advertisement of all foods, including locally prepared indigenous foods, promote compliance and strengthen consumer education

2.2.3 Merits

The National Food and Nutrition Policy has a strong component of food safety and quality. It incorporates the food safety and quality dynamics along the supply chain while also advocating for strengthening institutional capacity; enforcing food safety regulations; detecting; monitoring and controlling chemical residues in foods; and promoting appropriate and safe use of agricultural chemicals. Nutrition labeling and advertisement of foods is also included, it covers locally prepared indigenous foods and promotes compliance and strengthening consumer education. The Policy scored well when evaluated against the FAO/WHO Guidelines on Strengthening National Food Control Systems, because components of those guideline's building blocks are reflected in the Policy namely:

i.   Ensuring enforcement of regulations (Laws & regulations)
ii.   Strengthening institutional capacity and standard setting (Food control management)
iii.   Ensuring compliance (Inspection)
iv.   Mechanisms for detection of chemical residues in food (Laboratory)
v.   Monitoring and control of chemical residues in foods (Food Monitoring and Epidemiological Data)
vi.   Promotion of compliance and strengthening consumer education (Information, Education, Communication and Training)

2.2.4 Considerations and Challenges

The policy did not emphasize food safety training for control system enforcement by agency personnel as prioritized by FAO/WHO guidelines on Assuring Food Safety and Quality (9). Training for enforcement is very important for performance and should be considered for inclusion when it is revised. There is the need to also ensure that only the right personnel with expertise in food safety and hygiene are assigned to drive food safety related activities at the Federal, State and Local Government levels.

2.3. National Policy on the Environment (Revised 2016)

The National Policy on the Environment (12) recognizes that environmental pollution in Nigeria is much greater in magnitude today than in previous decades. This results from the high rate of population growth and urbanization; modernization of agriculture and the increasing use of agrochemicals; the introduction of new technologies and consumer products; and the ineffectiveness of the institutional, logistical and policy arrangements that have been put in place over the years to tackle pollution. With the advent of modern agricultural production farmers have increasingly relied on chemical inputs such as herbicides and pesticides which pose concerns about environmental health. The pollution of air, water and soil comes from extensive use of fertilizers on farms, dumping of expired and contraband chemicals and pesticides in the country, and improper storage and handling of chemicals. They can also harm humans who consume food produced with high pesticide residues and other toxic chemicals. Hence the policy statements relating to food safety in the National Policy on the Environment says that government will manage and control farmers' reliance on artificial inputs including herbicides and pesticides that are harmful to the environment. It also provides support to some extent in ensuring consumer food safety in Nigeria. However, the larger focus is on the protection of the environment from other non-agricultural activities.

3. THE NATIONAL POLICY ON FOOD SAFETY AND ITS IMPLEMENTATION STRATEGY (NPFSIS 2014)

The **National Policy on Food Safety and Its Implementation Strategy (NPFSIS 2014)** (12) was drafted by the Federal Ministry of Health (FMOH) and is the most comprehensive Food Safety Policy document that Nigeria has produced. Its implementation was to be supported by a Food Safety & Quality Bill that should be enacted into law. However, the resulting Draft Food Safety and Quality Bill (2016) is still awaiting enactment into law by the National Assembly almost four years after it was prepared; a major drawback for NPFISIS 2014. The content of the proposed Food Safety & Quality Bill is aligned with the National Policy on Food Safety and Its Implementation Strategy (NPFSIS). The Bill would give legal backing, budget, and power to the policy when passed into law.

A measure of the quality and comprehensiveness of a food safety policy is premised upon how well it reflects the building blocks for Strengthening National Food Control Systems as outlined in the FAO/WHO guidelines on Assuring Food Safety and Quality (9) and any other useful reference documents. A review of the document NPFSIS 2014 showed it is inclusive and complete as it captures all the components known to strengthen national food safety

systems ranging from Food Law and Regulations; Food Control Management; Inspection Services; Laboratory Services; Food Monitoring & Epidemiological Data and Information, Education, Communication and Training which is the essence of a food safety policy. The Policy goes further to outline the implementation strategies that would drive its effectiveness. It consists of four chapters: The Policy Framework, Institutional Arrangement, Implementation Strategies, Monitoring and Evaluation. The roles of both public and private bodies relevant in food safety are specified including the roles of the farmers, processors, professional bodies, private laboratories, the academia and research institutes.

NPFSIS 2014 aims to integrate and harmonize all existing laws, standards and codes that regulate food safety practices in Nigeria, redefine and coordinate existing food control infrastructures at various levels of government and reduce areas of overlap and conflict. It is widely felt by thought leaders and practitioners that the implementation of the policy would minimize the risk of outbreak of diseases arising from poor safety practices and reduce the prevalence of foodborne and related diseases. The policy dictates that the principles and practice of Hazard Analysis and Critical Control Point (HACCP) system would be applied during the preparation, production, handling, storage, processing/preservation, transportation, and distribution of foods. The policy focuses on building the capacity of both the public and private sectors and to strengthen the activities of the National Food Safety Control Agencies considering current developments at national and international levels. It recognizes that food safety in the agricultural sector begins with the suppliers of agricultural inputs to farmers and those involved in food production, since materials such as pesticides, fertilizers and veterinary drugs pose different risks at unacceptable levels and therefore require specific attention.

3.1.   Scope

NPFSIS 2014 is designed to provide the framework for the identification of national food safety objectives and the formulation of suitable laws, regulations and guidelines aimed at achieving international best practices in all sectors of the food supply chain. It is also intended to establish an effective early warning system that has the capacity to detect, trace and prevent outbreaks of foodborne illnesses before they spread.

3.1.1. Government Ministries, Departments and Agencies (MDAs) and their Mandates on Food Safety

NPFSIS 2014 revealed that food safety mandate in Nigeria is spread among 13 Ministries, Departments & Agencies (MDAs) as described below. The policy also articulates roles of the State Ministries and the Local Government Area (LGA) which is the lowest level of governance that is expected to reach most of the nation's population who are rural dwellers.

3.2.1 Ministries and their Subagencies

Federal Ministry of Health (FMOH)

The Federal Ministry of Health is responsible for the formulation of national policies, guidelines and regulations on food safety including monitoring and evaluation. The ministry is also responsible for the assessment of the nutritive value of food, environmental sanitation, food environment and handlers, control of foodborne disease, quality of public water from taps, as well as national and international matters relating to food. The National Agency for Food and Drug Administration and Control (NAFDAC) and the National Primary Health Care Development Agency (NPHCDA) are the food safety regulatory/implementation arms of the ministry. NAFDAC was restructured in April 2013, leading to the creation of the **Directorate of Food Safety & Applied Nutrition (FSAN)** to further strengthen the capacity for food control activities and enhanced professionalism. The Ministry is also responsible for water and chemical safety and chairs the National Codex Committee (NCC).

States Ministry of Health

The States Ministry of Health transform food hygiene and safety policies into program of activities for implementation in the 36 States of the country. They co-ordinate and supervise all activities on food hygiene and safety, conduct public health surveillance on the food premises and investigate food hygiene and safety complaints in food establishments within the LGA(s) and other sectors in the State. Technical support to the LGA(s) in the development and implementation of food hygiene and safety programs and inspecting and registering all food premises and hospitality establishments within the State is carried out. The States Ministry of Health acts as liaison between the federal and local government on food hygiene and safety surveillance reporting and information system.

Local Government Area Council

The Local Government Area Council (LGAC) (formerly known as Local Government Authority (LGA) in Nigeria) is the third tier and lowest level of governance. Each local government area is administered by a Local Government Council consisting of a chairman who is the chief executive of the local government area and other elected members who are referred to as Councilors. The LGAs have various functions which include the control and regulation of shops and kiosks, restaurants, street vended foods, bukkaterias, local abattoirs, traditional markets, and other places for sale of food to the public.

Federal Ministry of Agriculture and Rural Development (FMARD)

The Federal Ministry of Agriculture and Rural Development is responsible for formulating policies on primary agricultural production and practices which cover plants, animals, pests and diseases, etc., supervising and overseeing its departments and parastatals i.e. research institutes, colleges of agriculture, colleges of fisheries etc. Each sub-sector within the agricultural sector has separate food safety regulating protocols, i.e. livestock, crops and

fisheries. The National Agricultural Seeds Council (NASC) regulates the national seed system which covers such areas as varietal development, registration, release and certification of seeds, seed quality control, production and marketing, import and export of seeds. The Federal Department of Fisheries has the responsibility for ensuring that fish and fishery products produced, imported into or exported from Nigeria conform to international quality standards of wholesomeness as stipulated in the Sea Fisheries (Fish Inspection and Quality Assurance) Regulation of 1995. The food safety objective is to ensure compliance with the Fish Quality and Quarantine Services Regulation of 1995.

Federal Ministry of Industry, Trade, and Investment (FMITI)

The responsibility of the Federal Ministry of Industry, Trade, and Investment is to design policies, programs and strategies for an efficient, competitive and diversified private sector-led industrialization process and promote trade and investment with special emphasis on increased production and export of non-oil products that will lead to wealth and job creation, poverty reduction, enhanced service delivery and the country's integration into the global market. Nigeria is a member of the World Trade Organization (WTO). The Ministry is the focal point on WTO issues in Nigeria and in this regard Sanitary and Phyto-Sanitary measures (SPS). The SPS measures are designed to be applied only to the extent of protecting human, animal and plant health. Sanitary and Phyto-sanitary Standards (SPS) are preventive control measures necessary to protect the life and health of persons, animals and plants. For Nigeria to become fully integrated into the global market economies, she needs to satisfy international standards requirements for agricultural and food products, especially for export. Consequently, Nigeria has developed several standards and technical regulations to protect human, environment, animal and plant health.

Standards Organization of Nigeria (SON)

The Standards Organization of Nigeria (SON) is the sole statutory body under the Federal Ministry of Industry Trade and Investment that is vested with the responsibility of standardizing and regulating the quality of all products in Nigeria. SON is the Codex Contact Point (CCP) in Nigeria. The agency compiles inventories of products requiring standardization and sets Nigeria's standards specification. SON organizes laboratory tests to ensure compliance with standards designated and approved by the governing council. SON also fosters interest in the recommendation and maintenance of acceptable standards by industries and the public.

Federal Produce Inspection Services (FPIS)

The Federal Produce Inspection Services is domiciled in the Federal Ministry of Industry, Trade and Investment and located at ports of exit in Lagos, Port Harcourt, Warri and Calabar where it is responsible for the exports of agricultural commodities. It assesses products on a standard 3% sample for quality, weight, fumigation and packaging (QWFP).

Federal Ministry of Environment (FME)

The Federal Ministry of Environment has a role to play in the control of environmental food contaminants, persistent organic pollutants, environmental pollution, waste disposal, etc. The ministry has the mandate to provide quality environment that is adequate for good health and well-being of all Nigerians. It also prescribes standards for and makes regulations on water quality, effluent limitations, air quality, noise control as well as the removal and control of hazardous substances, monitor and enforce environmental protection measures.

National Environmental Standards and Regulations Enforcement Agency (NESREA)

The National Environmental Standards and Regulations Enforcement Agency of the Federal Ministry of Environment with the responsibility for the protection and development of the environment, biodiversity conservation and sustainable development of Nigeria's natural resources in general and environmental technology including coordination. Their role includes liaison with relevant stakeholders within and outside Nigeria on matters of enforcement of environmental standards, regulations, rules, laws, policies and guidelines.

Federal Ministry of Science and Technology (FMST)

The Federal Ministry of Science and Technology (FMST) has the mandate to provide scientific research and developmental support to food safety policy and programs in the country and as well develop innovative technologies to enhance food processing and handling. The department of physical and life sciences coordinates and monitors research and development policies, programs and linkages in agriculture and other critical sectors. Among the units that are active in some aspects of food safety are Federal Institute of Industrial Research Oshodi (FIIRO), National Biotechnology Development Agency (NABDA) and Sheda Science and Technology Complex (SHESTCO).

National Biotechnology Development Agency (NABDA)

The National Biotechnology Development Agency of the Federal Ministry of Science and Technology that develops the sustainable exploitation of bio resources for food and agriculture and the framework for ethical and profitable uses of biotechnology-based products and services. The agency promotes indigenous competence in the development and application of biotechnology-based products and service and develops mechanism and activities to support the emergence of biotechnology enterprises for the commercialization of biotechnology products. Appropriate legislation, compatible with international regulations, to promote biosafety, social and ethical use of biotechnology and to protect intellectual property, industrial property and farmers' rights are also developed by the agency. The National Biosafety Management Agency Act, 2015 is the legislation in place in Nigeria aimed at 'establishing the National Biosafety Management Agency (NBMA). This agency is charged with the responsibility of providing the regulatory framework as well as institutional and

administrative mechanisms for safety measures in the application of modern biotechnology in Nigeria, with the view to preventing any adverse effect on human health, animals, plants and environment.

3.2.2 Other Agencies, Services, Councils and Government Organizations

National Agency for Food and Drug Administration and Control (NAFDAC)
The National Agency for Food and Drug Administration and Control (NAFDAC) is the implementing agency of the Federal Ministry of Health responsible for the regulation and control of the importation, exportation, manufacture, advertisement, distribution, sale and use of food, drug, cosmetics, medical devices, chemicals, packaged water and detergent at Federal and State levels in Nigeria. They ensure appropriate tests are conducted and compliance with standard specifications for the effective control of the quality of food, bottled water, and the raw materials as well as their production processes in factories and other establishments is ensured. The Agency undertakes appropriate investigations into production premises and raw materials for food and establishes relevant quality assurance systems including certification of the production sites and the regulated products and pronounces on the quality and safety of regulated products including food, bottled water and chemicals. The role of the Agency also includes the inspection of imported food facilities to ascertain relevant quality assurance systems necessary for certification of the safety of imported food products.

National Primary Health Care Development Agency (NPHCDA)
he National Primary Health Care Development Agency provides education on the variety of safe foods required to meet dietary needs for active and healthy lives. They educate on correct methods of food preparation, handling, consumption and the importance of food security and proper nutrition for healthy living. The Agency trains health workers on nutrition knowledge and counselling skills and mobilizes Ward Development Committees (WDC) for nutrition activities such as food production, (community and school gardens), processing, storage, and distribution. NPHCDA is involved in distribution of essential food supplements such as Vitamin A, Iron, Zinc ORS (oral rehydration solutions) and micronutrient powder, food demonstration classes in health centers and training of local food vendors on proper food handling in the wards. The Agency also engages environmental officers on community food safety activities and monitors the activities of local food vendors in the wards.

Nigeria Agricultural Quarantine Service (NAQS)
The Nigeria Agricultural Quarantine Service (NAQS) is part of the Federal Ministry of Agriculture and Rural Development that ensures that all plants, animals and aquatic produce/products leaving the shores of the country meet International Standards and implements the enabling laws to prevent the introduction, establishment and spread of exotic pests and diseases of all agricultural products in the international trade. Their role also

includes the provision of effective science-based regulatory service for quality assurances of agricultural products through consistent enforcement of sanitary and phytosanitary measures for promoting a secured and sustainable agricultural and economic development.

Federal Competition and Consumer Protection Council (FCCPC)

The Federal Competition and Consumer Protection Council (previously Consumer Protection Council (CPC)) protects consumers from unwholesome practices and assists them seek redress for unscrupulous practices and exploitation. They carry out activities that increase consumer awareness and seek ways and means of removing unsafe foods from the markets. The FCCPC ensures that consumers' interests receive due considerations to provide redress to obnoxious or unscrupulous practices. Quality tests are conducted on consumer products and services. Products which do not comply with safety and health regulations are not permitted for sale, distribution, and advertisement. They encourage trade, industry, and professional associations to develop and enforce quality standards designed to safeguard the interest of the consumer.

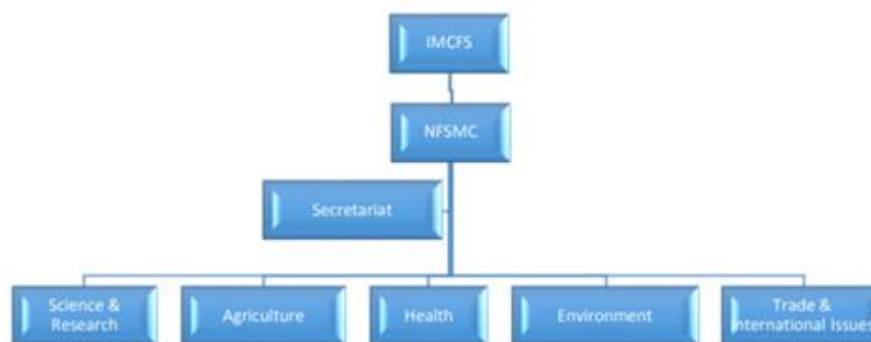## 3.3. Institutional Arrangement

Figure 1: Nigeria's National Food Safety System Organizational Chart

Source: Nigeria Policy on Food Safety and Its Implementation Strategy, FME, 2014 (13)

NPFSIS 2014 advocates for a National Food Safety System (NFSS) with an institutional arrangement that will ensure an effective, result-oriented program implementation. Previous implementation strategies had been mostly sectorial in nature, generally uncoordinated, inadequately funded and limited in scope and did not achieve the desired outcomes. The government's objective in producing the NPFSIS 2014 policy document was to achieve a comprehensive, effective collaboration and coordination of food safety practices from farm-to-table nationwide by adopting the Integrated Food Safety Management System approach. Towards this end, the NPFSIS established the National Food Safety Management Committee (NFSMC) as the entity that coordinates the NFSS. The NFSMC operates at the interface

between the various tiers of government and multiple stakeholders in the food supply chain, with defined goals and objectives. The existing multi-sectorial agencies retain their corresponding day-to-day statutory roles and responsibilities with a view to re-examining the statutory functions of concerned MDAs to reduce to the barest minimum overlaps and duplications of functions to achieve synergy.

The institutional arrangement is clearly targeted and aimed to accomplish the following important objectives:
   a) Improve public health in Nigeria by reducing foodborne illnesses and protect consumers from unwholesome, mislabeled, or adulterated food
   b) Leverage resources by ensuring proper coordination, cooperation and communication among those involved in the NFSS
   c) Engage private sector stakeholders to take greater responsibility in food safety and agricultural health through development and implementation of programs such as Good Agricultural Practices (GAPs), Good Manufacturing Practices (GMPs) and the Hazard Analysis and Critical Control Point (HACCP) systems
   d) Provide a forum for exchange of views and experiences among stakeholders involved in food safety activities, to strengthen their respective roles
   e) Coordinate the activities of various inspection agencies and put in place effective mechanism for the monitoring and evaluation of food safety programs nationwide.
   f) Support research and development
   g) Contribute to economic development by improving consumer confidence in the food supply chain
   h) Provide a sound regulatory foundation for expanding domestic and international food trade

The Policy provides for an Inter-Ministerial Committee on Food Safety (IMCFS) to oversee the National Food Safety Management Committee (NFSMC) with its functions clearly described. The IMCFS consists of five Honorable Federal Ministers of Health; Industry, Trade and Investment; Agriculture and Rural Development; Science and Technology and Environment. It provided for the Honorable Minister of Health to convene the first meeting. The committee is also granted freedom to engage other members from among the stakeholders as deemed necessary to achieve its objectives. The Committee is expected to meet at least twice a year and be serviced by the NFSMC secretariat.

NPFSIS provides for the establishment of a thirty-one-member National Food Safety Management Committee (NFSMC) by the IMCFS consisting of the relevant MDAs, organized private sector, research institutes, food professional bodies, public analysts and trade groups to implement the NPFSIS and to report to the Inter-Ministerial committee. Twelve other listed stakeholders including the Ministry of Foreign Affairs; Federal Ministry of Education; National University Commission; Nigeria Customs Services and others, as deemed necessary could be

invited to the NFSMC meeting. The functions of the NFSMC are well described. There are five Technical Committees namely:

- Agriculture
- Health
- Trade
- Environment
- Science and Research

Technical Committee members are selected by the Chair of the NFSMC in consultation with the appropriate ministry. The membership is restricted to qualified individuals from the public and organized private sector, including consumers recognized for their technical and management expertise. If required, each technical committee is also allowed to have subcommittees with clearly defined roles and responsibilities. Membership of subcommittees shall be appointed by NFSMC with their specific roles and activities provided. Concerning international agreements (CAC, OIE, IPPC & SPS), NPFSIS makes provision for the existing relationship between the international committees and the national regulatory agencies. These committees will continue with their mandates, including preparation of national delegations and production of country position on CAC, OIE, IPPC and SPS matters. The existing multi-sectorial approach to food safety where responsibilities for food safety control are shared by relevant MDAs, States and LGAs subsists and the bodies will continue to perform their relevant statutory mandates under this policy. Each relevant Agency at the National, States and LGACs will continue to carry out their day-to-day responsibilities as prescribed by the statutory instruments that established them with the view of re-examining those statutory legislation/functions of the concerned MDAs to reduce to the barest minimum overlaps and duplications of functions.

3.4. Policy Targets

NPFSIS 2014 outlined succinctly the following defined targets in tandem with international practice and guidelines:

i.   Adopt the policy and establish the National Food Safety Management Committee within the first six months of 2014

ii. Inaugurate the National Food Safety Management Committee to provide technical support and coordinate food safety programs in all relevant MDAs and private sectors in 2014

iii. Minimize the risk of outbreak of diseases emanating from poor food safety practices and attain 30% reduction in the prevalence of foodborne and related diseases within the first five (5) years of its implementation

iv. Ensure adherence to the principles and practice of food safety management systems, such as HACCP system by ensuring full compliance by all stakeholders involved in the

preparation, production, storage, processing/preservation, transportation and distribution of foods within the first five (5) years of its implementation

v. Ensure that foods imported to the country, supplied to consumers are safe, wholesome in line with national standards and food safety objectives within the first five (5) years of its implementation

vi. Ensure that foods exported out of the country are safe, wholesome, properly labelled, and free from contaminants, in line with international requirements to significantly enhance our international trade within the first five (5) years of its implementation

vii. Ensure that the National policy on food safety and implementation strategy that integrates and harmonizes all existing laws, standards and codes that regulate food safety practices is implemented before the end of 2014

viii. Coordinate food control infrastructures at various levels of government to reduce areas of overlap of functions and conflict to achieve synergy within the first five (5) years of its implementation

ix. Establish a Public-Private Partnership on food safety by 2014

x. Reduce food waste and improve food security

Partial achievement of the policy targets was met judging from accomplishments in the following areas: adoption of the 2014 NPFSIS and inauguration of the National Food Safety Management Committee (NFSMC), marginal reduction in foodborne disease outbreaks, and some improvement in safety of imported and exported food products. However, there is a below expectation performance in areas of coordination of food control infrastructure, reduced food wastage and increased food security, legal harmonization in accordance with implementation practices and adherence to principles and practices of food safety management system such as HACCP. The public-private stakeholders' partnership and interface has not been effective and the unspecified targets on education and communication channel have been of limited success, though consistent with the stated policy targets.

3.5. Merits

This review noted great support of the production of the National Policy on Food Safety and Its Implementation Strategy (NPFSIS). The document is generally regarded as a successful exercise with a resulting outcome in the production of a Draft Food Safety & Quality Bill for Nigeria in 2016 (FSQB).

The NPFSIS 2014 is seen as a comprehensive document with clearly defined goals and roles of the stakeholders. It identified all players in the farm to table continuum of the food chain both in the public and private sector ranging from regulators (Federal, State & LGA); service providers (private laboratories, agricultural input providers); implementers (farmers/farmer groups, processors/manufacturers,); educators (the regulatory bodies for secondary and tertiary institutions which are also responsible for the curriculum, teachers & the academia);

sectoral groups (operators in food production, processing/manufacturing); trade (chambers of commerce, import/export operators); and professional groups including: food science & technology associations, nutrition, microbiology, and mycotoxicology, to name a few.

The NPFSIS 2014 was generally designed with intent to ameliorate previous food safety system policy lapses and flaws in the formulation, implementation strategy and processes. It articulated the government's commitment to ensure that the public has access to safe nutritious food and comply with international best practices. It also sets a target for reducing to the foodborne diseases by about 30% within five years of implementation of policy. Thus, the policy provides a platform to identify food safety goals, objectives and scope, formulation of suitable laws, promulgating regulations and legislation, and provide guidelines for relevant MDAs and sectors at all levels of the government to promote and improve public health and trade.

The NPFSIS 2014 adopted the integrated food safety management system approach which resulted in the establishment of a National Food Safety Management Committee (NFSMC) to coordinate the entirety of National Food Safety System (NFSS). It retained the multi-sectorial statutory agencies and leveraging on a NFSCM Technical Support Committee (i.e. Agriculture, Health, Trade, Environment and Science & Research) to coordinate with the mother Ministries where relevant. The institutional arrangement is structured on an inverted "T" model/format; the Inter-ministerial Committee on Food Safety (IMCFS) oversees the activities of National Food Safety Management Committee (NFSMC), followed by FMOH, FMARD, FME, FMITI, and FMST with its secretariat domiciled in NAFDAC.

The Nigeria national regulatory agencies still retain their relationship with the international counterparts committed to the mandate of preparing national delegations and production of country positions on CAC, OIE, IPPC and SPS matters among others as partner agencies. However, the monitoring, evaluation and implementation of NFSS is coordinated by NAFDAC and NPHCDA with a periodic system review/evaluation process of 1-2 years by NFSMC and IMFSC, and a broader review once every 3 years by FMOH, Key MDAs and other stakeholders. Finally, the target of the NPFSIS 2014 as captured in section 3.5 was the road map projection within the first five years of implementation; therefore, it is liable to modifications.

NPFSIS 2014 clearly outlined some specific challenges of the previous policy implementation strategies, such as uncoordinated MDAs and stakeholders, inadequately funding and limited scope which did not aid the achievement of the desired outcomes. Among the most pertinent issues of the NPFSIS 2014, it did not incorporate some relevant stakeholders in the formulation drafting and had an undeveloped execution action plan of NFSS which could have addressed the overlapping MDAs functional obligations, mandates and roles. The vast diversities in culture, lifestyles, agricultural practices, mode of food production, handling, storage, preparation, transportation and eating habits, pose a complimentary challenge to

measures for food surveillance, inspection, certification, regulation and training among other expectation as stated in NPFSIS 2014.

It is important to note that NPFSIS 2014 identified the challenges perceived as current issues facing the food safety system in Nigeria that may impact negatively on achieving its goals and objectives to include:

- Inadequate capacity to identify foodborne disease illnesses and outbreaks, and monitoring
- Controlling and providing an effective response to food safety across all levels of government
- Resource constraints in relation to financial, human development capacity and infrastructure
- Sub-standard infrastructure that hampers the regulatory agencies in executing their mandates in the food supply chain
- Poor communication channels and coordination mechanisms
- Inter-agency cooperation and collaboration gaps for the enforcement of their laws and regulations
- Functional ambiguity due to the lack of proper definition of roles and responsibilities leading to an overlap and duplication of roles and function
- Lack of effective policy monitoring action plan leading to pending revalidation issues and perceived marginalization of some stakeholders among the technical support committee teams and NFSCM
- The lack of an effective engagement strategy for stakeholders, including through a stakeholder forum to promote synergy among MDAs and stakeholders; lack or poor political commitment to food safety; and the too many sectorial ministries with diverse interests involved in the NFSS

3.6. Gaps and Limitations of the NPFSIS

Going by the outlined mandates of the MDAs, the *Federal Ministry of Health* has a strong and well-regulated legal mandate in the area of food safety under the Public Health Services Acts of 1958 (Cap 165), and the Food and Drug Act (Cap 50). Notwithstanding, there exist limitations on the implementation of responsibilities tangential to the Ministry and associated agencies. The various agencies involved are yet to have a strong grip on the issues associated with fake drugs, expired foods, advertisement on food composite matters, certification, unwholesome processed food and registration of food, drugs, and related products, AFA among others. This leads to an increase in the rate of foodborne diseases and deaths associated with the sale and consumption unsafe food.

There are also unresolved issues connected with inadequate information and database paucity on food safety in Nigeria. The bodies involved in carrying out research and studies to enlighten the general public have actually not performed to expectation; most information on disease outbreaks with statistical evidence had actually been provided by the international community (WHO, FAO, UNICEF, World Bank, etc.). In relation to the above, the WHO had earlier lamented about the few studies on foodborne diarrhea cases in developing countries (2), including Nigeria. Also, in terms of legal understanding (Criminal Code and Penal Code), the inadequacy of the provisions and the inefficiency of their enforcement have led to many activities negating the food safety regulation (14).

Coordination is lacking between Federal, State and Local government levels in the performance of relative tasks and responsibilities at the disposal of each agency. Additionally, some key policy gaps associated with data collation on foodborne diseases at various level (Federal, State and Community) are needed to support better analytical and evidence-based research; improved diagnostic and reporting systems would allow for more accurate assessments on food safety at all level. The poor communication link between stakeholders, implementers and the grass root community need to be improved. The role of the Directorate of Food Safety & Applied Nutrition that was created in NAFDAC to further strengthen its capacity for food control activities and enhanced professionalism is not fully articulated nor harnessed.

In the NFPSIS 2014 document, food safety begins with the suppliers of agricultural inputs to farmers and those involved in food production, since materials such as pesticides, fertilizers and veterinary drugs pose different risks at unacceptable levels and therefore require specific attention. Consequently, the major agricultural safety concern is related to production and mycotoxins (aflatoxins, fumonisins, ochratoxins, zearalenone, deoxynivalenol, T-2 toxin, patulins and citrinin), which significantly affects agriculture and public health. Interestingly, the major issue of mycotoxins, particularly aflatoxins and fumonisins, is their carcinogenicity (8). Hence, these mycotoxins are not limited to only crops but extend to animals. For instance, animal feed containing pathogens, including bacteria or toxic chemicals, may also pose specific risks to health status of the consumer. In the same vein, special attention is required during transportation, slaughter and handling of animals at abattoirs or when milk is produced on farms, as these foods products may serve as vehicles of transmission of health hazards (5, 6, 8).

Unfortunately, there appears to be a relative under-functioning by the regulators, based on the mandate and regulatory enabling Acts which are limited in scope (areas of seed and crops control regulation acts), with more emphasis on meat, hide and skin regulation Acts. This lapse opens a functional limitation in modernizing agricultural production, processing, storage and distribution outside the Act mandate.

The lack of modern infrastructure facilities, professional expertise, and a knowledge bank on modernized agricultural practices increases Nigeria's dependence on importation of agricultural produce. This shows the structural deficiency that keep agricultural agencies from actualizing their mandates. The ethical standards of the Nigeria Agricultural Quarantine Service (NAQS) is yet to be fully understood by various agricultural establishments on the standardization processes.

The statutory responsibility of the *Federal Ministry of Industry, Trade and Investment* is derived from Federal Government Gazette Nos. 42 (Vol. 73) and 15 (Vol. 76) of August 1989. These charged the Ministry with the responsibility for promotion of trade, investment and industrial development with a view to transforming Nigeria into an industrialized nation. The agencies were instructed to prepare standards relating to products, measurements, materials, processes and services among others and their promotion at national and state levels. The agencies involved in these activities are mainly concentrated at the urban areas of the country, thus, neglecting the rural areas of the nation, and leading to under functioning of MDAs due to poor integration network. This has led to more concentration on oil and gas products despite the mandate to increase agricultural production and exportation of non-oil products that will lead to wealth and job creation, poverty reduction and ensure enhanced service delivery and the country's integration into the global market.

The inspection of packaging to ensure proper markings, sewing and sealing of graded produce is nowhere to be found in the Nigeria market. Various packaged products are found in the market without registration, and there is no labeling or documentation for traceability, issuance of Certificate of inspection, quality, fumigation, proper packaging and weight. There is a paucity of data attributed to food safety in the industrial sector. This could be a consequence of the inspection strategy of MDAs, which is centralized on seaports, without adequate concentration on the domestic food supply chain.

The *Federal Ministry of Environment* focus is to ensure environmental protection, natural resources conservation and sustainable development. The relevant agencies under this ministry are instructed to prescribe standards for and make regulations on water quality, effluent limitations, air quality, and noise control. They also oversee the removal and control of hazardous substances and monitor and enforce environmental protection measures. The abuse or misuse of agrochemicals by farmers in Nigeria has had serious health effects on the population and it remains unchecked while areas of air quality, noise control and disposal of food or relative wastes are not fully controlled. Other unchecked and unsafe common practices in our environment is the misuse of pesticides for fishing, inappropriate application of pesticides and insecticides in storage of agricultural products (beans and cereal grains), the use of toxic and unapproved chemicals for fruit ripening or on vegetables for insect infestation (8). The Ministry has not yet fully resolved the key environment problems of poor air and noise pollution, water quality issues, indiscriminate mining, deforestation and environmental

degradation. The disposal of solid and liquid wastes, sewage and industrial chemicals into water bodies is seen in many parts of the country. There is need for continued public awareness creation, training, and education of the general public by the Ministry on environmental matters to enable achievement of its policy objectives.

The *Federal Ministry of Science and Technology (FMST)* is saddled with responsibility to facilitate the development and deployment of science and technology to accelerate Nigeria's development. Within the ministry, the department of physical and life sciences coordinates and monitors research and development policies, programs and linkages in agriculture and other critical sectors. There exists a human capacity development gap in the field of research in Nigeria, and there is limited acknowledgement of developed technologies to aid in food safety system. Research grants and funds are not readily available, and scientific thinking is not adequately supported or utilized. Based on this limitation there is a high level of brain drain. Legislative measures are needed that support and promote biosafety, social and ethical use of biotechnology and to protect intellectual property, industrial property and farmers' rights.

Finally, the *Local Government Area Council (LGAC)* representing the interest of the grassroots and local communities, are responsible for the control of street food vending/vendors, restaurants, bukkaterias, catering establishments, abattoirs, and traditional markets. The synergy between Federal and State agencies with the LGAC is relatively weak; most food safety agencies don't have any departments in the LGACs making it difficult to reach out to the community even in the collation of data on foodborne disease outbreaks. Significantly, challenges in the implementation of the NPFSIS in the LGAC include inadequate infrastructure, facilities, laboratory capacity and expertise, poor funding, insufficient number of regulatory officers, inadequate coordination of food safety activities along the value chain, insufficient knowledge by food handlers, and poor partnership interface with the general public among others.

3.7. Implementation Strategy of the Food Safety Policy

The desire and determination of the Nigeria government in producing the National Policy on Food Safety and Implementation Strategy (NPFSIS) 2014 was to achieve a comprehensive and effective program. Through the Integrated Food Safety Management System, the program was intended to cover food safety practices from farm-to-table nationwide to meet international standards of food safety practices. Coordination and collaboration have been achieved through the formation and inauguration of the Inter-ministerial Management Committee on Food Safety (IMCFS) and the National Food Safety Management Committee (NFSMC). The Food Safety and Quality Bill (SQB) has also been prepared and sent to the National Assembly to be passed into law. The review of the NPFSIS 2014 policy document

revealed that the implementation component which accommodates the Executing Agencies (EAs), implementing agencies (IPAs) with their respective MDAs and stakeholders, requires some amendment.

The target of NPFSIS 2014 (chapter 3 section 3.5) aimed to minimize the risk of outbreak of diseases emanating from poor food safety practices and attaining at least 30% reduction in the prevalence of foodborne and related diseases within the first five years of its implementation. Unfortunately, there is paucity of data to evaluate if this has been achieved as planned. Achieving this objective requires implementation activities built around the components of food legislation and regulations, foodborne disease surveillance system, improving policy and institutional strategies, food inspection and laboratory services, monitoring and evaluation, stakeholders' involvement, and dissemination of food safety system information. The implementation network of the NPFSIS 2014 noted that the objective of the first five years was to harmonize all existing laws, standards, and code alongside the regulation of food safety practices. As of today, there is no evidence that this harmonization has been achieved and the policy itself has no legal backing as the Food Safety and Quality Bill 2016 has not been passed by the National Assembly.

In the absence of the legal structure, the implementation of the food safety system rests on the MDAs/stakeholders network at the three levels of the Nigerian government. Public-private sector partnerships coordinate food control infrastructure and help reduce functionality overlaps but can also conflict with the implementation strategy. Donor agencies focused on improving food security also are involved in curbing foodborne diseases and food loss. Nigeria's policy implementation has experienced a host of issues ranging from the existing multi-sectorial legislation/regulatory lapses, multiple jurisdictions with no clear cut definition and overlapping functional roles and mandates, poor food safety surveillance system, poor monitoring and legal frame integration, poor enforcement and evaluation due to lags in database on foodborne disease cases, culture diversity and lifestyles, poor agricultural practices, poor handling and storage, preparation, transportation, poor eating habits, poor food safety information dissemination system among others factors.

Despite its comprehensive implementation strategy structure and mandates (Section 3.2-3.4), adopting an inter-ministerial food safety committee approach which retained their corresponding multi-sectorial agencies still leads to overlapping roles and duplication of functions. The NPFSIS 2014 is still on track for adoption but can be modified as required. Cottage food industries operators, including micro-, small- and medium-scale enterprises and small holder farmers, have not been fully covered in the policy document. As such, current practices including the continued use of hazardous food preservatives, herbicides, pesticides, and storage chemicals is rampant and represent public health issues Nigeria should address for the effective implementation of the food safety policy. In addition, restaurants, street food vendors and market vendors in informal markets do not have adequate knowledge of food

safety, and lack hygienic food handling practices resulting in microbial and chemical contaminants in raw and prepared food products, which predispose consumers to health hazards, including foodborne illnesses. The informal sector and farmers need to be sensitized on the importance of food safety, good agricultural practices, and appropriate proper postharvest handling practices to ensure the delivery of safe food.

3.8. Food Safety System Monitoring and Evaluation

NPFSIS 2014 entrusts the monitoring and evaluation processes of the implementation of food safety policy to the Federal Ministry of Health (FMOH). Its two main agencies, the National Agency for Food and Drug Administration and Control (NAFDAC) and the National Primary Health Care Development Agency (NPHCDA), are required to effectively collaborate with sister agencies and stakeholders to manage the following activities:

- Inspection
- Tracking, detecting, and identifying non-compliances
- Training and education
- Prevention and control of foodborne diseases
- Monitor food safety activities and practices
- Regulate importation, exportation, manufacturing, certification, advertisement, distribution, and sale of food products
- Registration
- Laboratory testing to ensure compliance
- Conformance with international best practices

Chapter four of NPFSIS 2014 outlined a systematic monitoring measure which is anchored by NFSMC and IMFSC within a period of 1-2 years while the FMOH coordinates the broader evaluation every three years in conjunction with key MDAs and stakeholders, for conformance with the national food safety implementation plan, review code, ethics and then articulate future actions for sustainability in line with the goals and mandate of the NPFSIS objectives. While this monitoring and evaluation aid effective collaboration, there is need to develop a master monitoring plan coupled with evaluative measures in an updated NPFSIS. A revised monitoring and evaluation system are needed to strengthen integration of the grassroots segments and consider activities at the federal, state and local government level more comprehensively. The need of cottage industries and small holder farmers should also be considered in terms of effective communication of food safety knowledge and capacity building through outlining simplified food safety protocols for their use.

3.9. Sustainability of the Food Safety Policy in Nigeria

When implementation activities are considered, this review revealed that the food safety system in Nigeria suffers from negligence of its policy networks by MDAs and poor interface with relevant stakeholders at all levels of government. The government of Nigeria has in one way or the other tried various schemes in making provisions for food safety practices across the Federation (13). Some of the major sustainability issues of NPFSIS 2014 are reflected in the structure, institutional implementation strategy as identified in the section on policy challenges and limitations which include:

- Poor stakeholders/MDAs integration in the planning and execution process of policy
- Socio-cultural divergence – differences in customs and traditions, culture, eating habits and food types are different across the Northern, Southern, Eastern and Western Nigeria
- Ambiguous definition and overlap of food safety related roles and responsibility of MDAs
- Short tenure duration of NCFSM administrative
- Non-creation of more sister implementing agencies to subsist mother agencies such as NAFDAC
- Poor enforcement of the National Food Safety System
- Inadequate funding for food control system
- Limited expertise on food safety matters
- Poor collaboration and partnership issues between the federal ministries, state and local government sector of the government
- Political issues of non-continuity in projects and programs that fosters sustenance of food safety practices coupled with non-transparency in M&E systems, especially at the local level, inadequate or lack of database systems, outdated infrastructural facilities and laboratories
- Over centralization of functional MDAs at the urban cities; coupled with poor communication network
- Too much white paper formulation with little enactment will power - The Food Safety and Quality 2016 is still yet to be enacted into law, four years after it was prepared
- Marginalization of public-private stakeholders' interface in the decision making in the formulation and planning process on food safety matters
- Poor funding and lack of increased investment on modern facilities by the functional MDAs and stakeholders in the food value chain, poor knowledge management system on the aspect of proactive measures as a contingency plan against emergency food related issues
- Limitation of infrastructural expansion for food research institutes to accommodate population growth in relation to food safety

- Lack of decentralization of Federal Agencies to semi-urban and per-urban areas of the country leading to unbalanced surge of urbanization which trigger most of the FBD outbreaks.

Based on the above assertions, it can be concluded that food safety remains a major issue in Nigeria. Nigeria's case is worsened by public unawareness, a lack of adequate training on the subject matter of food safety throughout the food delivery chain, poor coordination of the food control system, lack of technical expertise, inadequate analytical laboratories, poor enforcement of food safety legislation by regulatory agencies, and the introduction of contaminated food into the food supply chain due to inadequate inspection and surveillance system (5,6,8,14).

The issues stated above, among others, have limited the implementation of NPFSIS 2014 in Nigeria. Therefore, there is need to facilitate and intensify the implementation of the policy document in tandem with the report by FAO/WHO in 2005 that made some policy guidelines and specific policy mandate statements to maintain sound public health and food safety. To achieve this, the Federal Government should continue to adopt and leverage food hygiene and safety practices and international best practices that will promote social and economic productivity for her teeming populace.

Policy guidelines, technical aids, infrastructure and creating avenues to partner with donor agencies, NGOs, private sector, and the general public can help improve food access, quality, standards and food safety and security (5, 6, 8). Furthermore, all tiers of government should participate and fulfill their mandates holistically in the implementation of the National Food Hygiene and Safety policies which will protect, restrain the sale of unhygienically prepared of food, adulterated, contaminated, spoilt, improperly preserved or mislabeled food while ensuring adequate and proper inspection, registration and regulation via conducting public health surveillance at all levels of government. To leverage on the increasing population of Nigeria, more food agencies should be created or established to support existing agencies. More stakeholders should be encouraged to partner via investments on modern infrastructural facilities to validate and update current food practices at the grass root level. There should be synergy between all the ties of government, MDAs and stakeholders, especially at the local government level to attain compliance and monitoring of food safety practices at the grass root level. The legal component of the government should not be left out in enforcing the mandate of food safety. Public-private interface should be encouraged to facilitate sustenance of NFSS in Nigeria.

3.10. Considerations for Policy Modification of NPFSIS 2014

Based on the review of the NPFSIS 2014 document, the following modifications may be useful for more effective implementation:

i.   In Chapter 2 Section 2.1c, the Statement of Institutional Objectives, which engages private sector stakeholders to take greater responsibility in food safety and agricultural health via development and implementation of practices and interventions such as Good Agricultural Practices (GAPs), Good Manufacturing Practices (GMPs) and the Hazard Analysis and Critical Control Point (HACCP) systems, should include all stakeholders as major actors, rather than passive participants (being invited by NFSMC when needed), especially in the decision and planning segments of policy making and execution.

ii.   The agricultural acts and laws of the policy document is limited in the following areas: law on food regulation, production, storage, processing, certification, monitoring, and distribution of agricultural food products coupled with laws on trade. Therefore, responsive ministries should come up with relative strict laws and enabling acts that will aid and better support the national food safety system in Nigeria.

iii.   To reinforce the improvement and sustainable expansion of national food safety systems, all relevant ministries should be drafted into the business of food safety, hygiene and sanitation to further reduce the incidences of foodborne diseases to lower the mortality and morbidity rate among vulnerable groups (especially women and children). This policy should be geared to promote public health and adoption of international standards, especially at the rural sector level of the government.

iv.   Lapses in the implementation of NPFSIS 2014 is pegged to the undeveloped action master plan; therefore it is very important to develop a master action plan that outlines the implementation process at all level of the government-Federal, State and Local Government Area Councils.

4. CONCLUSION

The review suggests that the food safety policy should be revised to accommodate updated practices by decentralizing the channels of the policy executing and implementing agencies. This could be facilitated through the public-private interface and collaboration with international development and donor agencies on food safety matters as active participants in the formulation and implementation of the policy document. At present, there is confusion in areas of mandates and roles, and this could improve through a clear definition of roles and responsibilities with an objective target to carry all relevant sectors of the government along while limiting to the barest minimum inhibiting factors such as equivocal policy statements, and political factors. The proposed policy revision should champion new funding mechanisms for NPFSIS to limit the financial huddles.

In areas of coordination, monitoring and control of the food safety system, decentralization of mother MDAs to sub-MDAs should be created to reduce the bulk load in the execution mandates on NAFDAC and NPHCDA who are the only regulatory/implementation agency arms of the Ministry on Food Safety as outlined in chapter one. The justification statement in sub-section 1.3.2 noting weak communication and coordination can be linked to the transparency mechanism of the policy. Hence, a well-structured transparency mechanism should be added to strengthen the communication and coordination network of the policy frame as a baseline tool to aid functional efficiency across all levels of government. In a nutshell, the NPFSIS 2014 is a definite road map of the joint effort of MDAs towards driving an expected food safety system to achieve consumption of safe food and overall healthy living of her populace. Nonetheless, there remains a host of challenges that have impaired the expected effectiveness of the implementation of NPFSIS 2014.

The National Assembly should pass the **Food Safety and Quality Bill (2016)** after its review into law as a matter of national importance. As the bill is still awaiting passage by the National Assembly and subsequent assent by the President of the Federal Republic of Nigeria, it is a huge setback to the advancement of the food safety and control system in Nigeria. Therefore, advocacy for the passing into law of the Food Safety and Quality Bill is required but amendments may also be necessary since it is about four years old. The opportunity for amendments can be harnessed during the public hearing where concerned stakeholders can make additional input into the content of the bill. This will achieve the specific objective of supporting the implementation of the National Policy on Food Safety and Its Implementation Strategy and lead to sustainable improvements in national food safety and food security. Passage of the bill will also facilitate new food safety & quality activities under the same umbrella body. This would improve effectiveness and efficiency arising from operations as a single unit rather than the current situation which presents some bureaucratic bottlenecks and inefficiencies.

The NPFSIS 2014 revision should reflect and focus on the following areas:

- Redefining more specific and articulated roles and responsibilities, mandates and functions of responsive MDAs/stakeholders to address the issue of overlap, duplication of roles and responsibilities.
- Enact, review and enforce relevant laws on food safety practices in areas of food preparation, handling, preservation, processing import, export, and the likes.
- Extend the administrative tenure of the National Food Safety Management Committee to leverage on expertise and team work on all National Food Safety System matters.
- Affirm the stakeholders' role in the formulation and implementation of food safety policy as active agents and not passive as indicated in the technical committee structure of the NPFSIS 2014.
- Integrate and strengthen participation of community-based stakeholders for sustainability in the national food control system. This will lead to expanding MDAs hubs to the local areas to monitor, report and combat the outbreaks of food related diseases occurring due to poor food safety and hygiene practices of the teaming eateries, MSMEs and street food vendors across all levels of the government in Nigeria.
- Create and enforce a more effective and transparent mechanism for the responsible MDAs to strengthen areas of communication, coordination and collaboration on Food safety matters to reduce the level of ignorance of the general public on food safety issues.
- Enhance and enforce budget policy coherency for the effectiveness of policy implementation by responsive MDAs and Stakeholders at all levels: Federal, State and Local Governments. The Food Safety and Quality Bill is currently before the National Assembly and has not been passed pending a public hearing to gazette it for enactment into law.
- Establish a robust multi-sectoral cooperation and collaboration system to even out duty function and mandate overlap of MDAs, stakeholders such as public-private partners, donor and international agencies on food safety and security practices.
- Design and implement a well-planned training program given the high priority it deserves for the workforce involved in food safety regulations at the Federal, State and Local Government levels. This will build expertise and skills in all interested parties and serve as an essential preventive function that will enable food safety operators and stakeholders ensure food safety all along the entire farm to table continuum.
- Purposefully integrate the implementation components and involve the local government areas where most activities relevant to food safety takes place.
- Create and implement a robust monitoring and evaluation structure that establish and harness private-public stakeholders as active actors other than being passively invited when due for meetings by NFSMC.

- Address the issue of political inconsistency and instability, and non-continuity of related food safety programs due to changes in the federal government administration by enacting laws to enable continuity on established food safety matters, irrespective of the political party in power.

5. IMPLICATIONS FOR THE EATSAFE PROJECT

This review of existing food safety policy documents was undertaken to provide relevant information to guide the EatSafe project to design and implement appropriate intervention activities to enable lasting improvements in the safety of nutritious foods in informal markets by focusing on the consumer. Based on the findings, implications for EatSafe project implementation are discussed below:

- Food Safety policies are drafted at the Federal Government level through the MDAs and in most cases do not consider the specific needs of the cottage food industry and informal market settings. Thus, there is need for effective communication of the food safety policy to the actors and stakeholders at the informal market level to enable them to underscore the importance of food safety and the need for compliance to reduce both food contamination and the related food borne illnesses. This is critical because the food supply chain in Nigeria is currently characterized by poor agricultural handling and storage practices resulting in high level of contaminants in raw materials and processed food products. This also underscores the need to adapt national food safety policies and legislation at State and Local Government Area level that have responsibilities for local market operations.

- EatSafe will be implemented in informal markets with focus on the consumer. At the grass-root level, the poor level of awareness and understanding of food safety and the associated risks/hazards from contaminated food, food borne disease outbreaks poses a challenge to effective enforcement of food safety system in Nigeria. The EatSafe program may need to invest heavily to create public awareness on food safety at the community level where the informal markets are located for the actors and stakeholders.

- In Nigeria, the enforcement of food safety legislation is inadequate, resulting in insufficient consumer protection against fraudulent practices and contaminated food products, and leading to the importation and domestic production of substandard food items as well as trade rejections of food exports. The informal sector, which is often a significant producer and distributor of fresh and processed food products for direct consumption, is often outside the scope of official control systems and remains the least controlled. EatSafe research will be implemented in informal markets that are not directly covered in the National Food Safety Policy and Implementation

Strategy 2014. This affects assessment of their levels of compliance to Food Safety regulations at these markets. This creates a food safety policy implementation and enforcement lacuna among the producers, vendors, consumers and other actors/stakeholders that will need to be considered in the analysis of research findings and an awareness that this gap may affect intervention implementation.

- Lack of decentralization of Federal Agencies to semi-urban and per-urban areas of the country leading to unbalanced surge of urbanization which trigger most of the foodborne disease outbreaks.

- The poor communication link between stakeholders, implementers and the grass root community need to be improved. This is particularly required in the cottage and informal markets setting. In this regard, EatSafe may consider specific intervention activities on food safety that will improve the communication link between stakeholders, implementers, vendors and consumers. However, interventions, while focused on informal markets, could have positive repercussions on formal markets and potential for synergies should be recognized and documented. This is where the role of Pierce Mill Entertainment and Education, our co-implementing partner that specializes in social impact media for positive behavior change is pertinent to communicating existing food safety information and the evidence generated.

- The inspection of packaging to ensure proper markings, sewing and sealing of graded produce is not functional in Nigerian markets. Various packaged products are found in the market without registration, and there is no documentation of this produce for traceability; issuance of Certificate of inspection, quality, fumigation, good packaging and weight to facilitate repatriation of foreign exchange on sale of exported produce and generate data on export of agricultural produce is one of mandates of the agencies but there still exist paucity of data attributed to food safety in the industrial sector. This could be projected from the angle of the short-sighted inspection structure of MDAs which is centralized on seaports and relegating the caprice of the food safety supply chain. EatSafe will need to consider the absence of markings and registration of products as it designs its consumer-based interventions.

- The synergy between Federal and State agencies with the LGAC is relatively weak. Most of the food safety agencies do not have any departments or operational offices in the LGACs, making it more difficult to reach out to the community even in the collation of data on FBD outbreaks. Significantly, other issues and challenges in the implementation processes of the food safety policy at the level of the LGAC include: inadequate infrastructure, facilities, laboratory capacity and expertise; poor funding; insufficient number of regulatory officers; inadequate coordination of food safety activities along the value chain; insufficient knowledge by farmers, food handlers; and poor partnership interface with the general public.

Recommendations for Intervention Design and Future Studies under EatSafe

EatSafe Nigeria aims to generate the evidence and knowledge on leveraging the potential for increased consumer demand for safe food to substantially improve the safety of nutritious foods in informal market settings in Nigeria. Central to EatSafe's work is understanding (and potentially shaping) the motivations, attitudes, beliefs, and practices of consumers and food vendors. While EatSafe will undertake novel primary research on consumer and vendor motivations and practices, it is essential to ensure that this work is informed by and builds on what has already been done—both in terms of methods used and results obtained. The following considerations should be taken into account when designing EatSafe interventions in its second phase.

- The lack of public awareness on food safety at the state and community level where the informal markets are located for the actors and stakeholders.

- The role of FSQB Public Hearings, where EatSafe target stakeholders can participate in the public hearing and voice their support for its adoption into the new law.

- Recognize that since the States and LGACs currently have not adapted the NPFSIS food safety policy to their needs, EatSafe will rely on only the national food safety policy and available State Food Safety Enabling Acts for the informal markets should intervention design need policy grounding.

- Intervention designs will need to account for poor communication link between stakeholders, implementers, vendors and consumers and consider the role of of Pierce Mill Entertainment and Education, our co-implementing partner that specializes to appropriately define social impact media for positive food safety behavior change to these audiences.

- Be aware that communicating results in a readily understandable form will more effectively enable a dialogue between stakeholders, including consumers.

- Food safety is a corner stone of GAIN's efforts to increase demand, and access to safe and nutritious foods. While better enforcement of food safety policy and its legislation is needed, EatSafe's research will be designed to test the role of education and influence on consumer awareness on food safety as triggers for demand better quality and safer foods to reap more benefits.

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