
Regulation and Enforcement of Legislation on Food Safety in Nigeria

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Additional information is available at the end of the chapter

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1. Introduction

Many health problems encountered today arising from consumption of unsafe food are not new as they date far back in history. Contamination of food and feeds arising from naturally occurring toxicants, microbiological contaminants, chemical contaminants such as additives used above the permitted levels, pesticide and veterinary residues in food or as toxic components from food processing could have deleterious effects in humans and animals. Naturally occurring toxicants are of both plant and animal origin. Examples of toxicants of plant origin include alkaloids (pyrrolizidine and solanum alkaloids), allergens, cyanogens, phytoestrogen, glucosinolates, lectins, oxalates, phytates and phenolics. Also included are toxic lipids, peptides and amino acids. The sources of toxicants in foods of animal origin are mostly marine e.g. saxitoxin, neosaxitoxin and gonyautoxins in shellfish poisoning and tetrodotoxin in pufferfish poisoning.

Bacterial contamination, fungal toxins, pesticides and toxic metals are the food contaminants of major health concerns. Bacterial food-borne diseases caused by species of *Salmonella*, *Clostridium*, *Campylobacter* and *Escherichia* are of major health concerns in Nigeria contributing to the morbidity and mortality rates of the country. The presence of mycotoxins produced by toxigenic fungi in food and feed exacerbates endemic diseases such as malaria, hepatitis, HIV with consequent acute and chronic effects. Mycotoxins of significant effects in agriculture and public health are aflatoxins, fumonisins, ochratoxins, zearalenone, deoxynivalenol, T-2 toxin, patulins and citrinin. The greatest concern about these mycotoxins particularly aflatoxins and fumonisins is their carcinogenicity. Recently in Africa, fatal aflatoxin-poisoning outbreaks including the episodes in Kenya and Nigeria were reported.

The lack of or inadequate application of Good Agricultural Practices (GAP) and the abuse or misuse of agrochemicals by farmers and during storage in developing countries had serious

health effects on the population. Other unsafe common practices include the use of pesticides for fishing, inappropriate application of pesticides to stored products such as beans and grains to prevent insect infestation, inappropriate application of chemicals to fruits such as bananas to ripen them or to vegetables such as carrots and cabbages to control insect infestation. The recent lead poisoning in Zamfara state of Nigeria which caused the death of dozens of infants and children shows the poor attention given to toxic metals in food consumed in Sub Saharan Africa. Similarly, improper use of food additives such as artificial sweeteners, butylated hydroxyl anisole (BHA), nitrates, nitrites, food colours etc could result in various ailments ranging from gastrointestinal disorders to carcinogenesis and death. Some packaging materials with toxic degradable components that are no longer in use in developed countries are still used in rural Africa. Of concern also is the partial or complete destruction or removal of nutrients during food processing. Inferior digestibility or utilization of nutrients and generation of new potentially harmful chemicals arising from bad manufacturing and handling practices are another source of health concern.

The issue of food safety and food – borne toxicants in Sub Saharan Africa, including Nigeria, is exacerbated by public ignorance on the subject, uncoordinated approach to food control, lack of technical expertise and adequately equipped laboratories in some cases, poor enforcement of legislations and regulatory limits. Other factors include introduction of contaminated food into the food chain which has become inevitable due to shortage of food supply caused by drought, wars and other socioeconomic and political insecurity (Wagacha et al. 2008) among others. The occurrence of foodborne disease remains a significant health issue in developed and developing countries despite the efforts being made by governments all over the world to improve the safety of the food supply.

In view of the serious and negative public health and economic impact of unsafe food which is more pronounced in Sub Saharan Africa, this chapter will examine the roles of relevant bodies in assuring food safety all along the farm to table continuum, legislations, food control systems, structures and strategies with particular focus on the Nigerian context. To do this, the following outline would be used for the proposed book chapter.

Keywords: Food, Food Safety, Food Control, Contaminants, Registration, Regulation, Health, Nigeria

2. National food control

National food control systems are designed to address specific needs and priorities of countries. They may differ from country to country but to be effective, they should contain key components such as food legislation and regulations, policy and institutional frameworks, food inspection and monitoring, food laboratory services, involvement of all stakeholders and dissemination of information to them.

There are a number of principles that underscore food control activities and these include:

- a. recognizing that food control is a widely shared responsibility and requires interaction between all stakeholders in the farm-to-table continuum,
- b. establishing a holistic, integrated and preventive approach to reduce risks of contamination all along the food chain which is the most effective way to produce safe food,
- c. developing science-based control strategies,
- d. prioritizing activities based on risk analysis and effectiveness of risk management strategies,
- e. establishing emergency procedures for dealing with specific hazards or failures (e.g. product recalls) etc.

The roles of the private sector and consumers are important therefore their views and capacity should be taken into account. Communication between the public sector (government), private sector (industry) and consumers is also crucial to food control.

2.1. Objectives

The main objectives of a national food control system are: i) to protect public health by reducing food borne illnesses, ii) to protect consumers from insanitary, contaminated, unwholesome, mislabeled or adulterated food and iii) to maintain consumer confidence in the food system which will give rise to economic development due to increased domestic and international trade in safe food.

2.2. Scope

The scope of food control systems should cover all food from the farm-to-table continuum including imported food i.e. food produced, prepared, processed, imported, exported, stored, transported, distributed and marketed within a country. Such a system should have a statutory basis and be mandatory.

3. National food safety policy

A co-ordinated approach to food control could be achieved by establishing a national food safety policy that will amongst other things assign roles and responsibilities to all stakeholders and co-ordinate all food safety activities. This would reduce the lack of co-ordination and co-operation at national levels and conflict arising from the overlap of functions of the food regulatory bodies which results in ineffective control and inefficient performance.

The National Council on Health of Nigeria at its 40th meeting in November, 1995, directed that a National Policy on Food Hygiene and Safety be put in place. The policy which was formulated with inputs from relevant stakeholders and finally approved by the National Council on Health at its 44th Meeting in 1999 is currently being reviewed.

The National Policy on Food Safety is intended to assign roles and responsibilities and provide official guidelines on the minimum food safety practices which must be adhered to

and also assure consumers about the safety of food and food products meant for human consumption in Nigeria. It is an integral part of the Nigerian National Health Policy.

The National Food Safety Policy provides for the establishment of a National Committee on Food Safety which shall draw its membership from the public and private sectors relevant to the production, storage, processing/preparation, distribution, transportation, and sale of food intended for consumption.

- i. The Public Sector includes:
 - a. Federal Government Ministries
 - b. Federal Government Food Control Agencies
 - c. State Government Ministries of Health
 - d. State Government Ministries of Agriculture
 - e. Local Government Departments of Health
 - f. Local Government Departments of Agriculture
- ii. The Private Sector includes:
 - a. Industry
 - b. Non- Governmental Organizations (NGOs)
 - c. International Development Partners
 - d. Universities and Research Institutes
 - e. Professional Bodies/Associations
 - f. Consumer Associations.

3.1. Legal framework

From as far back as 1958, various laws and regulations had been promulgated over the years to ensure the safety and wholesomeness of the nation's food supply. Such legislations include the following:

- a. Public Health Laws (1917) now known as Public Health Ordinance Cap 165 of 1958;
- b. The Standards Organization of Nigeria Decree No. 56 of 1971;
- c. The Food and Drug Act No 35 of 1974 (now Food and Drug Act Cap F32 Laws of the Federal Republic of Nigeria, 2004)
- d. The Animal Disease Control Decree No. 10 of 1988;
- e. The Marketing of Breast Milk Substitute Decree No. 41 of 1990 (now Marketing (Breast Milk) Act Cap M5 LFN 2004;
- f. The National Agency for Food and Drugs Administration and Control Decree No 15 of 1993 (now NAFDAC Act CAP N1 Laws of the Federal Republic of Nigeria, 2004);
- g. The Food, Drug and Related Products (Registration etc) Decree No 19 of 1993 [now Food, Drugs & Related Products (Registration etc) Act Cap F33 Laws of the Federal Republic of Nigeria (LFN), 2004];
- h. The Counterfeit and Fake Drugs and Unwholesome Processed Food Act No 25 of 1999 (now Counterfeit & Fake Drugs and Unwholesome Processed Foods (Miscellaneous Provisions) Act Cap C34 LFN 2004;
- i. Various bye-laws enacted by various LGAs in the country.

3.2. Goals

The overall goal of the National Policy on Food Safety is to establish a national institutional framework that will consolidate all existing food safety and control systems in the country and ensure the attainment of a high level of food safety standards that will achieve the following:

- a. Promote the availability and consumption of safe, wholesome and nutritious foods;
- b. Improve public health and reduce/eliminate incidences of food borne and related diseases throughout the country.
- c. Protect the health of consumers by the reduction of exposure to hazards through producing, processing, and distributing safe food.
- d. Meet consumers' needs and preferences in addition to facilitating international trade in food

The specific goals of the National Policy on Food Safety are as follows:

- i. To review, update and promote all Government policies, laws and regulations concerned with the control of safety of food during its policy formulation, production, storage and handling, processing/preservation, trade, transportation and marketing, preparation and consumption.
- ii. To improve the quality of healthcare delivery by ensuring that only foods that are safe, wholesome and of good quality are produced and/or marketed in Nigeria in accordance with prescribed food safety management systems such as but not limited to HACCP (Hazard Analysis and Critical Control Point) and are accessible to the consumer at affordable price.
- iii. To update, strengthen, harmonize, integrate and publicize all existing laws/regulations, standards and codes of practice with respect to control and regulation of food safety practices; eliminate areas of duplication/conflict and make them more relevant to the needs of the country and also create a national data base needed for future planning.
- iv. To establish a risk based food control system that will assist in setting appropriate level of protection for the consumers; prioritization of food safety programmes and monitoring safety trends in the national food supply

Food safety activities are sometimes fragmented and compounded by overlap of functions of the government regulatory bodies with roles along the farm-to-table continuum. The National Policy on Food Safety 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 eliminate areas of overlap and conflict. Implementation of the National Policy on Food Safety (NPFS) would minimize the risk of outbreak of diseases arising from poor safety practices and reduce the prevalence of food-borne and related diseases. 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.

4. Bodies with roles to play in food safety

4.1. Government bodies

4.1.1. The 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. It is also responsible for the assessment of the nutritive value of food, environmental sanitation, food environment and handlers, control of food borne disease, quality of public water from taps, as well as national and international matters relating to food.

4.2. The National Agency For Food And Drug Administration and Control (NAFDAC)

The National Agency for Food and Drug Administration and Control (NAFDAC) is 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. 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 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 imported food product.

4.3. The Standards Organization of Nigeria (SON)

The Standards Organisation of Nigeria is responsible for the formulation and enforcement of set standards on the composition of imported and locally manufactured food.

4.4. The Federal Ministry of Agriculture and Rural Development (FMA&RD)

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.

4.5. The Federal Department of Fisheries

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 aim of all of which is to ensure compliance with the Fish Quality and Quarantine Services Regulation of 1995.

4.6. Nigeria Plant Quarantine Service (NPQS)

The NPQS was established in 1960 with an Act of Parliament “The Agriculture (Control of Importation) Act No.28 of 1959” which gave the Division the mandate to put in place quarantine regulations, infrastructural facilities, trained personnel and scientific equipment and regulations that would enable her to meet the objective of preventing the introduction of dangerous and destructive foreign plant pests (insects, fungi, bacteria, virus, nematodes and weeds) of plants and plant products into the country and prevent the establishment and spread where introduction occurs despite all preventive measures. This mandate is in line with the text of the International Plant Protection Convention (IPPC) of the Food and Agriculture Organization (FAO) of 1959, and revised in 1979 which Nigeria is a signatory. There has been a review of the NPQS enabling laws and drafting of the Nigeria Plant Protection Act also known as The Agricultural Control of Importation and Exportation Act Amendment 2003 to conform with international standards. Nigeria is one of the founding members of Inter-African Phytosanitary Commission and is being represented by Nigeria Plant Quarantine Service.

4.7. Consumer Protection Council

Consumer Protection Council is the government agency responsible for protecting consumers from unwholesome practices and assisting them seek redress for unscrupulous practices and exploitation. The agency encourages trade, industry and professional associations to develop and enforce quality standards designed to safeguard the interest of the consumer.

4.8. Federal Ministry of Environment

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.

4.9. Federal Ministry of Trade and Investment

The Federal Ministry of Trade and Investment is the Notification Authority on World Trade Organization (WTO) Sanitary and Phytosanitary rules in Nigeria and therefore has a role to play in international trade in safe food.

4.10. Federal Ministry of Education

Federal Ministry of Education has a role to play through enlightenment and manpower development by incorporating subjects on safe food handling in the school curriculum and

courses on Food Safety Management Systems i.e. Good Agricultural Practices (GAP), Good Hygienic Practices (GHP), Good Manufacturing Practices (GMP), Hazard Analysis Critical Control Points (HACCP) etc in tertiary institutions necessary for manpower development.

4.11. Local Government Areas (LGAs)

The Local Government Areas are responsible for Street Vended Foods, Bukaterias, Catering establishments, local abattoirs and traditional markets.

4.12. Universities and Research Institutes

Tertiary and Research Institutes are responsible for research and will provide scientific basis for policy development and programme design in addition to relevant training programmes for capacity building and manpower development.

4.13. Private sector

The food processing/service industry applies the various standards, regulations and guidelines to ensure that food manufactured, imported, exported, distributed and sold for human consumption comply with the relevant food safety laws/regulations. They should maintain appropriate internal Quality Assurance based on the Hazard Analysis Critical Control Point (HACCP) principles to ensure product safety and consumer protection. The private sector is also expected to collaborate and complement government efforts in specific areas of education and awareness creation on the need to adopt and cultivate safe food handling habits by all categories of employees. It is recommended that small and medium scale entrepreneurs complement the efforts of the regulatory bodies by forming umbrella associations (e.g. packaged water producers, cocoa farmers association etc) that will employ self regulation of their practices. This enables the group to easily arrange consultative meetings with the regulatory bodies during which their views, issues of concerns and capacities are discussed and taken into account during decision making. Forming such associations also enables the regulatory bodies organize targeted capacity building training programmes for the group.

Various bodies are involved in food safety activities all along the food chain therefore proper co-ordination of their activities is crucial for an effective food control system. Poor or lack of co-ordination of activities sometimes leads to duplication of efforts, higher cost of doing business, discouragement of entrepreneurs etc and an ineffective food control system.

The global trend in food safety control emphasizes a multifaceted and multidisciplinary approach with effective co-ordination and collaboration between the regulatory bodies, the industry, academia, research institutes, professional bodies, consumer associations and the general public. A national food safety policy which spells out the roles and responsibilities of all stakeholders is essential for achieving an effective food safety control system.

5. National food control systems

An effective national food control system takes into account current situations and develops a national food control strategy to enable the country develop an integrated, coherent, dynamic and effective control. Situations differ from country to country therefore the programmes to achieve the objectives of the food control strategy are country specific. Official food control systems provide the possibility for implementation of the regulatory activities of government bodies aimed at ensuring that all foods are safe, wholesome and fit for human consumption, and are honestly and accurately labelled. Important components of a food control system include: policy and institutional frameworks; food legislation and regulations; food inspection and monitoring; laboratory services and dissemination of information to all stakeholders. The private sector and consumers should be fully carried along and their views and capacities taken into account, because they play a crucial role in ensuring that the overall goals of the food control systems are achieved. It is essential for adequate communication between government, private sector and consumers to be active and sustained.

The widely accepted principles of food control systems include: the role of scientific evidence and use of the risk analysis framework to make food safety decisions, structures to achieve prevention and control along the entire food value chain and ensuring that food chain operators realize that the primary responsibility to ensure safe and good quality foods rests on them. A well planned and structured food control system should give rise to a suitable national system developed in line with international best practices and harmonized with Codex Alimentarius Commission standards and World Trade Organization (WTO) requirements.

There are various organizational structures for national food control systems; however the three main types that are considered suitable are as follows:

- A single agency system which involves a unified, single agency being responsible for national food control;
- A multiple agency system where multiple agencies are responsible for national food control;
- An integrated system based on a national integrated approach.

The type of system does not matter as much as its fitness for the intended purpose. Whatever system is in place, adequate communication and coordination among different institutions are crucial. The system that would facilitate regulatory action for food safety should be based on the principles of transparency, inclusiveness, integrity; clarity of roles and rules; accountability, science/risk-based approach and equivalence as the benchmarks against which it would be measured.

5.1. Single agency system

The single agency system puts the responsibility for food safety and public health protection in a single Food Control Agency. The relevant bodies responsible for food control along the value chain are domiciled in one agency and under the same management therefore the

system is coordinated and makes for quicker response and effectiveness. This kind of system shows that Government places high priority on food safety and reduction of food-borne illness. The advantages of a single agency system include:

- Coordinated and uniform approach to food safety and public health protection
- Reduction or elimination of overlap of functions, duplication of efforts, delays, increased cost of doing business and wastage
- Improved efficiency, cost effectiveness and better use of resources and expertise
- Increased ability to respond quickly to emerging challenges (e.g. emerging pests and diseases) and food safety emergencies (e.g. melamine, dioxin, nucleotide etc contamination of food)
- Delivering more efficient service that facilitates the growth of industry and promotes trade.

5.2. Multiple agency system

Food control systems serve the primary purpose of ensuring food safety and protection of the health of consumers although there are other important objectives such as ensuring fair practices in trade, facilitating food export trade, developing the food sector to operate in a professional and scientific manner and economic benefits.

The systems that specifically deal with these objectives can be sectoral i.e. based on the need to develop a particular sector such as roots and tubers; fisheries; meat and meat products etc. It could be mandatory or voluntary. It is put in effect through a general food law or a sectoral regulation. For example, an export inspection law that requires certain foods to be mandatorily inspected before export; regulated systems for grading and marking fresh agricultural produce which are sold directly to the consumer; specific commodity inspection regulations such as for milk and milk products, fats and oils, meat and meat products etc. Sectoral initiatives may give rise to separate food control activities which leads to the creation of multiple agencies with responsibilities for food control. In this type of system, the food control responsibilities are usually shared between government ministries such as Health, Agriculture, Commerce, Environment, Trade, Industry and Tourism and government agencies such as the National Food Control Body or the Food Standards Body. The enabling laws specify the roles and responsibilities of the relevant government bodies which are different but sometimes overlap. This gives rise to challenges such as fragmentation, increased bureaucracy, increased cost of doing business, duplication of functions and lack of co-ordination between the various bodies with roles to play all along the farm to table continuum.

Food control systems may also be fragmented between national, state and local government bodies and the thoroughness of implementation depends on the competence and efficiency of the agency responsible at each level. Therefore 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.

While the multiple agency system may be the most used, the serious drawbacks include:

- Difference in the level of expertise and resources resulting in uneven implementation
- Conflicts arising from overlap of functions and lack of cohesion between bodies with roles in food safety and consumer protection leading to over-regulation and undue delays
- Conflicts between public health objectives and facilitation of trade and industry development
- Limited capacity for appropriate scientific inputs in decision-making processes
- Lack of overall co-ordination at the national level
- Reduction of domestic consumer confidence and foreign partners in the credibility of the system.

It is often difficult to have a unified or integrated food control system in this kind of set up because of the various historical and political reasons therefore the national food control strategy should clearly identify and assign roles to each agency to avoid duplication of efforts and to enable some measure of coherence amongst them.

5.3. Integrated system

Integrated food control systems are operated where there is the desire and political will to achieve effective collaboration and coordination between agencies across the farm-to-table continuum. An integrated National Food Control Agency should address the entire food chain and have the mandate to move resources to high priority areas and to address important sources of risk. The system should be structured such as to have several levels of operation as follows:

Level 1: Formulation of policy, risk assessment and management and development of standards and regulations

Level 2: Coordination of food control activity, monitoring and auditing

Level 3: Inspection and enforcement

Level 4: Education and training.

This model calls for the establishment of an autonomous national food agency which is responsible for activities at levels 1 and 2 with existing multi-sectoral agencies retaining responsibility for level 3 and 4 activities. The advantages include:

- Politically more acceptable as it does not disturb the day to day inspection and enforcement roles of other agencies
- Separates risk assessment and risk management functions, hence objective consumer protection measures with resultant confidence among domestic consumers and credibility of foreign buyers;
- Provides coherence in the national food control system;
- Promotes uniform application of control measures across the food value chain throughout the country;

- Better equipped to deal with international dimensions such as participation in Codex work, Sanitary and Phytosanitary Measures/Technical Barriers to Trade (SPS/TBT) Agreements;
- Encourages transparency in decision-making processes and accountability in implementation; and
- Is more cost effective in the long term.

The role of such an agency is to establish national food control goals, put into effect the strategic and operational activities necessary to achieve the goals. It should also revise and update the national food control strategy as needed; advise on policy matters including determination of priorities and use of resources; draft regulations, standards and codes of practice and promote their implementation; coordinate the activities of the various inspection agencies and monitor performance; develop consumer education and community outreach programmes and promote implementation; support research and development and establish quality assurance schemes for industry and support their implementation. The agency should consider the role of private analytical, inspection and certification services particularly for export trade.

6. National Codex Committee (NCC)

Nigeria is a member of the Codex Alimentarius Commission, a Joint FAO/WHO Food Standards Programme. The National Codex Committee (NCC) was established in July 1973 by the approval of the Federal Executive Council and reconstituted in 2002 to incorporate all stakeholders to enable the committee function effectively towards providing relevant inputs and asserting the country's position at the Codex Alimentarius Commission in view of the implications for food safety and quality, protection of consumer health, fair practices in food trade as well as the enhancement of the national economy. The National Codex Committee (NCC) operates within the provisions of the NCC Procedural Manual that sets out the General Rules of the National Codex Committee (NCC) and the other internal procedures necessary to achieve the objectives of the National Codex Committee; lists out the core functions of the National Codex Committee Secretariat, the four (4) Technical Committees and their terms of reference; sets out the guidelines for meetings of the National Codex Committee and its technical committees and lists the membership of the National Codex Committee. The chair of the NCC is currently the Federal Ministry of Health but with the review of the NCC Procedural Manual, will become rotational between the Federal Ministry of Health and the Federal Ministry of Agriculture and Rural Development. The Secretariat of the NCC and Codex Contact Point (CCP) is the Standards Organisation of Nigeria (SON).

The membership of the NCC consists of the Federal Ministry of Health; Federal Ministry of Agriculture and Rural Development; Standards Organisation of Nigeria (SON); National Agency for Food and Drug Administration and Control (NAFDAC); Federal Ministry of Science and Technology; Federal Ministry of Trade and Investment; Federal Ministry of

Environment; Ministry of Foreign Affairs; Federal Ministry of Justice; National Planning Commission; Consumer Protection Council; Nigeria Customs Service; National Biotechnology Development Agency (NABDA); National Association of Small & Medium Scale Enterprises (NASME); Federal Department of Fisheries; Association of Food Beverages and Tobacco Employers (AFBTE); Institute of Public Analyst of Nigeria (IPAN); National Food Reserve Agency; Nigerian Institute of Food Science and Technology (NIFST); Nigeria Agricultural Quarantine Services (NAQS); National Association of Small Scale Industrialists (NASSI); Trawlers Owners Association; Vulnerable Empowerment Creative Network; Nigeria Institute of Oceanography and Marine Research (NIOMR); Nigeria Export Promotion Council (NEPC); and 2 (two) appointed Private Consultants.

6.1. Codex Contact Point

The Codex Contact Point is primarily a coordinator and focal point for Codex activities within the country, and is the link between the country and the Codex Alimentarius Commission (and its Secretariat). It receives all the correspondence from the Codex Secretariat and Codex Committees and also invitation letters to attend Codex Committee and Commission meetings and coordinates all the necessary activities to facilitate the desired response. The Codex Contact Point which also serves as the secretariat for the National Codex Committee in Nigeria is domiciled in the Standards Organization of Nigeria.

6.2. National Codex Committee Technical Committees

The National Codex Committee has 4 (four) technical committees that deliberate on Codex texts and Circular Letters received from the Codex Secretariat requiring government comments at steps 3 and 6 of the 8-step standard setting procedure of the Codex Alimentarius Commission. The technical committees meet to synthesize the national position and prepare the country delegation that would attend Codex Committee and Commission meetings. The recommended country positions are endorsed by the National Codex Committee and forwarded by the Codex Contact Point to the Codex Secretariat, respective Codex Committees and the Codex Commission as the case may be. The National Codex Committee also provides a technical forum for:

- e. Articulating national guidelines for protecting the health of the consumers and ensuring fair practices in the trade of food.
- f. Promoting co-ordination of all food standards work undertaken by national, international governmental and non-governmental organizations.
- g. Determining priorities and initiating draft standards with the aid of the appropriate organizations.
- h. Initiating review of published standards, after appropriate survey in the light of current developments.
- i. Discussing issues relating to Codex and other regional standards on composition, safety, labeling, analysis and marketing of foods.

- j. Initiating scientific and technical data, generating research or collaborative studies, collating and processing data to enhance and enrich national, Codex and regional standards and all aspects of food regulations and marketing.

The technical committees are responsible for work on the assigned Codex Committees as shown below:

1. General Purposes Technical Committee chaired by the National Agency for Food and Drug Administration and Control (NAFDAC) is responsible for Pesticide Residues in Food; Food Additives; Contaminants in Food; Food Labelling; Food Hygiene; Food Import and Export Inspection and Certification; Methods of Analysis and Sampling and General Principles.
2. Animal and Animal Products Technical Committee chaired by the Federal Ministry of Agriculture and Rural Development is responsible for Meat and Meat Products; Poultry and Poultry Products; Fish and Fisheries Products; Milk and Milk Products; Residues of Veterinary Drugs in Foods; Fats and Oils (animal origin) and Animal Feeding.
3. Plants and Plants Products Sub-Committee chaired by the Association of Food Beverages and Tobacco Employers is responsible for Cereals, Pulses and legumes; Vegetable Proteins; Fats and Oils (Plant Origin); Cocoa Products and Chocolate; Sugars and Honey; Fresh Fruits and Vegetables; Processed Fruits and Vegetables; Soups and Broths; Bouillon Cubes; Roots and Tubers; and Nuts.
4. Special Projects Technical Committee chaired by the Federal Ministry of Science and Technology (FMST) is responsible for Biotechnology; Food for Special Dietary Uses;
5. Mineral Waters; Food Supplements; Beverages (alcoholic and non alcoholic).

7. National Agency for Food & Drug Administration & Control (NAFDAC)

The National Agency for Food & Drug Administration & Control (NAFDAC) is the regulatory authority in Nigeria with the mandate to regulate and control the manufacture, importation, exportation, advertisement, distribution, sale and use of food, drug, cosmetics, medical devices, chemicals, detergents and packaged water often referred to as regulated products. NAFDAC is the lead Agency for food safety and quality.

7.1. Regulatory strategies

- a. Product Registration

The product registration process is one of the regulatory strategies of NAFDAC. The Agency uses product registration to establish and monitor the ownership and/or distributorship of the products it regulates, generally known as regulated products (i.e. food, drug, cosmetics, medical devices, chemicals, detergents and packaged water); their safety; quality; labeling; claims etc. NAFDAC employs a structured and systematic

procedure for product registration at the end of which the product is assigned a NAFDAC Registration Number which is an attestation to the safety, quality and appropriateness for its intended use. The registration process involves:

- Documentation: Documents are required such as Power of Attorney from the manufacturer authorizing an applicant to speak for his principal on all matters relating to the latter's specialties; Certificate of Manufacture and Free Sale which is an evidence that the product is manufactured and freely sold in the country of origin; Certificate of Incorporation of the representative company in Nigeria; Evidence of Trade Mark registration; Comprehensive Certificate of Analysis of the batch of product to be registered. The permit to import samples for registration purposes is issued if documentation is satisfactory.
- Labeling: Labels should be informative, clear and accurate; indicate the name of product; name and address of the manufacturer, packer, distributor, importer, exporter, or vendor; make provision for NAFDAC Registration Number; batch number, manufacturing date and expiry or best before date; net content, ingredients list in metric weight in case of solids, semi solids and aerosols and metric volume in case of liquids.
- Inspection: Good Manufacturing Practice (GMP) inspection of the production facility is carried out prior to registration of the product.
- Product Approval Committee Meetings: A three (3) tier product approval meeting is held to consider the documentation, laboratory reports, GMP inspection reports, product labels etc. of a product prior to its registration.

Once a product is satisfactory, it is assigned a NAFDAC Registration Numbers and can be freely sold or marketed within the country.

b. Consultative Meetings

NAFDAC encourages sectoral groups, small and medium scale entrepreneurs etc to form umbrella associations (e.g. Association of Food, Beverage and Tobacco Employers (AFBTE); National Association of Small Scale Industrialists (NASSI); Association of Table Water Producers (ATWAP), Association of Fast Foods and Confectionaries Operators of Nigeria (AFFCON); All Farmers Association etc). These organizations are encouraged to self regulate their practices and can easily arrange for consultative meetings with the Agency where their views and concerns are addressed and taken into account when making regulatory decisions that concern them. Such an arrangement also enables NAFDAC to organize targeted and focused capacity building training programmes for the various groups.

Consultative meetings could also be at the instance of the Agency to give information and enlighten the public on NAFDAC requirements, discuss perceived regulatory challenges, inform on international best practices and regulatory trends etc.

c. Public Enlightenment Campaigns

The Agency organizes public enlightenment campaigns on topical and emerging issues using the electronic media, print media and physical presence at campaigns held at

grassroots levels where the rural dwellers are invited with the cooperation and involvement of their local chiefs to inform and educate the populace. Programmes such as “NAFDAC and Your Health” are popular television and radio programmes where regulatory officers are invited to speak on issues such as food safety, Codex activities, food supplements, how to check food products for important information on the labels such as date markings, NAFDAC Registration Number etc. Some of the programmes are phone-in programmes where the public has the opportunity to ask questions and be further enlightened. The Agency also uses television advertisements and radio jingles to inform and educate the public.

d. Training and Publications

NAFDAC organizes international, national and in-house capacity building training programmes consistently for staff, the industry and the general public. There are also collaborations and exchange programmes with credible regulatory authorities and international bodies such as the United States Food and Drug Administration (USFDA), US Department of Agriculture (USDA), International Atomic Energy Agency (IAEA), World Health Organization (WHO), Directorate General for Health and Consumers (DG SANCO) of the European Commission, African Union/Interafrican Bureau for Animal Resources (AU/IBAR) etc.

The Agency produces informative news bulletins, pamphlets, magazines etc such as the “Consumer Safety” Magazine which not only offers technical information to the general public but also has a catch-them-young programme for schools through the Consumer Safety Club where NAFDAC educates members of the club on food safety issues and organizes annual essay competitions on selected food safety topics for member schools. The winners are celebrated in a NAFDAC organized national event where they receive awards and gifts for their schools and themselves. In addition to inculcating food safety and hygienic practices at an early age, the idea of the Consumer Safety Club also includes reaching out to the household or family level with food safety news and practices through the kids..

8. Challenges of regulatory control of food borne toxicants in Nigeria

The challenges of regulatory control of food borne toxicants range from variations in the quality of raw materials supplied to the food processors (because in many cases they are sourced separately and pooled together); having many food handlers and middlemen with the risk of practices that expose the food to contamination; inadequate infrastructure and laboratory capacity and expertise; insufficient number of regulatory officers, inadequate coordination of food safety activities along the value chain to insufficient knowledge by food handlers. Problems sometimes occur due to poor post harvest handling; inadequate storage facilities and cold stores or conditioned warehouses; inadequate infrastructure such as transport facilities; good road networks, absence or shortage of electricity supply and clean water. Lack of the requisite knowledge and expertise in good agricultural practices at the

farm level, good hygienic practices/ good manufacturing practices at the production level and poor traceability also play a part.

Certain unwholesome practices such as improper use of agrochemicals by traders of food commodities e.g. application to unpackaged or bulk beans meant for sale in the open markets during their storage, have led to pesticide residues levels exceeding the maximum limits and emergency food safety concerns. Poor handling and storage of products such as melon seeds, groundnuts, rice etc lead to fungal growth and mycotoxin production with levels that exceed the acceptable limits.

Street vended foods are an important component of the food supply chain but unfortunately such foods are generally prepared in unhygienic conditions with poor food handling, unhygienic surroundings and limited water supply. These conditions expose the food to microbiological contamination and could be a source of illness for the consumer.

All these challenges could be addressed through public enlightenment, better coordination of roles along the food value and food supply chain, capacity building, improved infrastructure, training from the farm to the processing or preparation levels, adequately equipping the producers and regulators to perform their functions better through training and retraining in addition to providing the necessary working tools.

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