

STDF PROJECT GRANT (PG)

APPLICATION FORM

The Standards and Trade Development Facility (STDF) offers grants for projects that promote compliance with international SPS requirements. Eligible organizations can apply for STDF project funding using this form. Applicants can request up to a maximum of US\$1,000,000 for projects that have a duration of three years or less.

The STDF Working Group makes decisions on requests for STDF funding. The following types of projects are given favourable consideration:

- Projects relevant to the identification, development and dissemination of good practice in SPS-related technical cooperation, including projects that develop and apply innovative and replicable approaches;
- Projects linked to STDF work on cross-cutting topics of common interest;
- Projects that address SPS constraints through regional approaches; and
- Collaborative and inter-disciplinary projects focused on the interface / linkages between human, animal and plant health and trade, and benefiting from the involvement of two or more partners or other relevant organizations.

Complete details on eligibility criteria and other requirements are available in the *Guidance Note for Applicants*. The completed application should be submitted through the [STDF online application system](#).

| | |
|--|---|
| Project Title | Improving SPS compliance to boost Nigeria's export capacity |
| Objective | Increased exports of selected agricultural products through improved compliance to food safety standards, institutional support and sustainable capacity building at common facility centres |
| Budget requested from STDF | US\$ 997,864 |
| Total project budget | US\$ 1,207,864 (US\$ 210,000 NEPC of which 50% in-kind and 50% financial contribution) |
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Acronyms and abbreviations

| | |
|---------|--|
| APP | Agriculture Promotion Policy |
| ASFSNS | Agriculture Sector Food Security and Nutrition Strategy |
| ATSDR | Agency for Toxic Substances and Disease Registry |
| CCP | Codex Contact Point |
| CFC | Common Facility Centres |
| COLEACP | Europe-Africa-Caribbean-Pacific Liaison Committee |
| EU | European Union |
| GAP | Good Agricultural Practices |
| GDP | Gross Domestic Product |
| GHP | Good Hygiene Practices |
| GMP | Good Manufacturing Practices |
| HACCP | Hazard Analysis Critical Control Point |
| ERGP | Economic Recovery and Growth Plan |
| FAO | Food and Agriculture Organization of the United Nations |
| FMARD | Federal Ministry for Agriculture and Rural Development |
| FME | Federal Ministry of Environment |
| FMITI | Federal Ministry of Industry, Trade and investment |
| FMOH | Federal Ministry of Health |
| FPIS | Federal Produce Inspection Services |
| IEC | Information, Education, Communication |
| IPM | Integrated Pest Management |
| IITC | International Institute for Tropical Agriculture |
| IPPC | International Plant Protection Convention |
| IPM | Integrated Pest Management |
| ITC | International Trade Centre |
| MRL | Maximum Residue Level |
| MUF | Minor Use Foundation |
| NAFDAC | National Agency for Food and Drug Administration and Control |
| NAQS | Nigeria Agricultural Quarantine Service |
| NBS | National Bureau of Statistics |
| NCC | National Codex Committee |
| NEPC | Nigerian Export Promotion Council |
| NFNP | National Food and Nutrition Policy |
| NFSS | National Food Safety System |
| NFSMC | National Food Safety Management Committee |
| NPHCDA | National Primary Health Care Development Agency |
| NPFSIS | National Policy on Food Safety and Its Implementation Strategy |
| NPPO | National Plant Protection Organization |
| NSSAN | National Sesame Association of Nigeria |
| PSC | Project Steering Committee |
| PwC | Price Waterhouse Coopers |
| R-SAT | Rapid SPS Assessment Tool |
| SDG | Sustainable Development Goal |
| SON | Standards Organisation of Nigeria |
| SPS | Sanitary and Phytosanitary Measures |
| STDF | Standards and Trade Development Facility |
| TBT | Technical Barriers to Trade |
| UK | United Kingdom |
| UNIDO | United Nations Industrial Development Organization |
| USAID | United States Agency for International Development |
| WAPRC | West African Pesticides Registration Committee |
| WTO | World Trade Organization |

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I. BACKGROUND & RATIONALE

1. Relevance for the STDF

Nigeria is a country in West Africa with the highest population of all countries in Africa. It is a federal republic with 36 states and the Federal Capital Territory with Abuja as capital city. It is also the largest economy with a GDP of 432.3 billion US\$ in Africa. Although oil and natural gas remain the key economic sectors, close to 70% of the labour force is employed in the agricultural sector which makes it the largest employer in Nigeria. Approximately, 22-24% of the country's GDP is derived from agriculture (PwC Nigeria). Agriculture is broadly divided into four sectors in Nigeria—crop production, fishing, livestock, and forestry. Crop production constitutes the largest segment, and it accounts for about 87.6% of the sector's total output. Despite agriculture and other non-oil exports being considered as a government priority, the overall agricultural trade balance is negative as Nigeria imports agricultural products at a value four times of its exports. The negative trade balance was at a record deficit during the first half of 2021.

In 2020 Nigeria's exports amounted to 34 billion US\$, a decrease of 34% compared to 2019. The export of certain types of oil seeds and oleaginous fruits, miscellaneous grains, seeds and fruits is significant although export numbers are dwarfed compared to oil and oil related products (source: ITC trade map). The export volume of oil seeds, grains and types of dried peas and beans has almost tripled within the past 5 years from around 122 million US\$ to 343 million US\$ in 2020. Thus, the commodity group including oil seeds and oleaginous fruits; miscellaneous grains, seeds and fruits are among the most important agricultural products exported by Nigeria and has further potential to grow. The most significant export markets for Nigerian agricultural products are the European Union, India, China, Japan as well as some regional markets, e.g. Cameroon, Ghana and Côte d'Ivoire. Although Nigeria has not yet faced rejections in some of these countries, the scrutiny applied for pesticides in rejected crop exports in other markets is likely to increase and it is a matter of time that other countries will detect non-compliant residues.

One of the future challenges will be to intensify the fundamental diversification of the economy. The Nigeria Export Promotion Council (NEPC) has identified a list of 22 priority products that can help the country to achieve its "zero oil plan" and to diversify the economy. Considering a high unemployment rate and a reduced value of the Naira caused by fluctuating crude oil revenues and exacerbated by the global Covid-19 pandemic the oil dependency has been discussed even more intensely. Setting the objective of 30 billion US\$ in non-oil exports by 2025 and 500,000 new jobs created annually, an important role will be on the private sector to achieve the goals of the zero-oil plan and to a non-oil led economy and export plan.

Agriculture is seen as the alternative to oil and gas for employment generation and wealth creation in Nigeria. However, the agricultural sector faces two key challenges which are inability to meet domestic food requirements and an inability to export at standards required for market success. One of the main reasons for these challenges is an inefficient system for setting and enforcing food quality and safety standards and poor knowledge of the market requirements, specifically with regard to Codex based pesticide Maximum Residue Levels (MRLs) and pathogen contamination (e.g., Salmonella).

In the zero-oil plan two main agricultural products identified for economic and export diversification are sesame and cowpeas, two products of national interest for which Nigeria has competitive advantages in production, processing and exporting.

While cowpeas are consumed domestically and exported, sesame seeds are mainly destined for exports. Despite its enormous potential, the Nigerian cowpea and sesame exports have faced several border rejections when trading to international markets. According to the Nigeria Agricultural Quarantine Service (NAQS), Nigeria loses about 362.5 million US\$ annually¹ as a result of the European Union ban on dried bean exports from Nigeria. Moreover, border rejections of Nigeria dried beans and sesame exports have also occurred in the Americas, Asia and the UK, on account of poor adherence to standards and exceeding MRLs. For instance, Japan, the world's second largest importer of sesame seeds, informed the Nigerian government in August 2022 about a violation of

¹ Figure quoted by the Nigeria Agricultural Quarantine Service the Federal Government Agency that issues Phytosanitary certificates.

national MRLs related to excessive pesticide levels. Nigeria accounts for 34.6% of all Japanese sesame imports. Any similar incident may have serious impact on the trade of Nigerian sesame to Japan. In the EU, Dichlorvos of 4.3mg/kg was discovered in exported dried beans from Nigeria in 2015, resulting in import suspension, while Chlorpyrifos was found in January 2021 in exported sesame seed. Thus, the main cause of the border rejections are the very high levels of pesticides in pulses and to a minor extent in sesame seeds that exceed permitted MRLs and do not comply with Codex based international standards. Moreover, Nigerian exports of sesame seeds have been rejected in Turkey, Asian and European markets for contamination with pathogenic micro-organisms like Salmonella. Thus, the SPS related export constraints have been identified as a major obstacle for export and affect the implementation of the zero-oil plan. Significant economic losses were caused by rejected shipments that violated SPS related measures and standards.

As a consequence, to the large amount of border rejections, the Federal Ministry for Agriculture and Rural Development (FMARD) runs an initiative entitled "zero reject" with the objective to bridge gaps in quality and standards of Nigerian produce for local consumption, export, and to avoid border rejections. The initiative promotes quality control and standardization to entrench best practices in food handling and sensitization for farmers and other stakeholders in the food value chains. It was launched to enhance the acceptability of Nigerian products internationally. The initiative is overseen by a standing inter-ministerial technical committee on zero reject of agricultural produce and non-oil-exports from Nigeria. A Nigerian Agricultural Export Control Plan was developed with HS codes for goods and manufactured items as a strategy to increase compliance with Codex based MRLs, avoid rejections in export markets, and to prevent future bans on other agricultural produce due to Salmonella. Under the umbrella of the initiative a nationwide awareness campaign on agricultural quality control & standardization was launched.

The project will build on past experiences and activities implemented under the "zero reject initiative" by analysing and supporting initiatives that address the causes and problems related to the rejects and providing solutions how to reduce them. The work of the zero reject inter-ministerial working group will be observed and NEPC will ensure synergies with ongoing activities under the initiative. It will put an emphasis on pesticide residues and pesticide management for dried beans and sesame seeds as well as on management of pathogenic micro-organisms for sesame seeds to meet requirements of local and export standards. It is envisioned that the products exported will meet standard requirements, will be safe for consumption contribute to the lifting of export bans and reduce the number of border rejections in targeted export markets. This will mean that Nigerian producers will be more competitive on international markets and the production of cowpeas and sesame seeds will be more sustainable.

The selected agricultural export sectors are critical to economic development in view of the level of youth and women participation in the value chain (cultivation, processing, marketing, etc.) of these products, thereby providing source of livelihood and income to communities, the foreign exchange inflow from export is used for wealth creation and economic development. However, the rejections of these agricultural products result in farmers and exporters losing substantial income thereby destroying their means of livelihood.

ITC had previously supported Nigeria under the project "Expanding Nigeria's exports of Sesame Seed and Shea butter through improved SPS capacity building for the public and the private sector" from 2010 until 2014. The STDF project 172 focussed on aflatoxin contents and its management to reduce the high level of aflatoxins in sesame seeds and shea butter. The NEPC was the political partner and ITC acted as supervising agency. The project was successful in laying a foundation of a stable food quality and SPS framework for sesame and shea production. As a direct output, risks associated with aflatoxin contamination along the sesame and shea value chains were minimized and enabled producers to export the commodities to key international markets. The project also built a public-private partnership for production site management. This is a model the new project can build on and adapt. NEPC has been following the achievements and outcomes of the project to ensure sustainability after the end of the project and is thus an ideal partner for the new project, too. It will be very helpful to learn from the experiences gained and adapt the best practices to the new product context.

In addition to building on past experiences, lessons learned and transferring best practices, the new project in Nigeria will follow an innovative approach including a component on new and smart technologies and digitalization and it will be explored to what level new technologies can support project beneficiaries and value chain stakeholders with pesticide residue and pathogenic micro-organism management and standards compliance. Nigeria promotes a policy vision of a digital

agriculture as well as increased education and sensitization on the topic which is being assisted by policies and related strategic documents as well as the creation of technology hubs in the country. Related user groups and technology associations have been formed as well. The new technologies can be used to increase traceability, visibility, transparency, reliability and thus augment trust in the value chain and compliance to standard requirements.

However, more efforts are needed to explain and promote the benefits of new digital technologies to value chain stakeholders, and sensitization is required to illustrate the effects on meeting local and international standard requirements including MRLs, pesticide management and pathogen contamination.

2. SPS context and specific issue/problem to be addressed

In recent times, Nigerian agricultural produce has suffered rejections in international markets largely due to non-adherence to food safety standards such as exceeding pesticide residue levels for certain agricultural commodities and pathogenic contamination for specific plant-based products. Two of the products that have faced continued rejections are cowpeas (dried beans), and oil seeds (sesame seed, melon, groundnut, etc.) which have severely affected Nigeria's agricultural export opportunities. With an increase from 2015, Nigeria has faced border rejections of dried bean and sesame consignments due to the detection of high residue levels of the unauthorised pesticides, specifically organophosphate insecticides (beans and sesame) and microbial contamination (sesame). Apart from an EU ban on dried beans from Nigeria, many agri-foods products of Nigerian origin have been rejected at the borders of the Americas, Japan, Turkey and the UK, on account of poor adherence to Codex based standards and exceeding MRLs (high levels of chlorpyrifos found in exported sesame seed from Nigeria in January 2021). Turkey as well as some Asian and European markets frequently rejected Nigerian sesame seeds due to pathogenic contamination with Salmonella.

Elements that led to the presence of high pesticide residue levels (exceeding Codex based MRLs) are the inaccurate control of bean and sesame pests, and a lack of the information needed to ascertain the effectiveness of pest control measures taken in the crop production and storage chain. The residue control and the export certification system also lack cohesion.

Pathogenic contamination with Salmonella in sesame seeds is often caused by improper hygienic conditions and regularly occurs during production, harvesting, processing or storage. Good manufacturing. Proper harvest and post-harvest techniques, hygienic practices and application of the Hazard Analysis Critical Control Point (HACCP) concept should minimize such routes of contamination.

(i) food and agricultural trade flows and relevant SPS issues

Many African countries including Nigeria face challenges with regard to conforming to Maximum Residue Levels required to comply with food standards of high-value export markets. Some export destinations have banned the import of selected products due to high levels of pesticide residues or rejected individual consignments. It is thus important for Nigeria to gain and renew trust in its cowpea and sesame exports by providing safe and traceable products as non-compliance to food standards could lead to further border rejections and economic losses.

In the case of sesame seeds, the presence of Salmonella spp. is the main reason for rejects and bans on export markets. During the first two months of 2023 alone, there have been 10 notifications on the European Commission's Rapid Alert System for Food and Feed (RASFF) for border rejections related to Nigerian Sesame seeds. In addition, consignments of sesame seeds were rejected at the Japanese border and returned due to similar high amounts of microbial contamination.

Cowpeas (dried beans/black eyed peas)

Cowpea (*Vigna unguiculata*) is a legume that is regularly planted in the tropical and subtropical regions of the world for consumption by humans and animals. In Nigeria the beans are an important crop as they can be stored for a relatively long period and provide calories and protein. Cowpeas (locally referred to as dried beans) are considered a delicacy in most Nigerian homes and are also

craved by Nigerians and Africans in the diaspora. Nigeria is the largest producer and consumer, producing 3.65 million tonnes (FAOSTAT 2020) which accounts for 42% of production in Africa. However, export figures for dried beans from Nigeria are relatively low; most of the exports are largely informal and are often single cargoes to Nigerians and Africans in the diaspora for sale in African food stores or outright home delivery. This is to a large extent an effect of border rejections in several export markets for imports of dried beans from Nigeria caused by the presence of pesticides well above the permitted MRLs. Insects are mainly responsible for poor yields of cowpea grown in Nigeria, with adverse effects on the vital parts and crucial phases of the crop. Organophosphate insecticides are frequently used to control insect populations in cowpea crops. Dichlorvos (2,2-dichlorovinyl dimethyl phosphate, commonly abbreviated as an DDVP) is an organophosphate widely used as an insecticide to control household pests, in public health, and protecting stored products from insects. The compound has been commercially available since 1961 and has become controversial because of its prevalence in urban waterways and the fact that its toxicity extends well beyond insects. The insecticide has been banned in the EU, the UK, India and most other export markets. However, it is widely used in Nigeria. Other organophosphate insecticides commonly found in Nigerian cowpea samples include malathion, parathion, ethion and carbophenothion. Carbophenothion is not approved for use by the European Union or the US's Agency for Toxic Substances and Disease Registry (ATSDR). Its detection in the cowpea varieties in the context of studies and research on this topic has raised serious concerns. Carbophenothion is an insecticide and acaricide. The country is facing challenges in implementing measures to address this issue. The project will have to assess the source of contamination. It might be possible that this chemical was included fraudulently as a cheaper alternative.

Sesame seed is the leading non-oil exportable product, and a major foreign exchange earner for Nigeria, inability to address food safety constraints associated with sesame seed will impact negatively on the livelihood of the smallholder farmers as well as on the revenue of the country.

Awareness of pest management is largely lacking and good storage techniques are often unknown to producers and processors. There is a great demand for knowledge of integrated pest management to increase quality and market value. Integrated pest management methods can help to solve the problem of pesticide residues in food by promoting the use of natural pest control mechanisms by the farmers, by ensuring the reduction of pests, and by maintaining the usage of pesticides by the farmers at levels that do not constitute risks to human beings, animals and the ecosystem in ways that are sustainable economically.

The following states will be targeted for the technical support and project interventions as they grow and produce cowpeas in large quantities and/or severe food safety incidents related to pesticide levels were reported: Benue, Kwara, and Oyo.

Sesame Seed

Sesame Seed is used for a wide array of edible products in raw and roasted forms. It is rich in vitamins B and E, and also a good source of Ca, P and Fe. In Nigeria, the primary use of sesame is oil for cooking. And it is eaten as a snack after roasting among rural and urban dwellers. Nigeria produced about 490,000 MT of sesame seed in 2020 (FAOSTAT) and is the world's 4th leading producer and its export ranked amongst the top 5 non-oil exportable products from Nigeria. It is among the most important exported agricultural products of Nigeria with an amount of N60.6 billion for export in 2019. Nigeria exports sesame seed majorly to the EU, Turkey, Japan, South Korea and other Asian markets, but has lately encountered rejections in the importing countries largely due to high level of pesticides well above the permitted MRLs. Similar to cowpeas, insecticides (Chlorpyrifos and Permethrin) are widely used and lead to excessive residue levels well beyond permitted amounts of most export markets. For sesame, one of the major problems is cross-contamination. Sesame seed is farmed in mixed crop systems, the attempt by the farmers to control pests in other crops using insecticides accidentally affects the sesame seed regularly. A large-scale study on diets in West Africa published in food chemistry highlighted the widespread usage of prohibited organophosphates. This had resulted in stricter inspection regime at the border control with stipulated 50% on consignments from Nigeria being investigated. This is a major hindrance to the efforts at growing the non-oil export sector. As one of the leading non-oil exportable products, and a major foreign exchange earner for Nigeria, the inability to address food safety constraints in sesame seeds associated with sesame seed will impact negatively on the livelihood of the smallholder farmers as well as on the revenue of the country.

Microbial contamination like Salmonella contamination may occur at several stages in the sesame value chain. A variety of animal hosts may introduce Salmonella into a sesame production site or it is transmitted through improper hygienic conditions between humans during production, harvesting,

processing or storage. Salmonella can survive in the natural environment (outside of an animal host) for extended periods and can persist in some food production areas for years. Salmonella can also survive for extended periods (exceeding 1 year) in low moisture foods including sesame seeds. The magnitude of the Salmonella population reduction rate in salmonella depends on the humidity of the sesame environment and temperature, when the water activity/humidity is elevated.

After India, Myanmar and Tanzania with a global share of 12.40, 12.78, and 14.56 per cent production respectively. Nigeria is the fourth largest producer with about 9.52 per cent of the world's sesame seed production, mainly produced in the states of Jigawa, Nasarawa, and Benue.

Sesame Seed production in Nigeria in metric tonnes (MT)

| Year | Value | Remark |
|------|--------|-------------------|
| 2016 | 593604 | Official data |
| 2017 | 632317 | Official data |
| 2018 | 480000 | Unofficial figure |
| 2019 | 510000 | Unofficial figure |
| 2020 | 490000 | Unofficial figure |

Source:

<https://www.fao.org/faostat/en/#data/QCL>

Nigeria's export of Sesame Seeds 2018-2021 (in US\$'000)

| S/N | IMPORTERS | 2018 | | 2019 | | 2020 | | 2021 | |
|-----|-------------|---------|----------|---------|----------|---------|----------|---------|----------|
| | | MT | US\$'000 | MT | US\$'000 | MT | US\$'000 | MT | US\$'000 |
| 1 | World | 225,086 | 246,620 | 518,670 | 288,653 | 248,103 | 287,112 | 427,338 | 284,695 |
| 2 | China | 74,954 | 73,940 | 40,715 | 46,049 | 84,915 | 92,013 | 105,481 | 126,862 |
| 3 | Japan | 48,901 | 53,754 | 338,751 | 66,991 | 55,442 | 66,690 | 157,285 | 64,914 |
| 4 | Turkey | 41,162 | 43,777 | 44,505 | 55,268 | 34,533 | 39,344 | 20,669 | 27,642 |
| 5 | Viet Nam | 14,965 | 17,768 | 18,982 | 22,736 | 23,143 | 24,426 | 15,824 | 21,481 |
| 6 | Greece | 2,066 | 2,755 | 3,671 | 5,249 | 2,976 | 4,179 | 101,020 | 9,401 |
| 7 | Germany | 4,487 | 6,808 | 5,770 | 10,464 | 2,303 | 4,106 | 4,653 | 8,616 |
| 8 | South Korea | 2,033 | 2,037 | 8,659 | 11,356 | 1,804 | 2,235 | 3,315 | 4,476 |
| 9 | Netherlands | 4,563 | 6,041 | 1,662 | 2,603 | 2,656 | 4,108 | 5,929 | 3,696 |
| 10 | Poland | 3857 | 4,917 | 2801 | 4,487 | 779 | 1,126 | 1,705 | 3,003 |
| 11 | Canada | 1,099 | 1,614 | 706 | 1,220 | 1257 | 1,927 | 1,346 | 2,519 |
| 12 | Others | 26,999 | 33,209 | 52,448 | 62,230 | 38295 | 46,958 | 10,111 | 12,085 |

Source: ITC Trade Map, NQ =No Quantity

(ii) *the institutional framework for SPS management*

With relevance to the plant-based products cowpeas and sesame seeds, the Nigerian institutional framework for SPS is composed of the National Plant Protection Organization (NPPO) which is the

Nigeria Agricultural Quarantine Service (NAQS) with its headquarters in Abuja. NAQS is a regulatory agency under the Federal Ministry of Agriculture and Rural Development. One of its main objectives is the prevention of plant pests. The agency is also responsible to ensure that agricultural exports meet international standards in line with the International Plant Protection Convention (IPPC) and SPS conditions of the importing countries.

The Standards Organization of Nigeria (SON) has the sole responsibility for standardization in Nigeria. The mandate of the Organisation includes preparation of Standards relating to products, measurements, materials, processes and services amongst others and their promotion at National, Regional and International levels; certification of products, assistance in the production of quality goods and services; improvement of measurement accuracies and circulation of information relating to standards. SON maintains a mandatory conformity assessment programme for local manufactured products.

The table below summarizes responsibilities of key SPS-related institutions in Nigeria:

| | |
|---|--|
| National Agency for Food and Drug Administration and Control (NAFDAC) | responsible for evaluation, approval and registration of agrichemicals. NAFDAC also carries out laboratory analysis for pesticide residue levels in produce whether for local consumption or export and is the WTO-SPS Enquiry Point for food safety. |
| Nigerian Agricultural Quarantine Service (NAQS) | regulatory agency under the Federal Ministry of Agriculture and Rural Development. It was created for the harmonization of Plants, Veterinary and Aquatic resources (fisheries) Quarantine in Nigeria to promote and regulate sanitary (animal and fisheries health) and phytosanitary (plant health) measures in connection with the import and export of agricultural products with a view to minimizing the risk to agricultural economy, food safety and the environment. NAQS is the WTO-SPS Enquiry point for Plant Issues. |
| Standards Organization of Nigeria (SON) | SON's mandate includes the preparation of Standards related to products, measurements, materials, processes, and services, amongst others; their promotion at national, regional and international levels. 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. Son is the WTO-TBT Enquiry Point. |
| 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 livestock Department of the FMARD is the WTO-SPS Enquiry Point for animal issues. |

| | |
|---|--|
| 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 water and chemical safety and chairs the National Codex Committee (NCC). 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. |
| 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 and notification Authority for WTO issues in Nigeria and in this regard Sanitary and Phyto-Sanitary measures (SPS). |
| 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). |

(iii) any SPS priorities or issues identified

The frequent border rejections of Nigerian agricultural produce (especially when exporting to the EU and Japan but also other export markets) are largely caused by high pesticide residue levels for cowpeas and microbial contamination for sesame seeds. Both products have been rejected with economic losses for traders and exporters. In the case of cowpeas, a ban for imports has meant a standstill of cowpea exports from Nigeria to the EU. According to the NAQS, Nigeria loses about US\$ 362.5 million annually² as a result of import bans for Nigerian products. The import bans were sanctioned due to high levels of pesticides in Nigerian dried beans.

Non-compliance with food safety standards and inadequate hygiene practices and control mechanisms have been identified by the public and private sector as a major issue affecting human health, export capacity and competitiveness in the sector. A multitude of causes can be attributed to the lack of non-compliance with existing MRLs. The issues are related to insufficient information and ignorance, inadequate coordination, poor practices, and a lack of capacity in the public as well as the private sector.

Producers and processors

- A large number are often not following labelling instructions for application of agri-chemicals and are not aware of its adverse effects to human health and the environment when applied

² Figure quoted by the Nigeria Agricultural Quarantine Service the Federal Government Agency that issues Phytosanitary certificates

incorrectly or which pesticides are banned. They are also not aware of trade restrictions in cases of wrong applications resulting in high residue levels

- They buy the pesticides from ignorant retailers who are not registered but offer storage chemicals for indiscriminate use to prevent pests instead of having to buy from a list of suppliers that are following good practices and adhere to requirements.
- Agricultural extension officers are not well trained and/or too small in numbers to exercise appropriate supervision, and advice to farmers and the National Plant Protection Office (NPPO) is occasionally not able to reach producers and processors to check and sanction inappropriate application of the pesticides.
- A general lack of knowledge and implementation of good agricultural practices (GAP), good manufacturing practices (GMP), pest controls, poor harvest/post-harvest techniques, inexistent food safety systems (HACCP, FSSC) and missing or inefficient implementation of required foundations, such as sorting, storage, recording, traceability, batching by farmers and processors additionally aggravates the situation and is a major factor to avoid microbial contamination.

Exporters

- Have limited knowledge and inappropriate equipment along the value chain (machinery, silos, trucks) for harvesting, handling, threshing, transport which leads to further losses and contamination and reduced export capacity
- Limited awareness of international SPS measures and food safety standard requirements

The underpinning factor however is a food safety control system that is not well coordinated and thus cannot perform according to international best practice.

Food Safety policy and control in Nigeria

Nigeria currently operates a multi-agency food safety system with responsibilities split across 17 ministries and national agencies that focus on different sectors, such as Health, Agriculture, Food Industry, Environment and Trade. The high number of institutions and fragmented nature of the system make it difficult to follow a coordinated approach and often does not achieve 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.

The main food policy documents are:

- The Agriculture Promotion Policy (2015-2020) of the Federal Ministry of Agriculture and Rural Development (FMARD)

The goal of the Agriculture Promotion Policy (APP) 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 policy includes recommendations and action items related to the use of agrochemicals, pesticides and alternatives, awareness raising for farmers and processors, developing standard systems, tracking and traceability.

- The National Food and Nutrition Policy (2016) of the Ministry of Budget and National Planning (MBNP)

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 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.

- The National Policy on the Environment (Revised 2016) of the Federal Ministry of Environment (FME)

The National Policy on the Environment includes relevant sections on modern farming techniques and agricultural production that increasingly relies on chemical inputs such as pesticides and other harmful chemicals with detrimental effects on human and environmental health.

- 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 include sections on food safety, the NPFSIS 2014 (National Policy on Food Safety in Nigeria) is the only document that outlines the policy and implementation strategies that would improve food safety oversight and drive its effectiveness. The NPFSIS is thus the most comprehensive and addresses all the building blocks for a strong national food control system as outlined in FAO/WHO Guidelines. Thus, the NPFSIS can be regarded as the central food safety policy document. The NPFSIS 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.

NPFSIS 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 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.

Nigeria Food Safety and Quality Bill

The bill was drafted to harmonize the federal food safety regulation efforts and has yet to be enacted into law. It is an act to establish the National Food Safety Council and the National Food Safety Management Committee for the official control of food and feed safety, includes the obligations of food and feed business operators and to define the functions and powers of institutions of governments with the objective of ensuring that food and feed safety risks are effectively managed. The progress of the bill with regard to its enactment into law will be closely monitored by the project and possible need for adaptation of project activities assessed in case it will be enacted during the project implementation period.

While there are many interventions needed to strengthen the food safety in Nigeria, the national strategic documents suggest that the area of agri-chemicals and pesticide as well as pathogenic management in particular and the system to monitor their safe use, microbial contamination, and

addressing MRL non-compliance is both a priority for domestic consumer safety as well as for access to high value agri-food markets.

It is evident that value chain stakeholders, including farmers/producers, processors and traders need to be sensitized and trained on the potentially harmful consequences of an inappropriate application and usage of pesticides and the effects of microbial contamination caused by poor food hygienic and safety practices. It should also be made clear that rejected consignments and related economic losses are closely linked to the correct handling of the agri-chemicals and application of good manufacturing and food safety processes. The farmers lack essential knowledge on standards and dosage of agri-chemicals applied by importers of Nigerian products. Thus, it is imperative to provide training, coaching and sensitization for the products to meet export requirements.

Moreover, there is insufficient qualified local expertise, extension officers and inspectors. This situation limits SPS-related knowledge transfer to stakeholders along the value chain, and the implementation of a consistent approach and system to apply so as to comply with GAP, GHP, GMP, HACCP across the value chain.

The project will enable stakeholders of the sesame and dried beans value chains to better understand market access requirements, train, and coach them to adjust their practices in food hygiene, pesticide application and usage and sensitize on the causes of economic losses due to border rejections of consignments. It will also look at recording and traceability to support the sustainable transformation of the sector.

The project will start with an inception phase that will be used to assess and analyse the sectors and its legislation, institutions, knowledge of value chain stakeholders, the degree of operationalization and enforcement related to agri-chemicals and pesticides in particular. A tool like the COLEACP Rapid SPS Assessment Tool (R-SAT) could be used as guidance document. On the microbial contamination, the extent in sesame production and processing will be assessed and its root causes examined. As a result of this, the capacity-building plan will be fine-tuned to assist the government, various stakeholders along the value chains and the beans and sesame producers and exporters to develop and apply a system that enables compliance with target markets' requirements.

The idea of the project to improve the safety and quality of Nigeria agro-food products through compliance with Codex Alimentarius standards will include a thorough review of the current food safety, control and residue management system, the field level production and its documentation.

3. Links with national/regional development plans, policies, strategies, etc.

The project is targeting priority agricultural sectors in Nigeria that are of national interest and have already sparked interest of international buyers. However, the full market potential could not be realised due to non-compliance with international and buyers' food safety and quality standards. In its plans to strengthen the national economy and slowly phasing out of its oil dependency, Nigeria developed the "zero oil plan" as a reference document. Both target products, cowpeas and sesame seeds are among the list of priority products in terms of growth potential and sustainable markets. Both product sectors are also very inclusive as they employ a large number of women and thus empowers them and lifts them out of extreme poverty.

Thus, the project is aligned to the strategic objectives of the NEPC, specifically with reference to the 2019-2023 strategy.

SDGs

The project is contributing to the attainment of several SDGs (see chapter on sustainability).

The Nigerian government has developed a range of strategic policy directions and responses to prevalent agricultural challenges with the aim to boost agricultural development. The policy directions recognize the importance of agriculture as a means of economic growth and diversification.

The most important policy and strategic documents for the Agro-Food sector are:

- The Economic Recovery and Growth Plan (ERGP) and The Nigeria Digital Agriculture Strategy (2020-2030) (NDAS)

With the aim of sustained and inclusive growth, the ERGP shall drive the economic transformation of Nigeria with an emphasis on public and private sector efficiency. As it is focussing on food and energy security as a starting point for economic development and diversification the project is directly linked to the vision of the Plan. Supporting Agriculture and trade are among the execution priorities of the strategy, contributing to macroeconomic stability.

The Economic Recovery and Growth Plan specifies digital-led growth as one of its main objectives. This has been picked up and further detailed by the National Digital Economy Policy and Strategy (NDEPS) and the Nigeria Digital Agriculture Strategy (2020-2030). The Nigeria Digital Agriculture Strategy (NDAS) presents a ten-year strategic plan with the intent to improve the efficiency of the Nigerian agricultural sector through the use of digital technologies both in the rural and urban area. The NDAS guides the agriculture sector to achieve competitiveness in the global market for agriculture produce while providing employment and source of livelihood for a large population of the country. The National Information Technology Development Agency (NITDA) is the leading agency in charge of the "Digital Agriculture Strategy 2020-2030" that provides purpose and direction of adopting digital technologies in agriculture. The strategy is an offshoot of the Nigeria Smart Initiative and the Nigeria Digital Economy Policy and Strategy (NDEPS) of the President Muhammad Buhari Administration. The NDAS is aimed at supporting the agricultural sector towards achieving the Federal Government's economic diversification policy for increased revenue generation for human and infrastructural development.

West African Pesticides Registration Committee (WAPRC)

The WAPRC is an ECOWAS-founded mechanism that seeks to harmonize registration tools for pesticides in the region. WAPRC currently receives technical support from the US Department of Agriculture. USDA helps organise meetings and consultations between member countries and provides training. The project will coordinate and monitor the development of WAPRC activities and will leverage ongoing efforts by USDA. The project team will request access to meetings for planning and the link with MUF will help to establish the contact.

The results of the project can be shared with WAPRC for scalability and strengthening of a regional approach. The WAPRC efforts on coordination planning and trust building will be consulted at the beginning of the project.

4. Past, ongoing or planned programmes and projects

Nigeria is receiving support for its agricultural sector development from numerous agencies and some of them focus on quality and food safety as export requirements. Some of the projects include

- (i) *WTO/STDF PROJECT 172 2010 – 2014: Expanding Export of Shea and Sesame Seed through Improved SPS Capacity Building for Public and Private Sector – implemented by NEPC with the support of WTO/STDF as donor*

The overall objective of the STDF Project 172 was to expand Nigeria's exports of sesame seed and shea nut/butter through improved SPS capacity building for private and public sector organizations, as well as improved quality control along the supply chain. The focus of the project was on developing effective aflatoxin, free fatty acid (FFA) and impurities control systems for the above-mentioned products. Via the implementation of this project, it was expected that the quality control system established, would provide compliance with the national and international standards. This results in higher domestic consumption and exports to the targeted markets. After four years of implementation, the project was successfully concluded in 2014 and developed a stable food quality and SPS framework for sesame and shea production. As a direct output, risks associated with aflatoxin contamination along the sesame and shea value chains were minimized, enabling producers to export the commodities to key international

markets. In addition, various guides on characterization of both products, predictive model for aflatoxin and fungi control, HACCP plan, traceability system, sampling plan, farmers' guide to quality production of shea and sesame, were produced.

- (ii) *CBI/NEPC Export Competency Programme 2017-ongoing: To build capacity of exporting agricultural value chain SME actors in sesame seed, cocoa and cashew targeted at accessing the EU market. This project was conceived as a joint collaboration between NEPC and the Centre for the Promotion of Imports from Developing Countries (CBI) to build capacity and know-how of practitioners in selected agricultural value chains in Nigeria geared at complying with the EU food import requirements. The program included activities like technical sessions and scooping mission to selected markets in the EU for the practitioners.*

Economies of scale and synergies with other projects will be sought throughout the duration of the project in order to build on the work already conducted in the framework of other projects supporting the same sector. The following projects are most relevant and opportunities for cooperation will be closely assessed:

UNIDO

Project "building trust for trade"

With a budget of EUR 12 million financed by the European Union, UNIDO assists the Federal Government of Nigeria in implementing its strategic framework, vision 20:2020 and transformation agenda, with the aim of developing policies and measures to improve competitiveness and diversification in the non-oil-related sectors of the economy. The project is mainly supporting the institutions of the Nigerian Quality Infrastructure which includes working with the Institute of Public Analysts of Nigeria on ISO 17025 accreditation of some laboratories and with SON as the main partner. The project was launched in July 2013 and concluded in July 2018.

UNIDO will also be consulted regarding other technical cooperation programs that seek to strengthen the local and regional quality infrastructure. In particular, any support to laboratories and certification bodies may be of relevance to the project in Nigeria.

"Conduit of Excellence"

UNIDO has developed a Conduit of Excellence concept and implemented in Nigeria to train producers, traders, exporters, Standards Enforcement Officers and to adopt and implement an improved Food Quality Management System. It was developed as part of the UNIDO facilitated NQI programme. UNIDO developed together with stakeholders the concept of **Conduits of Excellence**. It attempts to connect key infrastructure elements, in particular, storage, motivated and educated value chain partners with the National Quality Infrastructure in order to address current quality, safety and export issues.

The Conduit of Excellence addresses the suspension of Nigerian beans and other exports to the European Union. It has an emphasis on public-private sector cooperation to jointly identify gaps in food safety and quality that led to the challenges when exporting certain products. It follows a value chain approach and the lessons learned from this project will be closely analysed for the implementation of the STDF funded project.

USAID

The United States Agency for International Development (USAID) is implementing a 5-year technical support project entitled "Eat Safe – Evidence and Action Towards Safe, nutritious Food" from July 2019 to July 2024. It aims to enable lasting improvement in the safety of nutritious foods in informal markets by focusing on consumers.

USDA – Scientific Exchange Program

The Scientific Exchange Program promotes trade, trade policy, trade capacity building, and food security. The program aims to educate a new generation of agricultural scientists, increase scientific

knowledge and collaborative research, and extend knowledge to users and intermediaries in the international agricultural marketplace.

The project will explore the opportunity whether it will be possible to include researchers from Nigeria to extend and leverage on the STDF project.

GIZ

GIZ is implementing the Nigeria Competitiveness Project (NICOP). The overall objective of the project is to strengthen the competitiveness of Nigeria and enhance the country's integration into the regional and international trading system. This is achieved through interventions on the micro and meso level that are geared towards improving the performance, growth and contribution to industry, regional trade and exports of selected value chains. In addition, the action focuses on activities supporting policy initiatives to improve the business climate for businesses at federal, state and local levels. The support for an enabling environment also includes activities improving the access to finance and inclusion in the financial system for entrepreneurs in the selected value chains. The targeted value chains are tomato/chili, ginger, leather, and garments. The project regions are Kano, Kaduna, Plateau, Ogun, Oyo, Lagos and Abia. The project has limited opportunities for cooperation with the proposed STDF project as the value chains are different and most target regions are different, too. However, there may be an opportunity to cooperate on the vertical control and regulatory systems, i.e. to exchange information on institutions and their strengths and weaknesses.

5. Public-public or public-private cooperation

In order to manage the identified SPS issues effectively and comply with international requirements such as an alignment to Codex Alimentarius standard requirements for MRLs in selected food products, an active interaction between public and private stakeholders is essential. A close partnership and collaboration between public and private actors is envisioned in the project and will be supported under Output 3. With the intent of the project to assess the regulatory and control system and provide recommendations on how to improve the system, it will be inevitable to engage with the control bodies (public sector) and users farmers, producers, processors (private sector) at the same time. The project will establish a regular coordination and dialogue committee to enable the increase in exports through complying with international standards and requirements of importing countries.

The project will contribute to promote public-public and public-private cooperation as a means to support project sustainability and ownership by the country, and in an effort to support the ongoing cooperation mechanisms established in Nigeria. The project will build public-public cooperation between government organizations involved in managing SPS issues, i.e., the NAQS, the NAFDAC, the SON, with other relevant regulatory bodies and ministries i.e., the Ministry of Agriculture and rural development and the Ministry of Health. As the project is focussing on trade promotion and meeting export requirements, the Ministry of Industry, Trade and investment as well as NEPC will be involved in public-public cooperation efforts.

The project will also build public-private cooperation between the above-mentioned line Ministries and government organizations involved in managing SPS issues, sector associations i.e. the National Sesame Seed Association of Nigeria (NSSAN), the Cowpea and Beans Farmers, Processors and Marketers Association of Nigeria, and private sector stakeholders along the sesame and cowpeas/dried beans sector value chains from farmers, to small and medium size companies managing storage facilities, processing factories and exporters.

The project responds to key demands and recommendations from Nigerian policy and strategic documents as well as sector development plans, which have emphasized the significance of public-private partnerships and improved coordination of public institutions. A dialogue committee is envisioned that will establish a forum for better coordination among the numerous public actors involved in Nigeria's food safety and control system (including the ones mentioned above) and more than 100 business representatives (including the sector association mentioned above).

6. Ownership and stakeholder commitment

The implementation of the project will strengthen the coordination and cooperation among public and private stakeholders that are vital in the promotion of the selected value chains and the identified SPS issues inhibiting trade and export of the products. In addition, the state bodies in charge of trade and exports are important to increase stakeholder commitment for the trade and export component of the project. The following institutions composed of state, non-state and private stakeholders will be included in the planning, management, steering and monitoring of the project and project activities:

- the **Nigerian Export Promotion Council (NEPC)**, is the Federal Government of Nigeria's apex institution for the promotion, development, and diversification of exports. It coordinates all export promotion and administration activities and trade capacity building.

- the **Standards Organization of Nigeria (SON)**, is the sole statutory body that is vested with the responsibility of standardising and regulating the quality of all products in Nigeria. SON's mandate includes the preparation of Standards related to products, measurements, materials, processes and services, amongst others; their promotion at national, regional and international levels.

- the **National Agency for Food and Drug Administration and Control (NAFDAC)** regulates and controls the manufacture, importation, exportation, distribution, advertisement, sale and use of Food, Drugs, Cosmetics, Medical Devices, Packaged Water, Chemicals and Detergents. NAFDAC approves the pesticides used in the country and carries out the laboratory analysis for pesticide residue levels in the produce whether for local consumption or export.

- the **Nigerian Agricultural Quarantine Service (NAQS)**, is a regulatory agency under the Federal Ministry of Agriculture and Rural Development. It was created for the harmonization of Plants, Veterinary and Aquatic resources (fisheries) Quarantine in Nigeria to promote and regulate sanitary (animal and fisheries health) and phytosanitary (plant health) measures in connection with the import and export of agricultural products with a view to minimizing the risk to agricultural economy, food safety and the environment

- the **Federal Produce Inspection Service (FPIS)**, is mandated to discharge the following: Inspection and Quality control of all agricultural Produce to ensure compliance with international prescribed grades and standards as precondition for export. Ensure only pest free quality produce are exported or imported in or out of Nigeria. All vessel bulking produce and bulked (Imported) produce is disinfected and fumigated.

- the **Federal Ministry of Agriculture and Rural Development (FMARD)**, 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 **Federal Ministry of Health (FMOH)**, is responsible for the formulation of national policies, guidelines and regulations on food safety including monitoring and evaluation. The Ministry is also responsible for water and chemical safety and chairs the National Codex Committee (NCC).

- the **Federal Ministry of Industry, Trade and investment (FMITI)**, is responsible 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 **National Sesame Seed Association of Nigeria (NSSAN)**, promotes the development of the sesame seed industry in Nigeria as a major foreign exchange earner, with the aim of generating large-scale jobs and income.

- the **Cowpea and Beans Farmers, Processors and Marketers Association of Nigeria**, supports the growth of the cowpea and beans sector in Nigeria.

All above mentioned institutions are active in pesticide management and will be consulted regularly during the implementation period of the project. The work of the project will be aligned with ongoing work and refer to the law on Food and Feed Safety and Quality (see above).

The following institutions submitted support letters for the project which are attached:

1. NEPC
2. NAFDAC
3. SON
4. NAQS
5. IITA

II. PROJECT GOAL, OBJECTIVE, OUTPUTS & ACTIVITIES (LOGICAL FRAMEWORK)

7. Project Goal / Impact

The project goal is to increase income generation through the supply of high quality and safe agricultural products for international and regional markets.

High value and regional market access shall be enhanced for Nigerian agri-food producers, processors, and exporters through improving the management of pesticide residues as well as pathogenic-micro-organisms and thus supplying high quality and safe agri-food products. Compliance to food safety standards, institutional support and capacity building will lead to responsible consumption, sustainable agriculture and production. The Compliance to Codex Alimentarius standards will also reduce trade costs and fewer border rejections.

8. Target Beneficiaries

The beneficiaries of the project will be value chain stakeholders of the public and private sector. All ministries and regulatory authorities, business support organizations such as sector associations, farmers, processors, and exporters are target beneficiaries. In particular, small holder farmers, producers and processors of the sesame seed and cowpea value chains are targeted.

The project will build a pool of 30 local trainers and food safety advisers who will be trained on concepts of Integrated Pest Management (IPM), Good Agricultural Practices (GAP), Good Hygienic Practices (GHP) and Food Safety Systems based on HACCP. The local trainers will subsequently train 300 farmers/producers/processors as final beneficiaries of the selected product sectors. The final beneficiaries will also be trained and sensitized on (mainly Codex) standard requirements, in particular about pesticide residues, avoidance of salmonella contamination and related SPS measures. It is expected that female participants will benefit most from the training and coaching as the people employed in the selected value chains are predominantly women.

The project will assess the food control and safety system with a focus on pesticide and microbial management. Thus, the public sector (ministries and regulatory authorities) will benefit as it is intended to propose a more efficient system than it currently exists.

Finally, the consumers of Nigerian agricultural products will benefit from the project as they will consume safer products with a reduced number of pesticides and salmonella contamination.

Through the project, activities will:

- apply a results-based monitoring approach and observe the changes among one group of beneficiaries (e.g. farmers and apply lessons learned to other groups, e.g. processors)
- strengthen and optimize the coordination of public authorities in the food safety and control system

- Improve understanding and management (procurement, storage, traceability, use and monitoring) of pesticides
- Increase the understanding of project beneficiaries in the area of pathogenic micro-organism management
- Reduce the risk of contamination of the produced food and thereby increase its safety and quality.
- Improve trust in the products, attractiveness and thereby the demand and price and accordingly the income of value chain stakeholders.
- increase access to safer food for consumers

(a) Gender-related issues

Women play a key role in the global value chains for many agri-food products and face particular challenges in the context of compliance with international trade and SPS related standards. The majority of businesses in the proposed value chains in Nigeria are owned by women. In the sesame seeds value chain, an approximate of 70% of employees are women. The agricultural export sectors are critical to economic development in view of the level of women and youth active in the value chains. The selected sectors provide a source of livelihood and income to communities, as the foreign exchange inflow from exports is used for wealth creation and economic development. The numerous border rejections of the agricultural products result in farmers and exporter losing substantial income and reduce their means of livelihood.

The specific constraints faced by women in the application of food safety practices, GAP, GHP and IPM will be assessed at the beginning of the project in the context of the baseline study. Priority will be given to development of their capacities to increase their compliance with Codex MRLs. In addition to technical capacities related to the project objectives, women's negotiating and managerial skills will be strengthened to enable them to apply their newly acquired knowledge, develop partnerships, and navigate the business support and public authorities in Nigeria. This is envisioned to greatly empower women farmers and producers in the ways they lead their local farms and agribusinesses, and engage with stakeholders, including other producers, regulatory authorities, associations, exporters, and consumers.

The capacity development of women (those trained directly through the project, and those trained by the trainers of the project) will be supported through the dissemination of information, use of information, education and communication materials facilitating access to resources relating to compliance, as well as documentation of good practices in mainstreaming gender in capacity development for compliance with Codex MRLs.

In addition, the project activities involving women will be delivered in a manner that facilitate the participation of women and minimizes their burden, as they traditionally need to attend to households and childcare activities. Several of the activities of field training, workshops and capacity building will bring in the value chain sector, such as farmers, workers in food business operations, exporters or importers, which will help to identify if there are any gender specific issues that will be considered at the inception, as well as review and dissemination of the information.

9. Project objective, outputs and activities (including logical framework and work plan)

Goal

Increase in income generation through the supply of high quality and safe agricultural products for international and regional markets

Outcome

Strengthened competitiveness and export capacity of Nigerian Small and Medium sized enterprises through better compliance with international food safety requirements and standards

Outputs

Output 1: Regulatory, quality control and traceability system, usage and application of pesticides and management of pathogenic micro-organisms assessed and improved for the two selected agricultural value chains

The implementation of the Output will start with a baseline assessment on current practices of pesticide application, quality control and traceability with a focus on the selected agri-food products. The baseline will also take into account the list of approved pesticides as well as banned pesticides in Nigeria. This is important as some pesticides are banned on targeted export markets but still being used in Nigeria. It will include a collection of MRLs for pesticides in importing countries, specifically for those that are being used in Nigeria and for the targeted crops (cowpeas and sesame seeds). A product focus will be applied for the selected agri-food value chains (sesame seed and cowpeas). The baseline will also analyse the current practices that contribute to salmonella contamination in sesame seed production and processing.

In the case of Sesame, the project will assess the current practices in the management of food borne pathogenic micro-organism, specifically for Salmonella. Recommendation will be derived how to improve the regulatory and control system to reduce the amount of Salmonella in sesame seeds.

Further, the Output will feature an activity on a situation analysis and related recommendations for the implementation of a robust field quality control and traceability system. Based on the findings of the baseline study, the public sector institutions of the SPS and export trade system will be trained and coached to address the challenges and gaps analysed. The objective will be to develop recommendations and concrete action points about how to improve coordination and interaction between the public institutions involved in Nigeria's food safety and control system.

A focus will be set on recently enacted import bans and border rejections of Nigerian dried beans and sesame exports. Apart from the EU ban on dried beans and the recent border rejections for exports from Nigeria to Japan, many foods and finished products of Nigerian origin are also rejected in other countries of the Americas, of Asia and in the UK, on account of poor adherence to standards. Based on international standard requirements for pesticide residues and MRLs, with a main focus on Codex Alimentarius requirements, as well as food borne pathogen contamination, government officials will be trained and coached to understand the requirements and how these are related to the border rejections. An action plan how to manage the current ban and contributing to the lifting of the ban will be drafted. This plan will entail the role of the public sector institutions and SPS systems in supporting the value chains and its exports by complying to SPS requirements such as MRLs.

A close cooperation with the Minor Use Foundation (MUF) is envisioned under Output 1. The MUF will be consulted with regard to a market survey of sesame and cowpea (taking statistically relevant samples), the local lab analysis and in advising the relevant stakeholders on finding an appropriate risk mitigation approach. A possible field testing and registration activity is foreseen under the implementation of the action plan. In addition, other Nigerian and international partners will be consulted if a possible cooperation could lead to an improved result. For example, some of the globally active certification bodies that have offices in Nigeria will probably be consulted to support under Output 1, such as SGS or Bureau Veritas.

Activity 1.1 Collect baseline data on the current regulatory, quality control, traceability, and monitoring system for pesticides and pathogenic micro-organisms and coordination of public sector entities for the selected value chains

The project will commence with baseline study along the value chains of cowpeas and sesame seeds. The analysis will take into account available data collected by Nigerian public sector institutions as well as data generated by other development agencies (FAO, UNIDO) and enriched through desk studies, interviews and field visits. It will allow obtaining accurate and specific data on the imports, distribution, storage, sale, and usage of agri-chemicals, a situational analysis that leads to the Salmonella contamination in Sesame as well as the identification of specific problems. Extensive information on dosage, frequency of application, as well as the origin of agri-chemicals will be collected.

The study will also collect information on the supply side to develop fact sheets on the exporters of sesame seeds and cowpeas indicating volumes, quality characteristics, available certifications. This will be used as inputs to tailor technical support activities under Output 2.

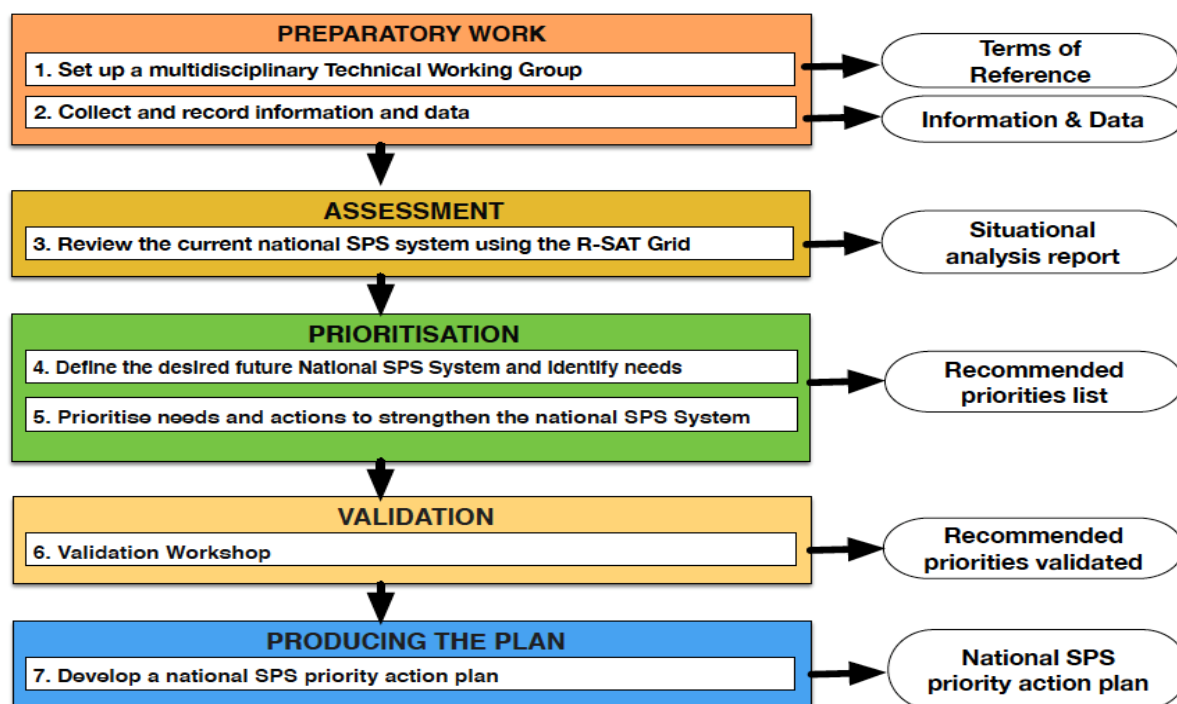
If deemed necessary, laboratory tests will be done on pesticide residues for dried beans and sesame seeds (salmonella contamination) to determine the level of residues in the products. The data will assist in defining the problematic focus areas. Data collection will also include meetings with the

competent authorities, expected to be involved in the regulatory control system to better understand the current situation and their particular needs. It will deliver data on international standards used, and other control systems and monitoring processes in place. The data will be entered and analysed by enumerators from universities to enhance the efficiency and use local capacity of the country.

More extensive research and a number of meetings will be held with state representatives involved in monitoring and laboratory testing and providing advisory services. The project will build on already existing mechanisms and strategies in place and assist in its application via its activities.

In addition, it is planned to use an abridged version of the COLEACP Rapid SPS Assessment tool (R-SAT) to collect and complement the baseline data. The COLEACP Rapid SPS Assessment Tool (R-SAT) provides a practical, step-by-step guide to undertake assessment of national sanitary and phytosanitary (SPS) systems in order to strengthen them in line with international standards and regulations. The COLEACP R-SAT has been developed as an integrated change management model to facilitate dialogue and engagement between and among key stakeholders, both public and private. The tool takes into account the need to go beyond scientific, technical and financial considerations, and to include the range of human and organisational factors that often cause delays, bottlenecks or even failures of an SPS system when they are not adequately addressed.

The 4 components of the current national SPS system to be reviewed are 1. governance systems, 2. operational processes, 3. management of skills and competencies and 4. communication and relationship dynamics. The situational analysis of the cowpea/dry beans and the sesame value chains using the COLEACP R-SAT grid would highlight the food safety (MRLs) issues and throw up the areas to be strengthened during the execution of the project to achieve the expected outcome.



The results of the baseline will be presented via a validation workshop to all relevant project stakeholders. This workshop will be an opportunity to fine tune the activities of the project and define roles and responsibilities of key stakeholders in “working together” towards the establishment of the overall system, such as FAO, UNIDO, USAID, which would be involved in complementary activities.

The study will be used during the inception phase of the project. The baseline data collection will provide information on resource and needs of the relevant institutions. Quantification of indicators of success will be defined in the inception phase as the detailed activities are planned and agreed with the beneficiaries.

The baseline will also include a collection of MRLs for pesticides in importing countries, specifically for those that are being used in Nigeria and for the targeted crops (cow peas and sesame seeds). In addition, MRLs from Codex standards with pesticide residues (CXLs) will also be included in the baseline.

A close collaboration with NAFDAC, SON and NAQS will be pursued in the collection of data, to include already existing information and data, advise on the design and approach of the study and increase ownership of the project from the beginning of the project.

Activity 1.2 Provide institutional support to address findings of the baseline study (activity 1.1)

Following the validation of the baseline study, it is expected that the baseline study will reveal the most pertinent areas for which intervention and technical support is required. A series of technical workshops and coaching sessions will address these challenges which are expected on institutional, procedural or managerial level. This activity will be further defined after the inception phase. It is envisioned that the project targets selected activities as outcome of the R-SAT action plan.

In addition to the baseline research, the overall benefits of complying with MRLs for farmers and other value chain stakeholders will be assessed. In order to promote changes in the practices that led to the issues, the project will assess to what extent exports still take place despite violations of regulatory requirements. The results will be taken up in the planning of the action plan and implementation of the plan (act. 1.5 and 1.6).

Activity 1.3 Provide support to improve the coordination system among ministries, SPS institutions and export promotion bodies

The current food safety control system is fragmented with more than 17 government institutions having a mandate in SPS and not coordinated well, leading to inefficiencies and weak monitoring and enforcement. Moreover, the federal governance has led to inconsistencies regarding responsibilities and authorities on different political levels (federal, states, local). Tailor-made training materials on the coordination of the regulatory and control system will be developed and at least 10 government officials at national level and approximately 50 in the regions that have a significant role in the system will be trained. To encourage the participation of government representatives coming from provinces, the project will cover the participation costs (only travel and accommodation).

Activity 1.4 Train government, NEPC staff and SPS officials on international standard requirements for cowpeas and sesame seeds including requirements related to pesticides and food borne pathogens and cooperate closely with border control for SPS certification at the point of exports.

Government officials of the Nigerian SPS system and scientist will be trained on how to generate and interpret pesticide and pathogenic micro-organisms residue data. This includes training technicians in Nigeria's national agricultural laboratory on pesticide method development and multi-residue analysis, and data review and reporting. The MUF global network of former regulators will be accessed to support in this training. This capacity development activity will improve the understanding and provide a better picture of the level of compliance to Maximum Residue Levels in Nigeria and how to react to a lack of compliance. The MRLs of Nigeria will be compared to international requirements to benchmark with international good practices. As MRLs are compliance requirements which are mandatory and should be supported by law or subordinate legislation, the activity will also improve the national control and residue monitoring system as Nigerian officials will be in a better position to decide based on the level of actual MRLs compliance compared to international standards. Technical support will also be provided to systematically ensure control of SPS certifications at the points of exports to avoid shipping of non-compliant consignments and border rejections at the destination. Under this activity, the training will bridge and connect the responsibilities from field extension, analytical technicians, registration officials, risk managers, and risk communicators in order to more effectively identify and address pesticide management.

Activity 1.5 Develop an action plan how to approach recent border rejections and import bans of Nigerian dried beans and sesame seeds

The development (act. 1.5) and implementation (act. 1.6) of an action plan will be the core activity under Output 1, if not the entire project. They will be decisive to fixing the problem.

Accelerating in 2015, several major export markets have rejected consignments of dried beans exports from Nigeria due to presence of high levels of pesticides exceeding permitted MRLs. Since 2019, Nigeria has also experienced import rejections from Japan due to non-compliance with MRL limits. As detailed in a letter from the Nigerian Embassy in Japan, the Japanese have requested that immediate measures be taken to ameliorate this situation.

An action plan will be developed including concrete steps on how to approach the rejections and what steps to follow to comply with requirements that will contribute to avoid rejections in future.

This will include forming an expert response team comprised of extension, laboratory, registration, and agricultural association personnel. The response team will review the information gathered and training provided under Activities 1.1-1.4 to refine the action plan. It is anticipated that the plan will include actions such as 1) conducting targeted sampling/testing from sesame and cowpea production areas to identify the origin (or most problematic growing area) where violations are actually occurring; 2) work with agricultural researchers/extension to identify the pests these problematic pesticides are targeting; 3) consult with international experts and local registration officials to identify a risk mitigation approach that can control the identified pests; 4) if needed, assist agricultural researchers to conduct efficacy and residue field trials to ensure the effectiveness and safety of the risk mitigation approach; and 5) collaborate with pesticide manufacturers, commodity associations, grower groups in the most problematic growing regions on the best use practices.

The action plan is likely to identify different risk mitigation approaches of which the best suited approach for the region and /or value chain will be selected to implement. In order to produce the action plan, the expertise of the Minor Use foundation (MUF) and their global network of experts will be consulted.

The action plan is likely to include an MRL review of the pesticides to the relevant export countries and to develop a strategy to ensure that a compliance pathway can be proposed.

Activity 1.6 Implement the action plan to address border rejections of dried beans and sesame seeds

After the development of the action plan, the plan will be implemented.

Once the expert response team has refined the action plan under Activity 1.5, a workshop will be held with all stakeholders of the plan to describe the actions, define and assign responsibilities, develop a timeline of the workplan, and form teams to carry out the work, loosely following the action steps provided under Activity 1.5, including (for example):

1. Establish a sampling plan for sesame and cowpea (specific growing areas and number of samples required to be determined under Activity 1.5). Provide training to a sampling team (where to collect samples, how big of samples, handling practices of samples, transportation, and chain of custody of sample transfers, etc.) Provide training to laboratory technicians on multiresidue analysis, method development, and reporting of results.
2. Receive consultation from agricultural extension and researchers (entomologists) to determine which pests the problematic pesticides are targeting. This can include some training for extension workers on how to better identify these pests in the field and how to communicate findings to farmers. This activity could also include developing field manuals or virtual tools to share with farmers on identification of these pests and management of the pests (using the new products identified under this project).
3. Hold consultation workshop with international experts (registration and entomology experts), pesticide product manufacturers, and registration officials to identify possible risks, discuss risk mitigation approaches or and/or potentially suggest low-risk conventional pesticide and biopesticide alternatives. Develop a regulatory plan with the stakeholders to determine the requirements to implement the risk management plan.
4. If research is required, train and guide agricultural scientists on how to conduct efficacy and/or residue studies to determine the appropriate approach for risk mitigation/management.
5. Finally, the information gathered and developed above will be used to create an IPM program for the farmers in the high-risk regions growing sesame and cowpea. This will involve consultations with an international IPM expert to work with Nigerian extension services to develop a spray program for sesame and cowpea, following a risk management program identified under this project. Training workshops will be conducted in the growing areas to educate the farmers and commodity associations on the IPM spray program.

The project will liaise with the MUF in testing, analysis, registration and promotion of risk management measures as part of implementing the plan.

Output 2: Strengthened capacity of project beneficiaries regarding management of pathogenic micro-organisms, pesticide residue management and compliance with international and regional quality and food safety requirements

To comply with standard requirements and apply pesticides according to international best practice (Codex and other international standards), it will be important that value chain stakeholders understand their role and contribution to the system. Capacity building programmes for farmers/producers, processors and exporters will be provided during project implementation to enhance the SPS capacity, in particular on the safe use of agri-chemicals with regard to compliance to food safety standards.

With regard to Salmonella contamination in Sesame, awareness and training activities on GAP, GHP, GMP and other food safety practices are important to avoid the contamination during production, harvesting, processing and/or storage of the sesame. SMEs active in the Sesame value chain will be particularly encouraged to attend such training as it is expected to have an important impact on the reduction of microbiological contamination.

The capacity building programmes will be designed specifically to address the needs and cover the knowledge gaps for each group of private sector beneficiaries. To achieve this, a number of customized training materials will be developed with the help of local representatives and international experts on the most relevant topics. The materials will be widely disseminated, not only between producers, processors, and exporters, but also to institutions related to the relevant sectors e.g. sector associations.

The local capacity of a pool of trainers/advisers will be strengthened on topics including but not limited to Good Agricultural Practices (GAP), Integrated Pest management (IPM), Harvesting and post-harvesting methods, Good Hygiene Practices (GHP), Good Manufacturing Practices (GMP) and Processing technology. In particular the harvest and post-harvest storage facilities seem to be a major issue with regard to pesticide (and also microbiological contamination). Thus, a special focus will lie on this part of the value chain.

A close cooperation is planned to take place with the Common Facility Centres (CFC) which are a public-private partnership arrangement where the government set up processing centres for value-addition of specific products. It will be pursued to train value chain representatives of the private sector, e.g., on understanding pesticide residue data, food-borne pathogen management, implementation, documentation and monitoring for practices of quality control for production, processing, storage, transport and export. Further training and coaching will be offered to establish an appropriate Integrated Pest Management System (IPM), Food Safety Systems like HACCP and traceability for companies and processors and if required the provision of minor equipment required to comply with the standards. The CFCs will also be included in all activities that target critical junctures where food safety may be compromised. In particular it will be assessed whether the CFCs could contribute towards improving the current weak transportation and storage infrastructure.

The training activities will support compliance with Codex Maximum Residue Levels (MRLs) and the collaboration with the Common Facility Centres will ensure that the training and coaching activities can be replicated and provided sustainably in the country. These training activities will be closely coordinated with the training and research activities enumerated in Activity 1.6. The work on the pathogenic micro-organisms shall contribute to a significant reduction of Salmonella cases in Sesame seeds.

Nigeria's digital agriculture strategy identifies new technologies like big data, analytics and blockchain technology as huge opportunity to revolutionize the agricultural sector in the country including compliance to local and international standards. Digitalization and new technologies have the potential to support the agricultural sector, improve monitoring of pesticide and pathogenic micro-organism management and increase traceability and transparency thereby creating trust in the products. Certain new technologies e.g. Blockchain can be used by all the participants along the supply chain (exporters, importers, transporters and custom authorities) to obtain information, track products and keep records of supply chain transactions and exchanges.

Such technology is increasingly important and growing in the food industry as an efficient means for tracking and tracing. In a growing number of states, the technology is being used to track food supply chains and manage food safety measures. The benefits of using new technologies for increased visibility are particularly interesting in contexts of lack of trust and where compliance with standards and technical requirements is difficult to ensure otherwise. Moreover, the new digital technologies have the potential to stop consignments of agricultural exports that may not comply with technical requirements before they reach export markets as e.g. blockchain application allows many stakeholders including overseas buyers to evaluate whether a potential product complies with requirements. If it is evident that a product does not comply with requirements the shipping or even processing can potentially be interrupted before high costs occur. Thus, new and smart technologies have a lot of potential in value chain management, especially with regard to transparency, traceability and building of trust.

Given that the steps in the production of the produce can be tracked throughout the supply chain and transactions stored digitally, retailers could verify if the products received are genuine or not. Moreover, the verified history of each product would help consumers identify products authenticity.

At the same time, many of the new digital tools are still in its early phases when it comes to application in agricultural value chains. The promising tools are still rarely available, and the level of adoption is relatively low which might make their use inefficient. It is also debatable to which level the new technologies are needed, are cost efficient or whether same benefits could be achieved with less advanced and more widespread technologies. The project will assess the possible benefit of digital technologies with regard to pesticide and food-borne pathogen management as well as with compliance to standard requirements.

Activity 2.1 Develop a group of local trainers and food safety experts to provide training and advice to producers, processors, and exporters in the use of agri-chemicals, standard requirements and process improvement

The project will develop a pool of 30 local experts who will be trained on food safety related concepts such as GAP, GHP, GMP, IPM, harvest and post-harvest techniques and management systems. The harvest and post-harvest storage facilities seem to be a major issue with regard to pesticide (and also microbiological contamination) and thus, a special focus will lie on this part of the value chain. Moreover, the group will also be trained in operational improvement and problem solving with the aim of equipping the local group of trainers with a range of tools required to advise final beneficiaries (farmers, processors) to increase safety and quality of their products and management systems). The advisors and local experts will be selected from those public and private entities, who are proactively operating in the two selected value chains and should have foundational knowledge of food safety, quality management or process improvement techniques. After the theoretical training sessions, the advisers shall be working closely with project beneficiaries (companies, associations) to implement their own food safety or improvement project. The group of local experts will also be supported to organise themselves once the project support has ended to continue their work and provide services to beneficiaries for financial compensation. Thus, the advisers will be in a position to sustainably support the sector after the project ended. These training activities will be closely coordinated with the training and research activities enumerated in Activity 1.6.

Activity 2.2 Coach farmers/producers and processors on the use, control and monitoring of agri-chemicals and management of food borne pathogens

At least 300 farmers/producers including processors will be strengthened via customized training sessions combining the theoretical and practical knowledge on the use of agri-chemicals in cowpeas and management of food-borne pathogens in sesame seed value chains according to international standards.

The tentative number of sessions are 12 (with 25 participants) and each session to last 5 days, depending on the confirmation of the needs and availability of the participants. The training will be followed up by visits to the field and premises to monitor the implementation of the knowledge. The detailed programme and materials will be confirmed and validated during consultation meetings with the public and private stakeholders. Possible linkages to anchor the trainings and ensure broader information dissemination will be done with appropriate institutions and in close cooperation with the common facility centres.

The training sessions will be organised and planned with the help of the common facility centres to build capacity of the centres in the long term and develop a database of potential clients and beneficiaries for the centres. Common Facility Centres (CFC) are specific product-based places which are set and equipped with basic processing equipment to enable MSMEs share processing equipment and other facilities that will ensure compliance with international standards. Within this proposed STDF project, the CFCs are expected to serve as model processing centre where the outcomes of the project can be measured. Further, in cooperation with the MUF, the project will support growers on how to apply alternatives with the aim of having safer and registered alternative pest control products with a huge impact on reducing or eliminating rejections.

Activity 2.3 Support for producers and processors in the development and replication of pesticide residue and food-borne pathogen self-control systems

The producers and processors will receive technical support by experts and government officials on pesticide residue and food-borne pathogen self-control systems. This will enable them to conduct rapid monitoring on the site, before the produce goes to the exporter or the buyer for the local market. To serve this, at least 30 advisory visits to producers/processors will be held. Lead producers/processors will be identified and by the end of the project at least 10 of them will implement the self-monitoring system. A digital support tool for the self-control system will be explored to improve the monitoring, tracking and traceability. The digital support bears the possibility of highlighting flaws in the self-control system, alerting the farmers and producers at an early stage of the value chain and potentially saving a lot of costs that could otherwise occur when the consignment is rejected at a later point of the export.

With regard to Salmonella contamination in sesame, awareness and training activities on GAP, GHP, GMP and other food safety practices will be conducted to reduce the amount of microbiological contamination in the value chain.

Activity 2.4 Assessment of digital support tools for transparency, trust, and increased efficiency

The project will assess opportunities for increasing the digital support for the cowpeas and sesame seed value chains, aiming at creation of transparency and trust in the value chain by using modern technologies. Modern technologies can increase traceability of the value chain, track the pesticide and pathogenic microbial management, and even stop potential consignments from being exported if they don't comply with export requirements before they are shipped. This will result in cost savings as there will be less rejections and returned shipments. This activity will be exploratory but also innovative as it is intended to study the benefits and potential application of blockchain and other digital tools as a means to improve the traceability and trust in the products.

The activity will start with an assessment of similar projects globally to understand the benefits of modern technologies for competitiveness of the value chains, residue management and compliance to export requirements.

Following the assessment, the results will be discussed and validated in workshops attended by Nigerian public and private sector stakeholders of the value chains. The participation of Nigerian stakeholders in the digitalization of the agricultural sector will be encouraged.

Based on the results of the workshop concrete options for using new technologies in the value chain with a focus on meeting standard requirements and MRLs will be developed.

In other comparable projects, new and smart technologies have optimized farming procedures including the use of agri-chemicals mainly through capturing accurate and reliable data throughout the value chain processes.

Strengthening the traceability of agricultural produce for better and adequate use of pesticides with the use of smart and new technologies such as blockchain, telecom infrastructure, Radio Frequency Identification and Internet of Things technology will benefit the selected value chain stakeholders through improved pesticide residue management.

Output 3: Strengthened awareness, public-private dialogue and information sharing

The Output will be composed of awareness and sensitization events with a focus on export requirements of destination markets for the selected value chains and compliance with standard requirements. Moreover, it will include information dissemination including the production of information, education, and communication material (such as posters, brochures, radio jingles, TV spots and similar). The material will be produced based on a strategy and implementation plan and it will be translated into the three main Nigerian languages and pidgin English.

Information, Education, Communication (IEC) and awareness training are important aspects that will 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.

The Output will also include a study tour to a production site that is more developed for export of the focus products and learning from countries that export similar products and faced similar issues (e.g. India).

To set and meet pesticide related MRLs and standard requirements related to food contamination with pathogenic micro-organisms on international level, an active interaction between the private sector actors, the users and the control bodies is essential. Via this project, that partnership will take place in the form of setting up a committee that will feature regular and structured consultations and meetings.

The objective is to strengthen the public-private dialogue and partnerships in the Nigeria dried beans and sesame seed sector. It will help to develop and institutionalise a process to control quality and safety including traceability in the value chain with participation of key stakeholders and directly affecting the major beneficiaries. It also assisted in developing a strong ownership within the farmers' community and other value chain actors and a culture of excellence in providing high value and safe products to the international markets.

Activity 3.1 Train processors, exporters, NEPC staff and trade support institutions on export market requirements

At least 50 processors, exporters, NEPC staff and officers of trade support institutions will be trained on the international market requirements to better understand and implement the food safety standards. Via the trainings, it is expected that they will enhance their knowledge on SPS requirements of different potential markets and understanding of the WTO SPS Agreement – a business perspective. The ITC/PTB book on Export Quality Management: A guide for small and medium size enterprises available in print and digital version will be used as a basis for the customization of the workshops in Nigeria. The trainings will be provided by ITC Advisers and will take place as 2-day training for two groups consisting of 25 participants. It is planned to conduct one training in the Abuja and another in one of the provincial capitals closer to the production areas.

Activity 3.2 Study tour to selected countries to familiarize with market requirements and to understand best practices

Two study tours, one for cowpeas and one for Sesame seeds will be organised for 12 participants to enhance their knowledge on markets, buyers' and SPS requirements, best international practices and their actual implementation along the value chain, know-how and technology availability. The destination country(ies) will be confirmed by the project stakeholders jointly with ITC based on relevant trade opportunities and development of the value chains. Farmers, exporters, NEPC staff and regulatory inspectors will have the opportunity to experience this learning opportunity jointly and establish linkages among themselves, that has been proven very successfully in other similar projects such as in STDF project in Sri Lanka for fruits and vegetables (farmers and exporters rarely interact and being out of their national context helps) and Tajikistan for honey. As it is expected that there will be a high number of beneficiaries interested in the study tours, a selection process will take place to define the 12 best and most committed candidates for each of the two study tours. The selected participants will contribute to the costs of their participation (travel cost). The findings and lessons learnt from the study tours will be disseminated through the sector associations and the media and through a series of information sharing events when participants return from their study tour.

Activity 3.3 Public information strategy and campaign

To sensitize and raise awareness of the beneficiaries on pesticide management and export requirements, the project will conduct an awareness campaign. The campaign will include a strategy on the objectives, target group, components, and implementation plan. The practical implementation will include the development of various materials focussing on information dissemination, such as press releases, TV and radio programmes, where the right use of agri-chemicals will be explained and pesticide related border rejections discussed. The awareness campaign will be based on a need assessment. At least five sensitization materials, such as posters, brochures on good practices will be developed and distributed.

Activity 3.4 Organization of networking workshops

At the beginning of the project, a workshop will be held with the project partners, implementing agency, and key stakeholders to plan and operationalize the project activities, review roles and responsibilities of stakeholders, build synergies and complementarities with other initiatives and projects in the SPS and quality infrastructure areas. The official food control dimension will be discussed to fine-tune the modality of engagement of the national authorities in the project activities and to link it to the other ongoing programs. The needs and expectations of the public sector representatives will be compared and evaluated with the demands of the private sector stakeholders.

The stakeholders will identify, give recommendations and agree on how to make available all the relevant trade information and market requirements, including sensitization and capacity building materials elaborated during the project.

In the course of the project at least three other networking workshops will be held to engage public and private stakeholders in the process of compliance with safe use of pesticides, meeting export standards and on other related SPS specific issues that may arise. These are opportunities to build a foundation for private public partnership to address SPS issues.

A workshop with the relevant stakeholders will be organized at the end of the project to disseminate results, share lessons learnt and compile recommendations for sustainability. The workshop will have media coverage to reach broader audience.

Activity 3.5 Establish a committee on public-private dialogue

With the objective to find a way to develop and institutionalise a process or system of support, coordination and quality control in the sesame seed and cowpeas value chains the project will set up committees consisting of private and public stakeholders to support the value chains.

One committee per selected product (cowpeas and sesame seeds) will be established. The committees will provide a space for the public and private sector actors to discuss specific issues of concern with regard to meeting export standard requirements related to MRLs and pesticide residues such as defining the requirements to establish regulatory and monitoring mechanism (e.g. record keeping, traceability and most appropriate standards), at the stage of implementation when the control bodies will need to engage with the users (i.e. farmers, processors) in an advisory capacity in the initial transition phase.

In the framework of the project the relevant documentation and organization of the meetings and dialogue will be carried out. It is intended that the dialogue will be sustainable and continue beyond the end of the project.

Special attention will be provided to women and youth in the value chains to understand challenges and concerns and to find ways how to address them.

Activity 3.6 Development of case studies on public-private dialogue

The project will identify good practices on public-private dialogue from other countries and prepare case-studies that will be presented and showcased during a workshop that will be attended by members of the proposed Nigerian public-private dialogue committees. The purpose will be to learn from international good practices and to identify options how to adapt to the Nigerian context.

10. Environmental-related issues

The project aims to overcome a number of environment-related issues. By strengthening the proper usage of pesticides, better control and monitoring, it is expected that the amounts applied to agricultural produce will be reduced. Through sensitization and production of information, education and communication material, the measures will likely reach a large audience in the country. In addition, the beneficiaries will be trained on integrated pest management systems. As a result, the project should contribute positively to the protection of the environment and supports a reduction of pesticide contaminated soil and water.

11. Risks

The following risks can be identified and action can be applied to reduce and/or mitigate them.

| Risk identified | Impact | Probability | Risk reduction/mitigation |
|---|--------|-------------|--|
| Even with mitigation, the residues or salmonella contamination do not fall below MRLs to meet export requirements | High | Low | All project activities are designed to support the public and private stakeholders to comply with standard MRLs. Regular reviews within the duration of the project will reveal effectiveness of measures |
| Reluctance of the public authorities (SPS and food control system) to analyse current problems, gaps, and challenges as this may reveal a need for restructuring and weaknesses of certain institutions and might be perceived as a loss of power and influence | High | Medium | Mitigation, e.g. by highlighting strengths and opportunities at the same time for each participating institution to reduce the risk of institutions wanting to block the activity. In-depth preparation and discussion with representatives of institutions to understand potential issues at an early stage and react accordingly. |
| Inadequate access to mass media and other information distribution mechanisms for successful public information campaigns | Medium | Medium | The project will work on the policy level to advocate the need for such public information campaigns and will advocate for budget accordingly. Alternative forms of sensitization (e.g., through road shows could be envisioned. |
| Reluctance of farmers, producers and exporters to engage in new technology and embrace the possibility of digital support for enhancing the value chains | Low | Medium | The project will explore the possibility of using new technologies and how this will be perceived. It will thus be interesting to see whether the ideas are feasible and embraced by the project stakeholders. |
| Beneficiaries along the value chain lack sustainable support to reap the benefits from project capacity building | High | Medium | Government and Sector associations will be key partners for project implementation. They will be involved in all project activities and in increasing awareness of local stakeholders on benefits from information and tools created under the project, and in outreaching stakeholders during and beyond the project duration. |
| Limited willingness and absorption capacity of project beneficiaries to actively participate in the project activities and consistently apply the knowledge acquired | High | Low | Project beneficiaries will be carefully identified at the project onset based on established selection criteria and inputs from the baseline data collection. Government officials, support sector associations, exporters, chemicals companies, farmers, processors, SMEs willing to benefit from the project and which can operate |

| | | | |
|------------------------|------|-----|---|
| | | | as catalysts leading to higher levels of commitment to the project; utilise local resources previously involved in international projects to provide continuous advisory/coaching support to project beneficiaries. |
| Covid/pandemic related | High | Low | Adoption of all stipulated health protocols and guidelines as designated by the health authorities. |

12. Sustainability

The project will very closely coordinate all activities with project partners in Nigeria and orient all activities around already existing strategic plans, country initiatives and policies related to the two selected commodities, the agricultural sector (e.g., the Agriculture Promotion Policy) and country initiatives for strengthening and diversifying the Nigerian economy (zero oil plan, zero reject, Economic Recovery and Growth Plan). The inclusion of the project activities in already existing development plans means that it is oriented along national demand and priorities. This will ensure that project partners and beneficiaries support the implementation, and it increases the likeliness of sustainability beyond the duration of the project.

The 5-year action plan for agro export which was presented by the Nigerian "Zero Reject" Committee in December 2022 will be considered to synergize and avoid overlap in the project activities that are required for integrated agricultural export control and business. There are interesting activities in the 5-year plan that are worth examining from the project perspective such as a web-based platform that includes digital solutions for traceability and documentation.

The "agro zero reject" initiative is composed of an inter-ministerial technical working group. The project counterpart, NEPC in Nigeria is closely following the work of the working group and will ensure complementarity of project activities. It will also be explored how the results of the project can be sustained in the long term through incorporating them into follow-up activities of the zero-reject initiative.

During the project implementation, a number of meetings with the project partners will be held. The discussions at these meetings will include the further sustainability of the project goals and its ownership beyond the STDF project. As the project idea and basic concept was submitted by the partner organisations and stakeholders in Nigeria and the idea is reflected in the project proposal, it is likely that project activities will be continued if the benefits become visible and project results have been achieved.

It is expected that with the compliance to export market MRLs and reduced contamination of Sesame with Salmonella, Nigerian exports for dried beans and sesame seeds will become more competitive and thus leading to economic empowerment of all value chain stakeholders.

The project will contribute to the Sustainable Development Goals by contributing to:

GOAL 2: "End hunger, achieve food security and improved nutrition and promote sustainable agriculture", by contributing to increase the agricultural productivity and incomes of small-scale food producers, in particular women, family farmers, including through securing other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

GOAL 3: "Ensure healthy lives and promote well-being for all at all ages", by contributing to reducing the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

GOAL 12: "Ensure sustainable consumption and production patterns", by contributing to achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

III. BUDGET

13. Estimated budget

See Appendix 3 for the detailed budget.

The overall estimated budget is 1,207,864 US\$ of which 17.4% are contributions provided by the applicant NEPC. The NEPC contribution is subdivided into 50% (105,000 US\$) direct project financing and 50% (105,000 US\$) in-kind contribution. The requested amount for STDF funding is 997,864 US\$. Nigeria contributes 21% of the STDF total contribution (20% minimum requirement).

14. Cost-effectiveness

Nigeria is the most populous country in Africa with the largest agricultural sector in Africa. It is the biggest producer of cowpeas/dried beans and second biggest producer of sesame seeds in Africa. This means that all project activities are implemented for the benefit of a large market reaching high numbers of project stakeholders and beneficiaries. The multiplication effects are potentially even higher.

The project will employ techniques and mechanisms to ensure the costs effectiveness of the intervention. It will focus on a specific field of activity (pesticide management for cowpeas and sesame seed value chains and salmonella contamination for sesame seeds) and address the issue from policy level to implementation and all along the food chain. In this way the impact of the resources is maximised.

The implementation of the project will be based on lessons learned from similar projects conducted by ITC in other countries and from other agencies that conducted similar projects in Nigeria.

Maximum use of National Consultants will be made in order to optimise the use of local knowledge and minimise the transportation and fees. A Training of trainers' approach to train local advisers and food safety coaches will be used to leverage the training and capacity building to a larger number of stakeholders and to ensure sustainability of the project. This approach will reduce travel costs, too.

The project will ensure maximized involvement of the government and other private stakeholders' representatives in the decision-making process.

Even though the project will have a specific sector focus, the information materials and knowledge transfer will be designed in a manner that will allow them to be distributed over other sectors. This will further contribute to the effectiveness of the project and promote SPS compliance in the country.

Regarding the study tours, participants will be asked to share part of the travel cost to ensure full engagement in the learning opportunity.

Considering the fact that the project is tackling the persistent issue of border rejections of Nigerian dried bean consignments and the suspension of exports to important export markets, it has a huge potential to contribute to a massive revenue increase for the value chain stakeholders should the number of border rejections be reduced.

IV. PROJECT IMPLEMENTATION & MANAGEMENT

15. Implementing organization

The Nigerian Export Promotion Council is the Federal Government of Nigeria's apex institution for the promotion, development and diversification of exports. NEPC has over the years worked to achieve its mandate by:

- coordinating and harmonising export development and promotion activities in the country
- taking the lead in all national export programs
- interfacing with international trade agencies on cooperation and capacity building

NEPC has ample experience in implementing similar projects. NEPC was the Lead Implementing Agency for the successful WTO/STDF Project 172 2010-2014. The Council with the support of the ITC as the Supervisory Agency, coordinated activities of over 30 stakeholders both in the public and private sector to ensure completion of the project.

Moreover, NEPC has a unique position in connecting the project activities with additional export promotion activities that are not the focus of this project but are important nonetheless to ensure sustainability of the project impact.

ITC is the joint technical cooperation agency of the World Trade Organization (WTO) and the United Nations (UN), for business aspects of trade development. ITC has more than 55 years' experience in providing trade-related technical assistance to developing countries, especially least-developed countries. It is the only development agency fully dedicated to the development of SMEs. ITC is fully engaged into supporting the private sector and build private public partnerships to implement practical and viable solutions in response to growing global safety and food-security challenges.

ITC has the required expertise and experience of supervising and implementing STDF projects: "Improved capacity for ensuring the quality and safety of Yemeni seafood products", "Expanding Nigeria's export of sesame seeds and Sheanuts/butter through improved SPS capacity building for private and public sector", "Improving safety and quality of the Sri Lankan fruits and vegetables", "Improving food safety and compliance with SPS measures to increase export revenues in the oilseeds value chains in Myanmar" and, "Tajikistan: Enabling market access for agricultural products through improved food safety system".

ITC has implemented several technical assistance and capacity building projects aiming at addressing SPS-related issues with the objective to achieve market access and enable market linkages, many of them with a focus on pesticides and agri-chemicals. ITC has extended technical expertise in supporting the private sector and smallholders in understanding and complying with SPS measures along the agriculture value chains and EU export requirements. ITC assists in strengthening the SPS-related official controls, inspection and certification agencies and introduce food safety management systems to companies.

ITC has led technical projects to strengthen the country's national sanitary and phytosanitary (SPS) framework in Zimbabwe, Burundi, Tajikistan and Laos. ITC has trained quality and food safety trainers in Myanmar, Kenya, Gambia, Tanzania, Rwanda, Uganda, Ethiopia, Burundi, Nepal and Laos.

ITC has a long-lasting cooperation with NEPC through a past STDF funded project in Nigeria (2010-2014) on the oilseed and shea butter sector as well as several initiatives under the ITC SheTrades Commonwealth project including technical support in the area of food safety and export quality management for women entrepreneurs.

16. Project management

The project will build on already existing structures and initiatives for cooperation in the food safety and SPS sectors. The National Food Safety System (NFSS) is steered by the National Food Safety Management Committee (NFSMC). It is responsible for the coordination of the development and implementation of food control management and organization in different sectors and operates at the interface between the various tiers of government and multiple stakeholders in the food supply chain, with defined goals and objectives. Accordingly, it is proposed that the highest decision-making

body of the project, namely the Project Steering Committee, will be represented by some relevant members of the NFSMC together with other public and private stakeholders in Nigeria, closely working in the agriculture sector and in particular on products such as dried beans and sesame seeds. The preliminary composition of the PSC is reported below and will be subject to final validation during the inception phase of the project.

Proposed composition of the PSC

Proposed Members of the PSC will include:

- NEPC
- FMARD
- FMH
- FMITI
- NAFDAC
- SON
- NAQS
- NSSAN
- the Cowpea and Beans Farmers, Processors and Marketers Association of Nigeria

The participating federal ministries (health; agriculture and rural development; industry, trade and investment) will chair the PSC meetings on a rotational basis.

After conducting the baseline study and the validation workshop, and during the implementation of the project other relevant parties might be identified and invited to become a member of the PSC or invited to contribute to particular meetings.

It may also involve other development partners that provide support to strengthen the SPS framework in Nigeria. Special attention will be paid to the non-state organizations that are involved in the advisory services and invited for information sharing.

The project aims to collaborate with private sector representatives and enable their involvement.

Terms of Reference

“Strategic guidance for project implementation”

1. Oversee planning, implementation and reporting (on Strategic level)

- approve work plan;
- review, monitor and evaluate project progress;
- identify possible bottlenecks and risks;
- propose mitigation actions;
- identify issues to be addressed at policy level that are common to sub-agriculture sectors;
- gather lessons learned;
- develop a mechanism for sustainability after the project.

2. Facilitate the coordination, collaboration, and communication among all stakeholders

- confirm and define how partners will work together for specific activities
- define roles of country stakeholders and appoint resources in project implementation (who is best placed to do which activity)
- review the need for specialised working groups on selected areas/activities and recommend establishment of such groups

3. Information sharing and collaboration

- Recommend mechanism for information sharing process (e.g. information sharing meetings, report sharing)

Meeting schedule:

The PSC will have bi-annual meetings.

Management

A management structure will be established for the day to day running of the project.

ITC will assume the project management role and responsibilities. ITC will be responsible for monitoring project activities and progress towards the achievements of the expected project outputs and outcome, according to all the indicators and targets set in the project log frame, with a baseline established at the outset of the project.

A National Project Manager (NPM) will be hired on a part time basis (80%) and assisted by a part-time National Project Assistant (50%). The team will be selected through a competitive project and have a good understanding of UN and international-funded procedures. Should the NPM not be available at the time of the start of this project, the National Consultant on SPS (NCS) recruited at 60% will also take the management role in charge. It will be assessed during the inception phase whether the NPM can be located at a NEPC premises, a UN office or will have to work from their homes. The NPM and NPA will be based in Abuja.

The NPM will be responsible for the effective and efficient management and monitoring of field-level activities according to the project work plan, support the organization of training, workshops, events and media, liaise and coordinate with country counterparts, facilitate hiring of national consultants, organize and prepare project steering committee meetings, help identify risks and propose mitigating strategies as needed, provide guidance and recommendations for activity implementation, collect regular feedback from beneficiaries and partners, provide inputs and data for preparing progress reports.

The National Consultant on SPS (NCS) will work in close coordination with ITC and local management team and hired at 60%. The NCS will be responsible for overall project coordination of the technical inputs and will deliver inputs to all project activities. The NCS will provide all technical inputs, guidance and recommendations to the planning, implementation, monitoring, reporting of project activities.

The NCS will be responsible for compiling relevant documentation (reports, studies, statistics), organize International Consultant's field visit and facilitate the smooth conduct of the missions, training, coaching and support with writing technical reports and provide inputs for communication purposes.

The NCS shall have relevant professional experience within the country's SPS institutions (e.g., in NAFDAC, SON or NAQS), worked towards developing and implementing SPS measures focusing on Food Safety, provided technical assistance to the line ministries in the field of food safety in Nigeria and good links with both the public and private stakeholders.

V. REPORTING, MONITORING & EVALUATION

17. Project reporting

Reporting will be done in line with the work plan schedule. ITC will prepare bi-annual project progress reports, during the project implementation. They will consist of information on the status and accomplishments of the project, activities conducted, progress versus outputs and outcomes. A financial statement will be attached to each report to reflect the expenditure on the project activities. The reports will be shared with the PSC members and submitted to STDF. Reports of workshops and other activities implemented during this period will also be incorporated. The information will include inputs from the project partners and beneficiaries and the local authorities regarding their monitoring and supervision of the project, as well as feedback from project beneficiaries, collected through mission reports and assessment forms completed after each project workshop, event and coaching activity.

No later than six months after completion of the project, a final project report on its implementation including final statement of expenses will be prepared and submitted by ITC to STDF.

In addition, a brief monthly progress report will be prepared by the NPM and the NCS with technical inputs by the national project organisations and submitted to ITC and shared with project partners to monitor closely the progress and challenges.

18. Monitoring and evaluation, including performance indicators

- Evaluation forms will be prepared, distributed and collected at the end of every workshop, event and coaching activity and the results summarized in the progress reports, and used in up-scaling other activities;
- ITC will hold regular coordination meetings with NPEC on bi-monthly basis in addition to the six-monthly project steering committee meetings. The meetings with NWPC shall be used to report on project progress, discuss any issues of concern and mitigation measures;
- Participation of female beneficiaries and youth will be encouraged and monitored and reported;
- Discussions and comments from stakeholders at each workshop and event will be documented and used to improve project activities design;
- Performance indicators as per the project logical framework will be monitored and reported in each progress report;
- In-kind contribution by project partners will be monitored and reported for each event, workshop, training;
- The learning process and application of the knowledge by project beneficiaries will be monitored and reported in each progress report;
- Progress reports will be prepared every six months and reviewed by the project steering committee which will recommend mitigation actions if/as necessary; progress reports and minutes of the meetings will be submitted to STDF via ITC;
- Internal reporting of progress will be done on a monthly basis, on a brief page summary of activities carried out, outputs, issues addressed and reason for any possible delay and activities planned for the next month
- As the implementing agency, ITC will also monitor the project progress and results through its internal monitoring and result-based management (RBM) reporting systems.

19. Dissemination of the projects results

- At each workshop and project activity, introduction to the project and its outputs, outcomes, project partners and STDF will be presented and explained to participants;
- Project progress, recommendations and visibility will be relayed at the national level through the Nigerian Export Promotion Council (NEPC).
- ITC will disseminate all information and ensure project coordination with other development agencies through different fora and in Nigeria the coordination meetings and workshops related to the food safety and quality control system will be used to update on project results.
- Workshops and project activities will be given full media coverage. In particular, the media will be invited to participate in workshops as well as some of the training sessions to ensure better visibility. The project will also be given publicity through regular press releases and newsletters on the project progress and outcomes.

- Project partners and ITC will disseminate information and promote the project through their internal resource materials and communication means.
 - Core and specific training material/manuals/leaflets, sensitisation and capacity building materials elaborated during the project, including relevant trade information and market requirements, will be made available in print form to all the stakeholders and institutional reference.
 - A website or another platform (social media) will be used to facilitate access to the information developed under the project.
 - A dissemination workshop with the relevant stakeholders will be organized at the end of the project that will have media coverage to reach broader audience.
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20. ATTACHMENTS

- (i) **Appendix 1:** *Logical framework*
- (ii) **Appendix 2:** *Work Plan*
- (iii) **Appendix 3:** *Project Budget in Excel*

APPENDIX 1: Logical Framework³

| | Project description | Measurable indicators / targets | Sources of verification | Assumptions and risks |
|--------------------------------------|---|---|--|--|
| Goal | Increase in income generation through the supply of high quality and safe agricultural products for international and regional markets | - 5% increase of dried beans/cowpeas and sesame seeds exports within the duration of the project - access to two new markets for selected products supported by project measures | - NEPC statistics - Trade statistics - baseline assessment compared with assessment at the end of the project | Target markets can be accessed through improvements in food safety and don't require other support that is not under the scope of the project |
| Immediate objective (purpose) | Strengthened competitiveness and export capacity of Nigerian Small and Medium sized enterprises through better compliance with international food safety requirements and standards | - selected products are in compliance with international standards | - testing of food samples in a laboratory - buyers perceptions obtained and analysed | Buyers can be identified and are willing to share data The analyses of food samples provide an accurate picture of the pesticide usage in the country |
| Expected results (outputs) | Output 1: Regulatory, quality control and traceability system, for pesticides strengthened for the two selected agricultural value chains | Participating institutions in the regulatory, quality and traceability system have initiated steps to improve the system | Reports, interviews | The regulatory and control institutions embrace the opportunity for improvement and are willing to change |
| | Output 2: Enhanced capacity of project beneficiaries regarding management of pathogenic micro-organisms, pesticide residue management and compliance with international and regional quality and food safety requirements | At least 200 stakeholders of the targeted value chains have changed practices to comply with Codex MRLs At least 10 businesses comply with international standard requirements | Interviews, surveys, certification of businesses | Training and coaching activities are attended by interested project partners who will apply new skills and further increase their knowledge on standards, pesticide residue management, SPS requirements |
| | Output 3: An effective public-private dialogue has been established and is used to share and discuss information on pesticide management and microbiological contamination for cowpeas and sesame | At least 500 value chain stakeholders are reached through the promotion materials 10 project partners are engaged in the digital support activities for their business | Reports, assessment of opportunities for digital support and contribution by stakeholders Documentation of the dialogue mechanism | The digital tools are welcomed by the value chain stakeholders Public and private project partners are willing to participate actively in the dialogue. |

³ the logical framework will be adapted and revised after the inception phase of the project.

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| | | A stable dialogue mechanism is established that increases the coordination and cooperation between private and public sector stakeholders | | |
| Activities | 1.1 Collect baseline data on the current regulatory, quality control, traceability, and monitoring system for pesticides and pathogenic micro-organisms and coordination of public sector entities for the selected value chains | <ul style="list-style-type: none"> - One baseline study prepared - 20 fact sheets for suppliers of the value chains drafted - 50 product samples analysed in an accredited laboratory for pesticides - COLEACP Rapid SPS Assessment Tool (R-SAT) applied | <ul style="list-style-type: none"> - baseline study - fact sheets - results of laboratory analyses - COLEACP Rapid SPS Assessment Tool (R-SAT) conducted - results of baseline assessment discussed and validated in a workshop | Value chain stakeholders and support institutions provide sufficient data to support the baseline assessment |
| | 1.2 Provide institutional support to address findings of the baseline study | <ul style="list-style-type: none"> - 5 workshops were carried out which addressed the institutional issues identified in the baseline study - 4 institutions coached and strengthened | <ul style="list-style-type: none"> - workshop reports - coaching reports and evaluation of the coaching | - institutions are ready to address the issues and change if required |
| | 1.3 Provide support to improve the coordination system among ministries, SPS institutions and export promotion bodies | <ul style="list-style-type: none"> - training materials on the coordination of the regulatory and control system - 10 government officials at national level trained - 50 government officials in the project target regions trained - 5 training sessions in regions conducted | <ul style="list-style-type: none"> - training materials - reports | - government officials in the regions can be identified for training |
| | 1.4 Train government, NEPC staff and SPS officials on international standard requirements for cowpeas and sesame seeds including requirements related to pesticides and food borne pathogens and cooperate closely with border control for SPS certification at the point of exports | <ul style="list-style-type: none"> - 15 Government officials of the Nigerian SPS system, NEPC staff and scientists trained on pesticide residue data | <ul style="list-style-type: none"> - training reports - data analysis | - authorities are willing to share relevant data |
| | 1.5 Develop an action plan how to approach recent border rejections and | <ul style="list-style-type: none"> - action plan with clear steps and a roadmap on how to | <ul style="list-style-type: none"> - action plan and roadmap developed - workshop report | - EU officials are collaborating in sharing relevant information that |

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| | import bans of Nigerian dried beans and sesame seeds | address the rejections developed - validation workshop conducted | | can help to address the ban |
| | 1.6 Implement the action plan to address border rejections of dried beans and sesame seeds | - 3 workshops conducted that address issues identified in the action plan | - reports | - stakeholders are willing to address the identified issues |
| | 2.1 Develop a group of local trainers and food safety experts to provide training and advice to producers, processors, and exporters in the use of agri-chemicals, standard requirements and process improvement | - 30 national food safety experts developed - 15 projects to support businesses of the value chains carried out by the experts | - successful exams by food safety experts - feedback from business representatives supported by local experts | - a group of experts can be identified and beneficiary enterprises are interested to participate |
| | 2.2 Coach farmers/producers and processors on the use, control and monitoring of agri-chemicals and management of food borne pathogens | - 12 training sessions conducted -300 farmers/processors trained | Reports, training documents | Project regions are safe and allow to conduct training |
| | 2.3 Support for producers and processors in the development and replication of pesticide residue and food-borne pathogen self-control systems | - 30 advisory visits conducted - 10 farmers/producers can credibly show that their internal self-control systems have improved | - visit reports, photos, documentation | 10 selected beneficiaries are ready to document and present their self-control systems |
| | Activity 2.4 Assessment of digital support tools for transparency, trust, and increased efficiency | - opportunities for the development of digital tools to increase transparency and traceability of the agricultural sector in Nigeria identified | reports | - relevant institutions working on the development of digital tools are interested to cooperate |
| | 3.1 Train processors, exporters, NEPC staff and trade support institutions on export market requirements | - 50 private sector stakeholders of the cowpea and sesame seed value chains and NEPC staff trained on export requirements - 2 workshops conducted | - workshop reports | |
| | 3.2 Study tour to selected countries to familiarize with market requirements and to understand best practices | - study tour for 12 participants including NEPC staff conducted | - reporting, travel documents, reports | - suitable destination (costs, interest, safety) can be identified |

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| | 3.3 Public information strategy and campaign | - needs assessment carried out - five sensitization materials, such as posters, brochures, radio jingles, TV programmes on good practices will be developed and distributed | - assessment report -IEC material (posters, brochures, radio jingles, TV programmes) produced and aired | |
| | 3.4 Organization of networking workshops | - organization of 3 workshops on public-private dialogues that include issues relevant for improving the coordination and cooperation among actors involved | Workshop reports | |
| | 3.5 Establish a committee on public-private dialogue | A permanent committee is established | Committee documents (ToRs, agenda, management...) | Public and private actors are interested and actively contribute to the dialogue mechanism |
| | 3.6 Development of case studies on public-private dialogue | 3 case studies researched, further developed and presented | Case studies drafted and documentation available | Good practice case studies can be identified from other countries |

APPENDIX 2: Work Plan⁴

| Activity | Responsibility | Year 1 | | | | Year 2 | | | | Year 3 | | | |
|---|----------------|--------|----|----|----|--------|----|----|----|--------|----|----|----|
| | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| Output 1 Regulatory, quality control and traceability system, for pesticides strengthened for the two selected agricultural value chains | NEPC/ITC | | | | | | | | | | | | |
| Activity 1.1 Collect baseline data on the current regulatory, quality control, traceability, and monitoring system for pesticides and pathogenic micro-organisms and coordination of public sector entities for the selected value chains | NEPC/ITC | | | | | | | | | | | | |
| Activity 1.2 Provide institutional support to address findings of the baseline study | NEPC/ITC | | | | | | | | | | | | |
| Activity 1.3 Provide support to improve the coordination system among ministries, SPS institutions and export promotion bodies | NEPC/ITC | | | | | | | | | | | | |
| Activity 1.4 Train government, NEPC staff and SPS officials on international standard requirements for cowpeas and sesame seeds including requirements related to pesticides and food borne pathogens and cooperate closely with border control for SPS certification at the point of exports | NEPC/ITC | | | | | | | | | | | | |
| Activity 1.5 Develop an action plan how to approach recent border rejections and import bans of Nigerian dried beans and sesame | NEPC/ITC | | | | | | | | | | | | |

⁴ Please shade or otherwise indicate when the activity will take place.

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| Activity 1.6 Implement the action plan to address border rejections of dried beans and sesame seeds | NEPC/ITC | | | | | | | | | | | | |
| Output 2 Enhanced capacity of project beneficiaries regarding management of pathogenic micro-organisms, pesticide residue management and compliance with international and regional quality and food safety requirements | NEPC/ITC | | | | | | | | | | | | |
| Activity 2.1 Develop a group of local trainers and food safety experts to provide training and advice to producers, processors, and exporters in the use of agri-chemicals, standard requirements and process improvement | NEPC/ITC | | | | | | | | | | | | |
| Activity 2.2 Coach farmers/producers and processors on the use, control and monitoring of agri-chemicals and management of food borne pathogens | NEPC/ITC | | | | | | | | | | | | |
| Activity 2.3 Support for producers and processors in the development and replication of pesticide residue and food-borne pathogen self-control systems | NEPC/ITC | | | | | | | | | | | | |
| Activity 2.4 Assessment of digital support tools for transparency, trust, and increased efficiency | NEPC/ITC | | | | | | | | | | | | |
| Output 3 An effective public-private dialogue has been established and is used to share and discuss information on pesticide management and microbiological contamination for cowpeas and sesame | NEPC/ITC | | | | | | | | | | | | |
| Activity 3.1 Train processors, exporters, NEPC staff and trade support institutions on export market requirements | NEPC/ITC | | | | | | | | | | | | |
| Activity 3.2 Study tour to selected countries to familiarize with market requirements and to understand best practices | NEPC/ITC | | | | | | | | | | | | |

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|---|----------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Activity 3.3 Public information strategy and campaign | NEPC/ITC | | | | | | | | | | | | | |
| Activity 3.4 Organization of networking workshops | NEPC/ITC | | | | | | | | | | | | | |
| Activity 3.5 Establish a committee on public-private dialogue | NEPC/ITC | | | | | | | | | | | | | |
| Activity 3.6 Development of case studies on public-private dialogue | NEPC/ITC | | | | | | | | | | | | | |

APPENDIX 3: Budget (US\$) (budget is attached)