

STDF PROJECT GRANT 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* on the STDF website (www.standardsfacility.org). Please read the *Guidance Note* before completing this form. Completed applications should be sent by email (as Word documents) to STDFSecretariat@wto.org.

Project Title	Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, export seed certification and traceability
Objective	<p>Overall objective:</p> <ul style="list-style-type: none"> • To strengthen national phytosanitary capacity by mainstreaming ICT systems to implement phytosanitary measures as well as coordination to facilitate market access and assure compliance to trading partners' phytosanitary requirements <p>Specific objectives are to,</p> <ul style="list-style-type: none"> • Develop ICT tools to improve and systematize seed export phytosanitary certification and traceability in Nigeria • Strengthen phytosanitary capacity by developing fit-for-purpose ICT tools to implement pest surveillance, pest diagnosis and pest reporting and early detection of quarantine pests in Nigeria • Strengthen technical capacity and coordination among the regulatory agencies and private sector partners to improve compliance to phytosanitary requirements to facilitate export trade and access to markets
Budget requested from STDF	US\$ 516,075
Total project budget	US\$ 623,415

Full name and contact details of the requesting organization(s)	<p>International Institute of Tropical Agriculture (IITA) Oyo Road, PMB 5320, Ibadan, Nigeria Contact: Lava Kumar, Head of the Germplasm Health/Virology & Molecular Diagnostics; IITA, Ibadan, Nigeria; e-mail: L.kumar@cgiar.org; +2347032565130</p> <p>Nigerian Agricultural Quarantine Services (NAQS) Postentry Quarantine & Diagnostics, Moor Plantations, Ibadan, Nigeria Contact: O.O. Ogunfunmilayo, Head of Postentry Quarantine, NAQS, e-mail: delefunmilayo@gmail.com; +234 7089310378</p> <p>National Agricultural Seeds Council (NASC) NACRDB Plaza, PMB 716, Central Business District Abuja, FCT, Nigeria Contact: Ishiak Khalid, Deputy Director-Seed Certification; e-mail: ishiakbio@gmail.com; +234 8036071556</p>
Full name and contact details of contact person for follow-up	<p>Allan Liavoga Head, Project Development & Administration Unit International Institute of Tropical Agriculture (IITA) PMB 5320, Oyo Road, Ibadan, Nigeria c/o IITA Ltd 7th Floor, Optivo House, 125 High Street Croydon CRO 9XP, UK Tel: +234 700800IITA or 12016336094 ext. 2890 Fax: (+873/870) 761798636 Email: A.Liavoga@cgiar.org</p>

I. BACKGROUND & RATIONALE

1. Relevance for the STDF

The overall objective of this proposal, 'to strengthen the phytosanitary capacity to improve phytosanitary compliance for market access' is in line with the STDF priority areas of supporting projects on capacity development to address Sanitary and Phytosanitary (SPS) requirements of trading partners to improve income and social development. Specific objectives of the project are relevant to SDGs addressed by STDF objectives, i.e., SDGs 1 on poverty eradication, SDG 2 on zero hunger, SDG 7 on environmental sustainability, SDG 8 on global partnerships for development and avail benefits from new technologies, and SDG 17, partnerships for sustainable development as the project enhances the partnerships.

This proposal also, aligns with the national priorities on enhancing agricultural exports to diversify revenue stream of the Federal Government of Nigeria as enunciated by the country's "Agriculture Promotion Policy" thrust of 2016-2020 and the policy implementation strategy reflected in its "Green Alternative initiative" (FMARD 2016a). Inadequate capacity to comply with phytosanitary requirements of trading partners is a major bottleneck to expanding trade. Phytosanitary regulations are not yet clearly understood among many stakeholders which is complicated by weak capacity, poor resource and infrastructure status of the sector regulatory agencies.

In the past decade, considerable increase in trade and transport of goods heighten the risk of entry and spread of pathogens. At the turn of this millennium, Nigeria experienced damaging outbreaks of exotic pests and diseases. Papaya mealybug (*Paracoccus marginatus*), taro blight (*Phytophthora colocasiae*), Banana bunchy top virus, Fall Armyworm (*Spodoptera frugiperda*) and Southern Armyworm (*Spodoptera eridania*), and *Tuta absoluta* previously alien to the country reached economic thresholds. Due to lack of effective pest surveillance systems, identification of these outbreaks was delayed and loss of the opportunity for early detection and eradication were apparent. An analysis of the risk of 1,300 known invasive pests and pathogens in 124 countries underpin the vulnerability of Nigeria to invasive pests risks due to weak phytosanitary capacities (Paini et al.,

2016). It is therefore not a surprise that several new pest and pathogen outbreaks continue to occur in Nigeria. Entry of new pests and pathogens has increased phytosanitary risks to product exports from Nigeria triggering additional assurance measures that aid compliance to requirements of trading partners.

Nigeria has a huge agricultural export and import potentials. Export growth of agricultural commodities has risen slowly but would gain accelerated momentum with enhanced compliance and traceability of export products. In 2016, country exported agricultural products worth of US\$588 million (NBS 2018). Also, in the same year, the country exported nearly 700 metric tons of seed to countries in West Africa. To support agricultural products export growth requires assurance of compliance to phytosanitary requirements of importing countries. Whilst the needs are several, in this proposal we aim to address fundamental challenges related to pest identification and reporting, which are vital inputs for NPPO's quest to update pest information list; raise awareness for phytosanitary compliance; provide incentives that ease seed certification that smooths trade transactions. We also aim to establish national Nigerian Pest Information System (NPIS) linked to a national database of essential information on pests and phytosanitary compliance as well as foster closer interaction of this with the "Nigerian Seed Information System (NSIS)" of which the national seedbank is a vital component.

The project proposes to implement innovative Information Communication Technologies (ICTs), also referred as 'digital solutions,' to address recalcitrant phytosanitary challenges bogging agricultural exports from Nigeria. The proposal contributes to the development, testing and integration of a comprehensive digital systems, which are fit-for-purpose and capable of (i) pest surveillance and diagnosis as per the ISPM-6; (ii) pest reporting as per the ISPM-17, (iii) export seed certification integrating domestic seed regulations and phytosanitary regulations of Nigeria, and (iv) institutional capacity building necessary to install, maintain and operate digital systems. The project contributes to the development of standard operating procedures, and training of personnel to strengthen capacity in phytosanitary inspections and seed certifications using digital tools and building essential infrastructure for their sustainable management.

Activities were built in for advocacy and promotion to raise awareness among stakeholders and users to foster institutional linkages, build trust and ultimately promote phytosanitary compliance for tapping export trade.

The new capacity for pest surveillance and reporting will aid gathering data for Pest Risk Assessment (PRA) to ease processing of import/export permits. Development of "NPIS" provides reliable information on pest status to both domestic and external partners. The digital pest surveillance and diagnostic systems will also help early detection and reporting of invasive pests' incursions and attract control measures to nip-the-problem-in-the-bud.

The export seed certification will serve as model system for strengthening inspections and end-to-end traceability of products in a transparent and cost-effective manner and will build synergies between the regulatory agencies. The "NSIS" anchors seed data offering essential information to clients and regulatory authorities for planning and seed production trends.

The proposed plan is accorded priority status and has received strong support from the Federal Government of Nigeria and from the managements of the participating institutes, key private sector players who are the direct beneficiaries of export trade. The proposal included workshops, implementing team and key stakeholders, consensus building approaches and best practices in implementation; capacity development and knowledge transfer. Owing to the simplicity of the digital tools (adaptable in regular smartphones and web application), high and quick adoption is anticipated. The outputs, especially the digital tools and implementation model has flexible features that can be tailored to the needs of the other countries in West Africa. This feature also bears a critical handle to promote harmonization of regulations and information sharing that can stimulate regional trade and agricultural growth. In practical terms, this project will lay the foundation for Nigeria to transit to e-Phyto program of IPPC.

The project brings in a unique partnership between Nigerian Agricultural Quarantine Services (NAQS), National Agricultural Seeds Council (NASC) and the International Institute of Tropical

Agriculture (IITA). The NAQS and NASC are the parastatal organizations of the Federal Ministry of Agricultural and Rural Development (FMARD) of Nigeria, responsible for implementation of phytosanitary regulations and domestic seed regulations, respectively. Whereas IITA, a CGIAR center established in 1967 with its headquarters in Nigeria, is involved in research and development to enhance income and food security from agriculture. IITA's Germplasm Health Unit leads the CGIAR Germplasm Health program responsible for ensuring global phytosanitary compliance during international exchange of research products and seeds. These organizations have been working together for 50 years for agricultural development in Nigeria and in West Africa. The collaboration efforts since emergence of new epidemics and increasing demand for quality seeds have led to the development of 'Seed Tracker' as a tool for integrating supply chains and traceability, and 'Crop Disease Surveillance' for rapid disease identification and reporting. The proposal builds on these innovations to address the phytosanitary bottlenecks.

The project is expected to stimulate widespread interests and investments in strengthening phytosanitary capacity in the region and commitment among the various stakeholders and users to comply with regulatory requirements.

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

(i) Food and agricultural trade flows and relevant SPS issues;

Nigeria is the most populous nation (196.3 million) in Africa and the largest economy in Africa deriving GDP from the three primary sectors, which includes agriculture, mining and other natural resource industries. Approximately 70% of the population depends directly or indirectly on agriculture for income and employment. In 2017, agriculture contributed 20.9% of the country's GDP (Statista 2018). Although only 9.6% of the GDP is derived from oil, Nigeria is popularly known as oil economy due to large share of export revenue from oil exports (90% of the export revenue in 2017 from oil exports) (Nairametrics 2018). Nigeria is a major producer of several food crops (e.g., cassava, yam, maize, soybean, groundnut, etc.) in the continent and a major economic hub in West and Central Africa for agricultural trade.

To rescue export income from the fluctuating global oil prices, the Federal Government of Nigeria took various measure to diversify income from export earnings by enhancing the promotion of non-oil raw materials, services and agricultural products - both raw products and semi/fully processed foods. In support of this policy, in 2016, the Federal Ministry of Agriculture and Rural Development (FMARD) of Nigeria unveiled the Agricultural Promotion Policy (APP) and implementation strategy it called 'The Green Alternative' aimed at promoting agriculture as a business (FMARD, 2016a). The main objectives of the AAP are, (i) commercialize of agriculture, (ii) improve market-linkages between producers and off-takers, (iii) promote value chain approach to link value chain stages, and (v) policy integrity for accountability, transparency and efficiency. The overall aim of APP is to improve income to smallholder formers and rural households, increase agricultural contribution to GDP and access to international markets.

The APP policy also prioritized commodities for export market. Priority for exports includes, Cocoa, palm produce, groundnut, cashew, yam (flour and tubers) sesame seed, pineapple, banana/plantain, tea, ginger, coffee, kola nut, shea butter, pulses, potato, fruit and vegetables. Associated policies such as the Growth Enhancement Support (GES) schemes were implemented to enhance seed production to support agricultural growth. The GES scheme contributed to the increase of seed production from 5,000 metric tons to 180,000 metric tons in 5 years, with simultaneous increase in private sector participation in the seed production. Increase in seed production also increased regional seed trade. According to the National Agricultural Seed Council (NASC) data, in 2016, 8 companies operating in Nigeria, under the auspices of SEEDAN (Seed Entrepreneurs Association of Nigeria), exported 117.1 metric tons of Foundation seeds of rice (of which 63.1 tons went to Gambia and 54 tons to Sierra Leone); 452.4 metric tons of Certified seeds of rice (of which 146 tons went to Gambia and 306.4 tons to Sierra Leone); 2 tons of Foundation seed of Maize and 50 tons of Certified seeds of maize were also exported to the two countries. Various favourable schemes to

agricultural exports has shown to result in positive outputs. In 2016, Nigeria realized N212.7 billion (US\$588 million) from agricultural product exports (NBS, 2018).

Despite the positive growth, export trade has several challenges, including constraints to production of quality products, poor awareness among the emerging entrepreneurs about the opportunities and regulatory requirements to tap into export markets and inadequate capacity among the regulatory agencies for enforcement. A report of the Center for Strategic & International Studies identified that export markets remain underdeveloped, partly because Nigerian agricultural goods frequently fail international phytosanitary standards (Downie, 2017). The World Bank study in 2017 identified Nigeria to have good regulatory frameworks for seeds production, marketing and transportation of agricultural products, which unfortunately are not yet effectively implemented due to weak enforcement of regulations (World Bank 2018). Nigeria is classified among the countries vulnerable to invasive pest risk due to weak phytosanitary capacities in preventing entry or controlling spread of biological threats (Paini *et al.*, 2016). Investments and technologies are required to strengthen the existing system to promote agribusinesses.

ii) Institutional framework for SPS management in Nigeria

Nigeria is among the earliest countries that established quarantine legislation and seed laws in the continent implemented by NAQS and NASC, respectively, under aegis of FMARD. Nigeria is the member of FAO-IPPC, WTO, African Union Inter-African Phytosanitary Council (IAPSC) and established committee for SPS management Committee in the country overseen by multiple agencies. The NAQS is responsible for ensuring phytosanitary compliance to trading partners; the Standards Organization of Nigeria (SON) is the custodian of all National and International Standards on Food Safety in Nigeria; the National Agency for Food and Drug Control (NAFDAC) controls and regulates imports and exports of packaged, processed and semi-processed foods; and the Federal Produce Inspection Service (FPIS) responsible for inspection and fumigation of packaged material. Nigerian Customs authority is responsible for collection of trade tariffs on agricultural exports and imports, including seed as per the federal procedures, and this organization has no direct role in SPS compliance or phytosanitary matters.

The task of assuring phytosanitary compliance are handled by the NAQS: Responsible for import inspection at air, sea and road borders, inspect and treat where necessary, issue import permits for plant products (raw and semi-processed, seeds, soil, biocontrol agents, solid wood packing materials, etc), inspection of crops during active growth inspection of export crops, agricultural commodities in warehouse prior to export certification, conduct pest surveys and monitor pests of quarantine significance, post-entry quarantine inspection, export phytosanitary inspection and determines compliance to SPS conditions of the importing countries, issuance of phytosanitary certificate, treatments, formulate quarantine regulations, pest risks analysis (PRA) to technically justify SPS regulations. It is the formal contact point for IPPC, IAPSC and SPS committee of Nigeria.

NASC is responsible for the domestic seed regulations. Any seed production activity must comply with NASC procedures and National Seed Law. NASC is responsible for promoting a market driven seed industry for the production and distribution of high quality seed, accessible and affordable to all farmers. NASC formulates programs, policies and actions regarding seed development and the seed industry, including research on issues relating to seed testing, registration, release, production, marketing, distribution, certification, quality control, supply and use of seeds; advise the Federal Government on the organization, management and financing of seed programs; advise the national system on the changing pattern of seed demand and farmers' needs; and regulate the seed industry in Nigeria. NASC is responsible for seed quality control and enforcement of seed law. Companies exporting seed from Nigeria are subjected to domestic seed production procedures; and NASC issues seed clearance for agencies importing seed into the country or producing seed for export. NASC permits in way serves as pre-requisites for the NAQS import or phytosanitary permits. NASC and NAQS interact in the matters of seed export or import. NASC represent ECOWAS and continental and global committees relating to harmonization of seed laws and seed trade in West Africa.

iii) SPS priorities to be addressed

Among the major challenges are new pest outbreaks attracting additional measures on export trade; insufficient infrastructure and funds to operate regular surveillance programs; insufficient knowledge on the pest, lack of updated pest lists, low awareness about the phytosanitary regulations among the traders and other stakeholders. Fragmented nature of paper-based communication along the production to export trade supply chain which is weak and a major contributor to the current status of poor compliance in the wake of increasing export trade volumes. Failure to meet trading partners phytosanitary requirements resulted in rejection of products (e.g. instance, rejections of cowpea, yam and vegetables in 2018). Notwithstanding these limitations, volumes of export are increasing, demanding urgent measures to address the critical gaps for ensuring phytosanitary compliance for export trade.

Demand for seed exports to West African countries is increasing. The ECOWAS region already has enabling regulations aimed at promoting regional trade on seeds which hitherto were not operationalized because of clarity on unified certification procedure. In 2016, FMARD unveiled a unified quality control management system plan for 'zero reject' of agricultural commodities/produce and non-oil exports from Nigeria (FMARD 2016b). Export trade requires phytosanitary structures to conduct field inspections, pre-border inspections, ability to trace products along the value chain, knowledge on endemic pests and pest lists.

In a number of technical group meetings held to discuss invasive pest control at IITA and FMARD, many organizations identified phytosanitary controls for seed import and export as high priority, as seed is considered as a major pathway for pest spread; and they suggested strengthening the country's capacity for surveillance and rapid response. Nigeria is regarded as gateway for trade in West and Central Africa especially for seed and other commodities. Effective pest surveillance system is identified as a requirement for safeguarding both national and regional biosecurity. This recommendation also emerged as the strong recommendation from the AU-IAPSC 11th Steering Committee.

Based on the technical group comprising NAQS, NASC and IITA formed to prepare this strategy to strengthen (i) Pest Surveillance and Diagnosis, (ii) Pest reporting, and (iii) Seed Export Certification as model for implementing effective phytosanitary controls from production to port, involving public and private sector stakeholders. Addressing these issues will contribute to the ISPM-6 on Pest Surveillance, ISPM-17 on Pest Reporting, ISPM-7 on phytosanitary certification. This model also enhances the linkages and harmonization of procedures between the regulatory agencies and has scope for out-scaling to other countries of West Africa.

This project planned to use innovative ICT-based technologies developed to fit-for-purpose of Nigerian regulatory needs also, offer rapid transformation in a cost-effective manner. These technologies are less reliant on the infrastructure and operational needs, and therefore would offer sustainability for use and flexible for adopting to future changes in policies and procedures. The new tools and procedure will strengthen NAQS and NASC capacity to implement phytosanitary measures with an innovative approach, prioritizing ISPMs related to phytosanitary surveillance and phytosanitary inspection, vital for seed export trade to West and Central African markets. ICTs makes information sharing and service access easy for users and infuse better accountability and transparency.

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

As explained in sections 1 and 2, this project aligns with WTO-STDF priorities. It addresses the national policy (Agricultural Promotion Policy, APP) of Nigeria on diversification of revenue streams from enhanced contribution to national GDP through commercialization of agriculture and promotion of access to markets anchored on the 'Green Alternative' of the Federal Government of Nigeria. It also seeks to advance aspiration of the FMARD to unified quality control systems to drive its plan for 'zero reject' of agricultural commodities exports from Nigeria (FMARD 2016b).

The proposal builds on ECOWAS (Economic Community of West African States) Regulation C/REG.4/05/2008 and UEMOA Regulation 03/2009/CM) that harmonized the rules governing Quality

Control, Certification and Marketing of Plant Seeds and Seedlings, as a uniform law on the territory of the ECOWAS, WAEMU and CILSS States.

It subscribes to ECOWAS priorities under the strategic/ Emerging issues in the West Africa Sub-Region SO3, Result 3.1: The resilience of households is enhanced and their vulnerability to chronic food and nutrition insecurity is reduced (of ECOWAP2025/RAIP-FSN 2016-20) and supports operationalization of the harmonized seed legislation document "Increasing food production by improving farmers' access to high-quality seed of improved varieties through facilitated cross-border seed trade".

It is embedded in FAO-IPPC strategic objectives for the period 2012-19, "to secure cooperation among nations while protecting global plant resources from the entry and spread of plant pests, in order to preserve food security, biodiversity and to facilitate trade".

It draws substantial guidance from the recommendations of the Nigerian Agribusiness Group (NABG Associates) seeking to institutionalize private sector partnership with FMARD to "Jump-Start" the Green Alternatives focusing on prevention of pest outbreaks.

4. Past, ongoing or planned programmes and projects

This proposal is leveraging on a number of past and on-going initiatives implemented by NAQS, NASC and IITA.

NAQS implemented several projects on pest surveillance, PRAs and phytosanitary inspections multi-donor supports from FMARD, IFAD, FAO, World Bank and the Bill and Melinda Gates Foundation (BMGF). NAQS serves as the training hub for quarantine officers from ECOWAS region, organizing training and capacity development in pest surveillance and pest diagnosis using modern diagnostics.

Similarly, NASC have implemented several national and international projects funded by FMARD, IFAD, FAO, World Bank and other donors. Recently, it launched "Seed Connect" initiative to promote regional seed trade, and to establish Nigeria as a primed "seed hub" as well as a regional center for capacity development in the seed sector for West Africa. As part of the BMGF project, NASC committed to adopting e-certification platform for domestic seed certification.

Some of the projects jointly implemented by IITA, NAQS and NASC that demonstrates the partnership and shared vision for strengthening agricultural sector and trade are listed.

I). The USAID funded 'Collaborative Research Network Projects in Africa' to develop capacity for pest risk assessment and early warning network (surveillance net) is currently being implemented by IITA in collaboration with NAQS. This project contributed to the development of Cassava Disease Surveillance (CDS; www.cassavadiseasenet.org) program that monitor the spread of cassava brown streak disease. Under the Project, a digital surveillance laboratory was established in the Postentry Quarantine Station of NAQS in Ibadan. The second phase of this project was allotted to DRC, led by IITA, Nigeria in collaboration with INERA. The project in which was launched in 2017 is scheduled to continue through to 2022, focusing on on-site diagnostics for cassava viruses. The result from the project and from similar ones will be handy for Nigeria especially to NAQS staff assigned the responsibility for surveillance, diagnosis and early warning reporting

II). Bill and Melinda Gates Foundation and the CGIAR Research Program on Roots, Tubers and Bananas (CRP-RTB), funded project on containment of Banana bunchy top disease (BBTD) in Africa is yet another intervention that offer results that may contribute this Project. The project is currently operating in 8 countries in Africa, including Nigeria. In Nigeria, it is implemented by IITA in partnership with NAQS. The project focuses on containing spread of invasive BBTD, using innovative surveillance methods(www.bbtvalliance.org). The project started in 2013 will conclude in 2019. It offered tools and methods to search for invasive pest in the field and containing spread. Experience from this project will be scaled through the STDF initiative.

III). BMGF and the CRP-RTB funded project on "Cassava Seed Tracker (www.seedtracker.org/cassva)". This project for is schedule for a 4-year tenor that started in 2016

has contributed to the use of seed tracker for cassava seed certification, traceability and value chain integration. It is being implemented by IITA in partnership with NASC. This project contributed to the tailoring of the CST to suite Nigerian seed regulations. NASC currently piloting this project in Nigeria. The CST program is the precursor the proposed plan to use "Seed Tracker" as tool for farm to port certification and traceability. This an on-going initiative laying the foundation that will be reinforced to enable NASC transit to e-certification operations.

IV). CGIAR Germplasm Health Component (2017-2022): Implemented by IITA in collaboration with NPPOs. It contributes to procedures, technologies and polices on safe exchange of germplasm (seeds) (<https://www.genebanks.org/the-platform/germplasm-health/>). It is also developing monitoring tools for priority invasive threats to food crops. Part of the focus of This project is to facilitate global linkages and transfer of suitable technologies to Africa to strengthen phytosanitary monitoring of international seed distribution.

V). BMGF funded Maize lethal Necrosis (MLN) epidemiology project (2016-2019): This on-going project implemented in collaboration with NAQS and NASC focused on protecting maize seed sector from invasive threats. Awareness creation, training, advocacy and strengthening quarantine capacities are some of the targets of this project. The project works with seed industry and also performed pre-emptive surveys to safeguard seed production zones from invasive threats.

5. Public-public or public-private cooperation

Multiple government agencies are engaged in the export trade regulations. Similarly, compliance to SPS regulations are governed by different governmental agencies. NAQS is the primary organization responsible for ensuring phytosanitary compliance of the agricultural products (raw and semi-processed) and seeds; NASC is the primary agency responsible for seed production and regulations. These Federal government organizations are represented in the National Export Promotion Council. This project provides opportunity to both agencies to work together to promote private sector led-seed industry access to regional markets. IITA as international agency provide a platform for multilateral linkages.

Partners to this project have been working together and with private seed industry. This proposal strategy was discussed with Seed Industry partners on 1st August 2018 in Abuja, who strongly endorsed the plan (see evidence in support letters in Annex 4). The Seed Entrepreneurs Association of Nigeria (SEEDAN), the largest conglomeration of the private seed sector in West Africa, endorsed the plan and committed as stakeholder to participate in the inception workshop to review and advice on planning and relevance of the technology, and has pledged to urge its members to actively participate in the pilot testing and to offer feedbacks from end-user side.

Universities and Extension services are expected to interact with the project team to adopt technologies for diagnostics and to benefit from the pest and seed data.

Strong links with ECOWAS SPS and Trade information desk is envisaged to benefit from the ECOTIS (ECOWAS Trade Information System) to which the Nigerian Seed Information System maintained trade linkages for seed produced in the country.

Strong partnership will be established with FAO-Regional Office (Accra) and AU-IAPSC, by joint participation in planning and review meetings to promote linkages for regional scaling of relevant results of the project.

Project will communicate developments and progress as briefs to donor community, national and international partners. It expects to benefit from the experience and goodwill of STDF secretariat as the principal advisory and oversight on the technical matters and partnerships.

Overall, this project is expected to trigger close collaboration between a range of public-private-international and intergovernmental organizations that will yield scalable results, clarify outreach programs, elevate phytosanitary capacity of Nigeria to optimize national and regional trade opportunities.

6. Ownership and stakeholder commitment

The management of each of the partners to this Project, NASC, NAQS and IITA, have pledged unstinted support for its implementation, and will commit to the Project relevant staff and facilities and other in-kind resources including administrative, finance management and auditing. Letters of support are included as part of the annexes. Both NAQS and NASC have fully committed to adopt new procedures, tools and to implement modern measures that strengthen and or modernize practices in respective institutions.

Private sector partners, especially SEEDAN, expressed their willingness to take part in the pilot testing as well as to serve as advocates for good trading practices in Nigeria. Members of the regulatory bodies, such as Standards Organization of Nigeria, responsible for SOP implementation and quality monitoring in the industry have also conveyed their support for the implementation of the Project.

ECOWAS have also expressed its interest to facilitate, where necessary, the execution of the Project when it is approved during the stakeholder' meeting held on 1st August 2018 in Abuja, Nigeria., ECOWAS has ample influence that could be deployed to communicate message to the regional partners on new developments to enable market access for trading parties in the region.

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

7. Project Goal / Impact

The goal of the Project is to diversify non-oil export trade and revenue by promoting and enhancing the competitiveness of agricultural trade commodities from Nigeria. Specific purpose is to improve national phytosanitary capacity by mainstreaming ICT systems to implement phytosanitary measures as well as promote market access and compliance to phytosanitary requirements.

The project results are expected to include:

- Provision of necessary infrastructure and skilled practitioners for pest surveillance and diagnosis for Pest Risk Assessment (PRA) and updated pest lists for export and import SPS compliance from Nigeria.
- Optimize seed certification procedures to enhance exports linked to a simple system for tracking and tracing the certification and certified products along the supply chain.
- Increase compliance to best phytosanitary procedures by traders and regulators.
- Raise national ability to early detection of invasive pests and mitigation before the incidence becomes a major outbreak thereby reducing loss of investments.
- Realize benefits from the data integration for production and market trend analysis and forecast.
- Lay foundation for adoption of IPPC's e-Phyto and e-certification.
- These in turn will enhance agricultural production by reducing pest risks, increased availability of quality seeds leading to higher yields and better income and food security in Nigeria and other countries. Increase in export seed trade from Nigeria contributing to the local employment, reduction in of poverty and increased foreign exchange earnings.

8. Target Beneficiaries

The project is targeted at several categories of beneficiaries including policy makers/seed sector regulators, seed business operators and users/farmers. Four tangible products will be produced benefited of which spreads across actor in the seed value chain and users of Phytosanitary Early Warning reports. The primed products are Knowledge transfer, Database system improvement, E-certificates and e-certification and Phytosanitary surveillance reports. Envisaged direct beneficiaries of the database that will be generated are NASC & NAQS, investors in the seed sector, Policy makers and Researchers/ Students. Three of these actors in the seed value chain has potential to take up 90% of the benefits of having the proposed database of which 50% is accruable to NASC and NAQS. E-certificates/E-certification and Phytosanitary early warning reports have both direct and indirect beneficiaries. It is anticipated that 70% of the benefits of e-certification will directly accrued to seed businesses (30%), NASC (25%) and seed exporters (15%). The indirect beneficiaries of e-certifications are seed traders and farmers and about 30% of these results is accruable to them. An estimated 60% of the benefits of surveillance early warning reports is direct which will impact on smallholder farmers, food consumers, farm enterprises and input suppliers. Indirectly this result has tangible benefits (40%) accruable to extension system, Seed Businesses, policy makers, NASC & NAQS and Researcher & Training institutions.

In term of numbers, the database will benefit about 500,000 users and suppliers of information, e-certification will conservatively benefit over 25 million farmers using improved seeds, all 157 registered seed businesses of which 12 are regular exporters of seeds, policy makers and countries importing seeds from Nigeria. An estimated 30 million beneficiaries is envisaged spread across consumers, seed businesses, input suppliers, farm enterprises, healthcare providers, seed sector/Phytosanitary service regulators (NASC and NAQS), policy makers, researchers and education/media institutions.

On overall, the anticipated impact of the Project is significant.

(a) Gender-related issues

The project is gender friendly. Its implementation and results are gender neutral and adaptable to all actors on the phytosanitary surveillance and seed value chain from the seed users to the producers/farmers and researchers. Currently, seed certification and Phytosanitary surveillance are dominated by male staff. An estimated 80% of field operations are covered by male officers while female officers are responsible for 20%. This gender structure tends to make capacity building efforts benefit male officers more than female officers. In this Project, training activities detailed in the project document has factored on improving gender inclusiveness and has structured programs directed at women and young officers in both public and private sector agencies by deliberate commitment to 50% female participation.

The implementation of the Project and the use of its results require skills in ICT application. Young people have high disposition to apply ICT to generate and use information. On the other hand, elderly persons in Africa rarely fully subscribes to rigorous ICT applications in field and business operations. The same trend is envisaged for this Project. However, the Project has taken note of this potential barrier that could hinder widespread usage of the results of the Project has provided for structured training modules for the various actors on the seed value chain and surveillance operations. As general rule, technology developed will be kept simple and usable for any user familiar with using WhatsApp on a smartphone.

Digitalized e-certification and phytosanitary surveillance operations may likely reduce human labour requirements enabling free labour to be deployed to other critical services and operations.

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

Overall objective is to strengthen national phytosanitary capacity by mainstreaming ICT systems to implement phytosanitary measures as well as coordination to facilitate market access and assure compliance to trading partners' phytosanitary requirements

Specific objectives are to:

1. Develop ICT tools to improve and systematize seed export phytosanitary certification and traceability in Nigeria
2. Strengthen phytosanitary capacity by developing fit-for-purpose ICT tools to implement pest surveillance, pest diagnosis and pest reporting and early detection of quarantine pests in Nigeria
3. Strengthen technical capacity and coordination among the regulatory agencies and private sector partners to improve compliance to phytosanitary requirements to facilitate export trade and access to markets

Objective 1. Develop ICT tools to improve and systematize seed export phytosanitary certification and traceability in Nigeria

Seed certification system involves multi-stage registration and permits and requires separate visitations and tracking (<http://seedtracker.org/cassava/index.php/2017/07/21/nasc-guidelines/>). Manual certification tag issued are difficult to trace along the value chain because of ledger system. As a solution, digital seed certification scheme was developed to modernize seed certification and traceability. This program named as "Seed Tracker" is developed by IITA, NASC and partners as part of the CGIAR-RTB and BMGF funded projects. The program has been piloted in Nov-2016 for cassava seed certification in Nigeria (Fig 1) (www.seedtracker.org/cassava). This program, usable on a Web app and Android smartphones, offers integrated digital data collection forms tailored to the seed regulations and approval procedures of Nigeria, with auto-messaging and SMS alerts prompting for actions. Offers secure accounts to each user, with data privacy and security. Data access by regulators are controlled as per the privilege status guided by the management policy. Seed Tracker collects data integrates into a common data platform.

In this project, the software will be tailored to suit export seed certification as per the protocols of NASC and NAQS, and usable to all crops. The database generates geographic reference points, analytics functions to extract and use data as per the need. Features will include on-line interaction between client and regulator; barcode generation; barcode-based data retrieval; supports printing of barcode certificates; field reports; status and stages of certification by crop and date of planting, in unison with certification procedure; GPS linked image records; decision support for interaction with expert and offers reference guides for seed quality certification; and certification procedures; and artificial intelligence (AI)-based diagnostic tool for identification of common diseases and reporting, thus this tool can also contribute to disease surveillance.

Data entered in the system remains as a permanent record. Encrypted based and transactions encrypted to prevent malware attacks and hacking. Database (in cloud and mirrored on terrestrial server) will be secured with standard safeguards. The program usable on web and Android phone. Android version will be designed to work in areas of no-internet and delayed data upload when the device gets connected to Wi-Fi.

Traceability is easily achieved as each user will get a unique ID, and log-in account. Every entry gets a unique ID that will serve as a barcode, traceable along the supply chain. Each regulator holds a unique log-in id. The system integrates all the information and provides traceable data on producer, certifier, and entry time and date and geolocation if desired, all combined as one record extractable using barcode.

Seed Tracker will offer a comprehensive tool for certification for export and domestic. This system is expected to simplify export seed certification and traceability, cost-effective and eco-friendly as it reduces dependence on paper and fossil fuels. Fully tailored program will be piloted with users, and

validated program will be released. Information from the Seed Tracker will contribute to data to the “Nigerian Seed Information System” as centralized national seed data bank.

As part of the development, IITA will train appropriate NASC staff on maintenance and management of the tool and the technology will be transferred to NASC for unrestricted use and future upgrades. Cost of system maintenance recoverable through user fees as per the current norm for certification.

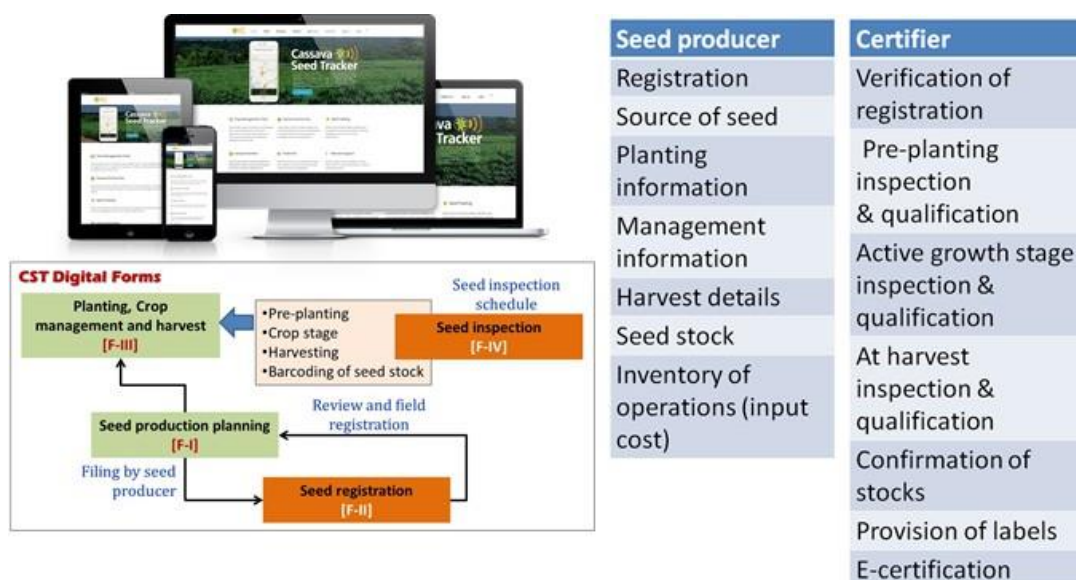


Fig 1. Graphic of Cassava Seed Certification piloted in Nigeria by NASC

- Objective 2. Strengthen phytosanitary capacity by developing fit-for-purpose ICT tools to implement pest surveillance, pest diagnosis and pest reporting and early detection of quarantine pests in Nigeria

One of the major challenges in Nigeria is out-dated pest information. They are not readily accessible. Pest surveillance surveys are rarely done due to high cost associated with surveys. Consequently, pest incursions are detected after the incursion event enlarged into a severe outbreak. A spate of new pest invasion since 2000s in Nigeria has caused significant production loss and new phytosanitary measures restrictive to trade. New approaches are essential to enable NAQS and other extension officers to perform pest surveillance, diagnosis and reporting to improve the situation. As a solution, as part of the USAID funded project, IITA, NAQS and partners have developed Cassava Disease Surveillance (CDS) program to specifically monitor for cassava brown streak spread from East Africa. This program usable on web or Android phone enables GPS tagged image-based disease diagnosis with on-line expert help in real time (Fig 2). Data generated after validation by the expert get posted for public view. Thus, this tool helps early alert, rapid diagnosis and reporting. This program is tailored to NAQS functions and command chain for decision on emergency response action (Fig 2). This program is piloted in 2016 and a pilot Digital Surveillance Unit was established at NAQS Postentry Quarantine Station, Ibadan.

In this project, this program will be improved to perform pest surveillance as per the ISPM-6 and provides AI-based disease diagnosis as additional feature for preliminary diagnosis followed by affirmative diagnosis using field diagnostics kits established for some of the invasive pests (e.g cassava brown streak disease; maize lethal necrosis). This program includes barcoded image and field observation notes; short voice messages; two-way interaction with experts; disease diagnosis and integration of data in the database. The CDS can be used for surveillance by ADPs (Agricultural Development Programs of State & Federal Governments) located in Local Government Areas offering extension services; NASC seed inspections and other users. It can be used for inspections at the border points and ready reporting of the situation for decision making. All the information is stored in a secure encrypted database, accessible only to authorized users. Data from various resources integrated into a database - “Nigerian Pest Information System”. The database features will include geographic maps by crop, pest, user, institution, year and other user defined options. The greatest

advantage is that surveillance can be performed by NAQS staff posted in different locations with minimum mobility and expected to improve competencies of NAQS staff, strengthen diagnostic capability, reporting and performance of PRA and other functions. This tool can be operated under existing infrastructure and offers cost-effective and eco-friendly solution to pest surveillance and diagnosis.

Envisioned digital technology will be developed offered as open-source suite for unrestricted use. The geo-coded data and referral databases improve source data traceability and reliability of information. Such system improves regular monitoring of seed production sites for pests and diseases enriching baseline knowledge on pests and pest lists vital for phytosanitary protection and export trade. The digital systems will be built 'to-fit-for-purpose' and empowers NAQS to utilize ICT in routine operations and dealings with sister agencies involved in regulatory approvals of products for international markets.

As part of this project, IITA will transfer technology to NAQS for unrestricted use and upgrades.

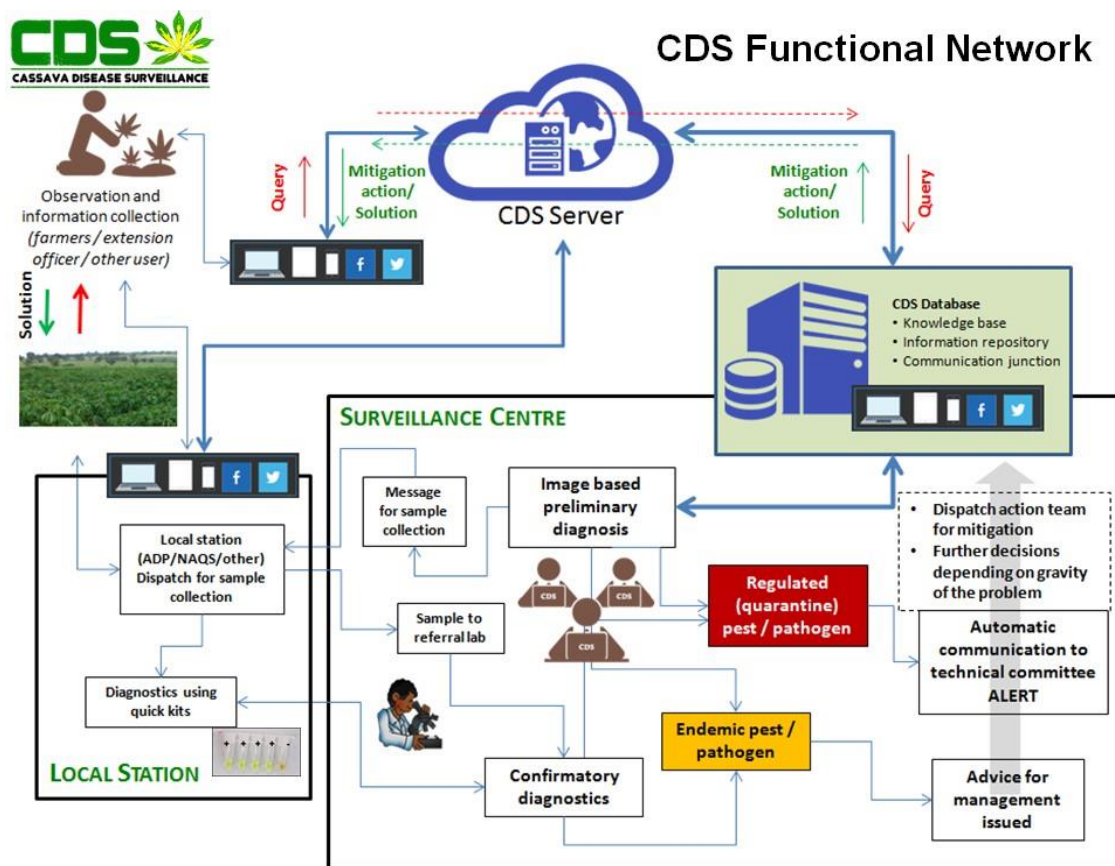


Fig 3. CDS system recently piloted for surveillance of invasive pest risks to cassava

- Objective 3. Strengthen technical capacity and coordination among the regulatory agencies and private sector partners to improve compliance to phytosanitary requirements to facilitate export trade and access to markets

As part of the project, the two core technologies established will be transferred through a series of training workshops to users in NASC, NAQS and seed sector. Training of Trainers (TOTs) will be serve as resource persons for further training of staff. Five SOPs, training guides and user manuals will be developed and disseminated to users. Infrastructure at NAQS and NASC will be improved by adopting solar power and upgraded IT infrastructure. Activities were built in for validation and national launching for promoting use and adoption.

Detailed steps of implementation and timeline are given in the log frame (Appendix 1) and workplan (Appendix 2)

Following documents are attached

Appendix 1: Log frame

Appendix 2: Work plan

Appendix 3: Budget (key Staff purpose is listed in the Budget table)

Appendix 4: Letters of support

10. Environmental-related issues

Major components of this Project are ICT driven involving the use of computers, smartphones, tablets and transmitters etc. These tools are substantially friendly to the environment. The existing practice which rely' almost exclusively on wood paper will be drastically impacted upon. Manually operated, paper based system currently in used will become automated digital system leading to reduction of carbon print. The demand for paper for data collection, dissemination and reporting and environmental hazards related to these operations and other health issues will be reduced significantly.

The Project will directly contribute to reduced carbon footprint by less dependence on paper products, and fuel use as it the systems will reduce the travel cost (reduced burning of fossil fuels) linked to the manual work for paper filling and other administrative needs which is expected to be substituted by the digital communications. Project also envisages to install solar power to support ICT systems reducing the dependence on diesel generators. These actions will indirectly reduce the need to cut down trees for the production of paper pulps.

Digitalized seed certification and Phytosanitary surveillance systems which are the prime outputs of this Project also have potential to raise product (seed) quality. Local and international seed trade will receive a boost in line with enhanced product quality. Upsurge of seed demand at domestic and regional levels would induce the impetus to produce more seeds to meet emerging demands, lead to expansion of areas devoted to seed production which increases carbon sequestrations and reduction of greenhouse gas emissions. Positive environmental impact of the project is therefore envisaged.

11. Risks

Three risks elements of the Project were identified namely:

1). If new pests were to emerge that can have profound impact on seed /crop production.

Mitigation measure: This project envisages such a disaster could occur giving the recent experience with the incidences of Fall Armyworm (FAW) that devastated maize field in Nigeria, the Ebola epidemic in Liberia, Serra Lone and DR Congo and Maize Lethal Necrosis (MLN) in Easter Africa and *Tuta absoluta* in tomatoes. Such epidemic could jeopardize seed trade including exports and may require quick responses that could overwhelm the technical capacities of NAQS, NASC, IITA and other responsible agencies. Part of what this project will deliver is an Early Warning Pest Surveillance System linked to electronic alarm triggers that would enable early responses- quarantine and containments measures to be imposed with minimal damage to seed trade transactions.

2). If the regular electricity supply is not available to support the digital platform.

Mitigation Measure: Alternative renewable electrical energy source – solar power is proposed as part of the components of digital systems that will be installed by this project when approved. Adequate solar powered units will be installed to enable basic operations of the digital systems of partner agencies to continue e-certification and e-phytosanitary services when regular electricity is not available. In generally, all the technologies and practices proposed in the project meant to operate with minimum infrastructure support.

3). If policies become hostile to seed/agricultural export

Mitigation Measure: Presently, agricultural policy of Nigeria support both import and export of quality seeds especially to regional member countries of ECOWAS. In the past, policy changes are implemented with limited considerations of their broad implications perhaps owing to weak internal institutions. A change in the policy related to seed supply is a potential risk especially if it targets restrictions of seed export. This is however unlikely giving the growing need for foreign exchange earnings, the fast-growing domestic seed industry requiring fast-track e-certification operations. The expanding population and the need to diversify the mono-economy away from oil have become the drivers of the country’s policy leading to a more stable investment climate for seed business.

Additional details:

Risk	Impact	Likelihood	Prevention/Mitigation
New pest outbreaks / resurgence of established pests	High	Medium	Pest surveillance and diagnosis system established in the project expected to give scope for early detection and mitigation.
Government policies restrictive on export trade	High	Low	Advocacy on value of export economy to domestic GDP, employment and food security.
Electricity and infrastructure limits application	High	Medium	Solar power generation systems to sustain the electronic systems. Proposed technologies are low on infrastructure dependence.
Lack of commitment from partners	Medium	Low	This project is demand driven; consultation and team work will ensure timely implementation and outputs
Delays in project execution	Medium	Low	Quarterly on-line meetings and half-yearly face to face meetings allows checks on schedules and progress and appropriate adjustments for timely delivery

12. Sustainability

This Project is situated within established public institutions that has regulatory mandates for seed sector development, phytosanitary surveillance services and ensuring compliance to SPS concerns of trading partners. Two of the principal partners- NASC and NAQS that will collaborate with IITA to implement the Project are agencies of the Federal Ministry of Agriculture and Rural Development (FMARD) of Nigeria established by law and acts of parliament to regulate seed sector development and phytosanitary services, respectively. This project is structured to enable the country through the agencies to improve the quality and timeliness of their services, reduce operational cost and to deliver their products in accordance with global best practices. Long term interests and commitment to digitalize operations had been demonstrated earlier by these agencies in a collaborative Project executed with IITA. Until the recent joint project, the effort to digitalize was impaired by lack of

technical skills and resources. IITA, as a lead CGIAR center in Africa, specifically in Nigeria, will continue to invest in R&D to improve available tools and technologies and make them available to the partners, NASC and NAQS, to ensure sustainability and suitability to the evolving need.

This Project will partly address the challenges of lack of technical skills and also support institutionalization of digitalized operations and services aligned to existing structure. Since the Project addressing the priority issues of the institutional mission and mandate, there are high prospects for sustained use and further development of the results of this Project. The technologies and tools, especially databases, are highly demanded by various stakeholders, including universities and research organizations, and expected to develop as a core resource tools for information, service access and national status/trend on seed production and pest information. With high usage will offer incentive to hosting organizations to use and update resources.

Budgetary provisions are made annually for these agencies by the FMARD which will likely to be applied partly to maintain and further develop the digital platform that will be installed. Also, the operations that will be digitalized are revenues bearing services which will continue at higher level of efficiency. This will be a stimulus for additional inflow of revenue and a motivation to sustain its usage. The fact that agricultural seeds are the focus of these agencies underpin the inherent high sustainability value of this Project.

III. BUDGET

13. Estimated budget

Total budget of the project is US\$ 623,415 for two years, of these US\$ 516,075 is requested for funding from STDF and US\$ 107,340 is in-kind contribution.

The funds requested for two years from STDF will cover Staff costs (\$266,500; 52%); Operational costs for validation and software licences (\$91,000; 17%); Infrastructure to upgrade solar power and ICT equipment for NAQS and NASC (\$52,000; 10%); Workshops for training (\$82,000; 16%) and Contingency (\$24,575; 5%).

In-kind contribution covers staff time, office space and software.

Detailed budget is presented in the Appendix 3.

14. Cost-effectiveness

This project address high priority constraints challenging to sustainable production of agricultural due to recurrent outbreaks of invasive pests and loss of opportunity due to non-compliance to phytosanitary requirements of trading partners.

Proposed plan by far offers the most cost-effective and eco-friendly solution to transform regulatory capacity to suite the current demands. ICT-based solutions are easy to adopt, don't depend on the heavy infrastructure, and flexible and adoptable to evolving situations.

Digitization of phytosanitary procedures, monitoring, traceability and seed certification is essential in the increased connected world, for ready access and transfer of information in a most cost-effective manner. This system is expected to offer benefits to users as well as implementers by reducing several costs associated with current cumbersome manual procedures, which depend on the paper-based systems requiring re-entry of data into the system or creating of ledgers. Filed information was rarely extracted for use. Digitization offers flexibility to manure and make use of data. Many countries are realizing the value of Big Data for economic growth. The systems envisaged in this project not only address the phytosanitary concerns and enhance operational efficiency, but for the first provides a scope for data integration and opportunity for the agencies and governments to review and make use of data for trend and demand estimation, production and market analysis.

Currently there are no effective alternatives or duplication of efforts. This effort builds the pilot platforms and technologies established recently, and lessons from the on-going initiatives. The

proposed plan is most cost-effective, and every effort was made to save costs by combining events/activities.

ICT-based solutions for pest surveillance and diagnosis is a fast-emerging field with several latest innovations, including Artificial Intelligence (AI)-based solutions, surfacing at a monthly rate. Several global initiatives have been adopting digital systems for pest diagnostics, including STDF program on e-certification, CGIAR BIG DATA Platform, CABI Plantwise, Australian PaDIL, CGIAR Germplasm Health, Penstate's PlantVillage are complementary to this PPG. However, none of these programs offer integrated solution to pest surveillance and seed certification as designed in this proposal. The project proponents have links or partners in some of these on-going initiatives to benefit from the experience and technology. The project team will ensure active communication with ICT technology developing teams through open sharing mutually beneficial interactions for public good.

IV. PROJECT IMPLEMENTATION & MANAGEMENT

15. Implementing organization

IITA shall be the Implementing organization. It will make submission of this proposal to STDF and administer the grant jointly with NASC and NAQS. IITA, NASC and NAQS has been working together for closed to 50 years. IITA is a CGIAR centre established in Nigeria in 1967. It is an autonomous organization supported by the inter-governmental donors and has diplomatic status and privileges similar to UNO in Nigeria. The centre uses best project management practices in line with international Agricultural Research Centers (IARCs) and administrate grants funded by African Development Bank, World Bank, USAID, DFID, GIZ, IFAD, BMGF, JICA, JIRCAS, EUC, ACIAR, Ford Foundation and several other governmental agencies.

16. Project management

IITA, NASC and NAQS will jointly coordinate and implement this project. IITA will make submission to STDF and administrate the grant, including financial and technical reporting responsibilities to STDF. Lava Kumar (IITA) will serve as coordinator together with, Ishiak Khalid (NASC) and O. Ogunfunmilayo (NAQS), who will also act as co-coordinators taking responsibilities (as focal persons) at their respective institutions. A project implementation team (PIT) will be former with two members from each organization and 3 external advisors. Project team will meet twice for face-to-face meeting to review progress and planning; and quarterly meetings by teleconferences. Project team will communicate meeting dates to STDF Secretariat for participation or advice. Meeting notes will be shared with all the partners and the STDF.

Project Administration Office of IITA will be responsible for financial management, accounting, auditing and financial reporting to the STDF. It will coordinate with counter parts in NASC and NAQS in smooth administration of the project. IITA uses CGIAR best practices in monitoring expense and project implementation and ensures timely reporting to STDF Secretariat.

V. REPORTING, MONITORING & EVALUATION

17. Project reporting

Project team will submit technical and financial reports as per the STDF timelines and format, through IITA Project Development and Administration Unit. The team will also communicate all major developments and training events to STDF Secretariat.

18. Monitoring and evaluation, including performance indicators

The project has five key deliverables, (i) Seed Tracker for seed export certification and end-to-end traceability; (ii) Pest surveillance and diagnosis; (iii) Pest reporting, (iv) Nigerian Pest Information System; and (v) Nigerian Seed Information System. The first three are accessible and usable on the

smartphones and web applications; and the latter two are databases that integrate information and process in tailored manner make it available as open access information or through secured log-in.

Indicators to measure progress and achievements were established in log frame (see Appendix 1). These includes workshop proceedings, technical reports, meeting briefs, on-line reports, reports in newsletters and specific new releases. In addition, product availability can be tested by on-line search and functionalities can be reviewed. A total of 5 SOP, one each for each of the outputs, two guides for system management; available for verification.

Project implementation team will monitor the progress and 3 external advisors also comment on the progress and quality of the outputs and meeting the required standard.

With the project validation of products by piloting testing is incorporated as activities. The validation reports will be shared as part of the annual technical reports.

Records of outreach, number reached, numbers used, with data disaggregated by gender will be included.

19. Dissemination of the projects results

As part of the inception workshop, the project will design dissemination and outreach strategy to enhance adoption. A communication specialist will help design the strategy along with the project team.

The project will disseminate results using multi-channels including websites of the implementing agencies, social media, targeted placements of outputs, dissemination of flyers and procedures (SOPs, training manuals and guidelines) and electronic modules etc. Project will invite key stakeholders to workshops and training events and disseminate information kits through the participants also. Emphasize will be on softcopy (electronic) distribution to reduce the use of paper and plastic products.

The project members explore every opportunity to communicate the progress and outputs of the project on other relevant meetings to expand the outreach.

Project team will also supply materials to STDF Secretariat for further dissemination.

All the data generated, and documents produced will be made available as open access, immediately or after six months from generation, except those categorized as classified information

ATTACHMENTS

Appendix 1: Logical framework (see attached template)

Appendix 2: Work Plan (see attached template)

Appendix 3: Project Budget (see attached template)

Appendix 4: Letters of support from organizations that support the project request

Appendix 5: Written consent from an STDF partner that agrees to implement the project **OR** evidence of the technical and professional capacity of another organization proposed to implement the project.

Appendix 6: Terms of Reference for key staff involved in project implementation

APPENDIX 1: Logical Framework¹

	Project description	Measurable indicators / targets	Sources of verification	Assumptions and risks
Goal	To diversify non-oil export trade and revenue by promoting, and enhancing the competitiveness of agricultural trade commodities from Nigeria	<p>-At least 20% increase in seed export trade to regional markets from Nigeria, realized within 5 years from completion of the project.</p> <p>-At least 40% reduction in the rate of agriculture rejections due to non-compliance to phytosanitary standards realized, within 5 years from completion of the project.</p>	<p>- 'Merchandise Trade Intensity Index/Exports' published by the National Bureau of Statistic (NBS) of Nigeria.</p> <p>-Notices of non-compliance and rejections by NAQS, NASC and the importing countries</p>	<p>-Policy support to agriculture including seed exports to regional markets remain favourable.</p> <p>-Demand for seed imports from Nigeria continues to grow and capacity exist for the seed sector to meet local and external demands</p> <p>-No major adverse changes in pest situation in Nigeria and/or phytosanitary polices of trading partners</p>
Immediate objective (purpose)	-To improve national phytosanitary capacity by mainstreaming ICT systems to implement phytosanitary measures as well as promote market access and compliance to phytosanitary requirements	<p>-ICT systems/tools made available for enhanced compliance to standard phytosanitary procedures for (i) seed export certification and traceability, (ii) pest surveillance and diagnosis and (iii) pest reporting</p> <p>-The database (Nigerian Seed Information System; and Nigerian Pest Information System) provided to enhanced data quality, use and access, and support to phytosanitary services, seed</p>	-Information from databases and use cases published in organizational annual reports and websites.	<p><i>Assumptions:</i></p> <p>-Implementing organizations remain committed to adopt and adapt improved phytosanitary and certification tools and procedures.</p> <p>-Stakeholders, especially seed industry partners, willingly comply with the domestic and export seed regulations.</p> <p>-Government policies</p>

¹ See the CIDT Handbook on Project Identification, Formulation and Design, available on the STDF website, for guidance on the preparation of logical frameworks.

		<p>certification and trade.</p> <p>-User portals provided for ready access to services by stakeholders in the public and private sector to benefit from the improved phytosanitary systems.</p>		<p>favourable to agricultural Exports.</p> <p><i>Risks:</i></p> <p>-If new pests were to emerge that can have profound impact on crop production, and that may attract new quarantine sanctions</p> <p>-If policies become hostile to export trade.</p>
Expected results (outputs)	<p>-Electronic seed certification with end-to-end seed traceability system established.</p>	<p>-A "Seed Tracker" tool developed and standardized for export seed certification, validated, and institutionalized</p> <p>- All-in-one smartphone app and web app tool for Seed Tracker made available</p> <p>-A "Nigerian Seed Information System" as database for seed inventory established.</p> <p>-One Standard Operating Procedure [SOP-1] for seed certification and traceability using barcodes developed.</p>	<p>-Annual Reports of NASC, NAQS and IITA.</p> <p>-SOP-1 available on-line</p> <p>-Workshop documents and Project reports</p> <p>-Barcode based seed traceability records</p> <p>-Users case reports in the "Nigerian Seed Information System".</p>	<p>-NASC and NAQS maintain interest to adopt/ adapt and use digital tools for export seed certification.</p> <p>-Awareness among stakeholders about new procedures and tools continue to increase unimpeded.</p> <p>-Support from Federal Ministry of agriculture and Rural Development (FMARD) remain tangible.</p>
	<p>Digital pest surveillance and pest information system established</p>	<p>-Digital systems for pest surveillance, diagnosis and pest reporting as per the ISPM-6 and -17, developed, validated, and institutionalized</p> <p>-All-in-one smartphone app and web app tool for pest surveillance, diagnosis and reporting made available</p>	<p>-Pest information and surveillance reports in Pest Information portal</p> <p>-SOPs available on-line</p> <p>- Project reports/ Newsletters</p> <p>-NAQS and NASC Reports</p>	

		<p>-A "Nigerian Pest Information System" established</p> <p>-One Standard Operating Procedure [SOP-2] for pest surveillance, and diagnosis developed.</p> <p>-One SOP [SOP-3] for pest reporting developed</p>		
	Phytosanitary surveillance and export seed certification actions in NASC and NAQS strengthened	<p>-Training /user manuals, one each for practitioners of (i) seed export certification, (ii) the pest surveillance, diagnosis, and (iii) pest reporting published</p> <p>-Two 'user guides' for managing and maintenance of digital systems by NASC and NAQS practitioners developed</p> <p>-At least 10 (50% women) beneficiaries of TOT on ICT application in phytosanitary surveillance from national programs"</p> <p>-At least 4 ICT staff from NASC and NAQS full trained in digital systems management and maintenance</p> <p>-Improved ICT lab infrastructure at NASC and NAQS for maintaining digital systems</p> <p>-Two SOPs developed [SOP-4: Seed Tracker maintenance and management; and SOP-5: Pest surveillance, diagnosis and reporting system maintenance and management</p>	<p>-Websites of NAQS and NASC</p> <p>-Workshop documents, training course reports, Project reports/newsletters</p> <p>-Training manuals, SOPs and user guides available on-line</p> <p>-Two solar powered ICT labs in operation, one each at NAQS and NASC stations in Nigeria</p>	

	<p>Capacity for e-certification for export seed trade and phytosanitary compliance strengthened</p>	<ul style="list-style-type: none"> -Digital content tailored to end-users (3 modules one each on (i) seed export certification, (ii) the pest surveillance, diagnosis, and (iii) pest reporting) developed for on-line training and webinars -Five information flyers on phytosanitary regulations and instructions for compliance -At least 40 staff (50% women) from public and private sector trained to use digital tools for certification, pest surveillance and reporting -Two user case studies on cassava and banana pest surveillance, diagnosis and pest reporting from Oyo and Ogun States of Nigeria -e-certification for seed exports validated by the industry (at least 5 user cases implemented during year 2) 	<ul style="list-style-type: none"> -Reports of seed sector players (SEEDAN), NASC and NAQS -Project reports -Media reports about the new phytosanitary certification systems in Nigeria -Records of national e-seed certification portal use for seed field registration and certification by the private sector -Records of national pest information system portal use for surveillance, diagnosis and reporting by NAQS -Variety of communication materials developed and made available through on-line portals -Workshop documents, training course reports, -Project reports 	
Outputs	Activities	Indicators	Sources of verification	Assumption

1. Electronic seed certification with end-to-end seed traceability system established.	Activity 1.1. Expert workshop to develop workflow streams for digitalizing the seed certification, integrate domestic and export (phytosanitary) seed certification, from production through to export (jointly with Activity 2.1) [Workshop 1]	-Two-day project inception workshop held for implementing partners and key stakeholders, workplans, and communications and outreach strategies discussed, and final plans agreed -A 3-day workshop conducted, and digital workflow streams and implementation plan developed	-NAQS and NASC Annual Reports -Project Report -Workshop proceedings -NASC, NAQS and IITA Websites -Media reports	-NASC and NAQS remain interested to adopt/ adapt and use digital tools for export seed certification. -Awareness among stakeholders about new certification procedures are needed. -FMARD support from for seed industry remain active.
	Activity 1.2. Use the 'Seed Tracker' for digitalizing export seed certification operations and train key staff (Activity 1.1) and establish 'Nigerian Seed Information System' for traceability	- A 'Seed Tracker' program for web and smartphone application developed for export seed certification, and made available to NASC and NQAS - "Nigerian Seed Information System" established and integrated into the NASC website -Smartphone ready Seed Tracker application for use by practitioners	-Technical reports -Seed Newsletters and Websites	
	Activity 1.3. Develop one SOP and one user manual for application and management of 'Seed Tracker' program by NASC	-One user guide on 'Seed Tracker' for seed certification and traceability drafted, reviewed and finalized	-NASC, NAQS and IITA websites and Newsletter. -Project report -Annual reports of NASC and NAQS	
2. Digital pest surveillance and pest information system established	Activity 2.1. Expert workshop to develop workflow streams for digitalizing pest surveillance and pest reporting based on ISPMs # 6 and 17, respectively (jointly with Activity 1.1) [Workshop 1]	-A 3-day workshop held, and digital workflow streams and implementation developed	- NASC, NAQS and IITA websites and Newsletter -Project report -Annual reports of NASC and NAQS -Workshop proceedings	-NASC and NAQS remain interested to adopt/ adapt and use digital tools for export seed certification. -Increased awareness among stakeholders about new

	Activity 2.2. Use the 'Crop Disease Surveillance (CDS)' software to digitalize pest surveillance and diagnostic systems and train key staff	-The CDS program for web and smartphone developed and validated -The CDS program app available on web and smartphone -Smartphone ready CDS application for use by practitioners	-NASC, NAQS and IITA websites and Newsletter. -Project report -Annual reports of NASC and NAQS	procedures and tools -Support from FMARD
	Activity 2.3. Introduce national pest information system	-Nigerian Pest Information System" developed and integrated in NAQS website	-Project progress report -Pest information database -NASC, NAQS and IITA websites and Newsletter. -Project report -Annual reports of NASC, NAQS and IITA.	
	Activity 2.4. Develop detailed user manual for application and management of 'pest surveillance and pest reporting' program by NAQS	-User guide drafted, reviewed and finalized	-NASC, NAQS and IITA websites and Newsletter. -Project report- -Annual reports of NASC and NAQS -User manual available on-line	
3. Phytosanitary surveillance and export seed certification actions in NASC and NAQS strengthened	Activity 3.1. Organize a workshop to develop strategies for promoting adoption of digital tools (together with Activities 1.1, 2.1 and 5.2) [Workshop 1]	-5 Training workshops for partners -Communications strategy developed -Project communications and outreach plan	-Workshop proceedings - NASC, NAQS and IITA websites and Newsletter. -Project report -Annual reports of NASC, NAQS and IITA	-NASC, NAQS interest to adopt/ adapt and use digital tools for export seed certification. -Increased awareness among stakeholders

	<p>Activity 3.2. Develop three SOPs: (i) export seed certification and traceability, and (ii) pest surveillance and, diagnostics, and (iii) pest reporting</p>	<p>-3 SOPs developed validated and published for use by NAQS on pest surveillance. SOP-1: Seed certification and traceability SOP-2: Pest surveillance and diagnosis SOP-3: Pest reporting</p>	<p>- NASC, NAQS and IITA websites and Newsletter. -Project report -Annual reports of NASC and NAQS</p>	<p>about new procedures and tools -Support from FMARD -No undue delay in obtaining procurements</p>
	<p>Activity 3.3. Develop SOPs [SOP-4 and SOP-5] for management of ICTs and databases in NASC and NAQS</p>	<p>-2 SOPs developed validated and published for management of database SOP-4: Seed Tracker maintenance and management SOP-5: Pest surveillance, diagnosis and reporting system maintenance and management</p>	<p>- NASC, NAQS and IITA websites and Newsletter. -Project report</p>	
	<p>Activity 3.4. Pilot testing and validation by end-users of ICT tools for seed export certification, pest surveillance and diagnosis, and pest reporting.</p>	<p>- 3 pilot teams testing, and validation completed, and evaluation reports submitted -System upgraded as appropriate to meet the end-user requirements</p>	<p>-Use case reports available on-line -Report on any system updates - NASC, NAQS and IITA websites and Newsletter. -Project reports -Users case reports</p>	
	<p>Activity 3.5. Train staff of NASC and NAQS on management and maintenance of ICT systems [Workshop 2]</p>	<p>-Staff of NASC, Seed companies and NAQS trained on ICT systems and applications in certification -4 staff trained, two each from NASC and NAQS, in managing and maintenance of the digital systems</p>	<p>-Training course report -Project report. -Users case reports -Report on operations and troubleshooting feedbacks</p>	

	Activity 3.6. Training of Trainers (Tot) of NASC and NAQS in application of export seed certification and pest surveillance and pest reporting tools [Workshop 3]	-10 trainers (50% women) trained and skills improved to serve as trainers -ToTs further conduct at least two training courses to in-house staff and stakeholders	-NASC, NAQS and IITA websites and Newsletter -Training course proceedings -Project report	
	Activity 3.7. Establish e-certification system management facility at NASC and NAQS	-Needs assessment and SWOT analysis conducted -Procurement list and order placement -Installation of equipment -Software installed -Trained staff managing ICT platforms Business plan and SWOT analysis report -Functional platforms	-Project progress report - NASC, NAQS and IITA websites and Newsletter. -Project report. -User reports and logs on system functions	
Capacity for e-certification for export seed trade and phytosanitary compliance strengthened	Activity 4.1 Develop and place communication materials for awareness creation on regulations and phytosanitary procedures, ICT tools, functions and uses for internal and external stakeholders	-Expert team identified for developing communications materials -Design layouts of flyers and printed for hardcopy and softcopy use -Demonstration videos developed on hosted on-line -Targeted dissemination to users/beneficiaries in regulatory organizations, Federal Government policy makers, professional associations and committees, and private sector	-Communications material available on-line (open access) -Demonstration videos, flyers and seminars, available on hosting websites and social media -Project progress report	-Swift organization of project implementation team -NASC, NAQS interest to adopt/ adapt and use digital tools for export seed certification. -Increased awareness among stakeholders about new procedures and tools -Support from FMARD

	Activity 4.2. Organize two training workshops on ICT applications for NASC, NAQS and seed sector [Workshop 4] and [Workshop 5]	<ul style="list-style-type: none"> -Two training workshops organized in year 2 for 20 persons in each event. -Training manuals prepared, incorporating various SOPs and mock exercises -At least 40 persons trained (50% women), and skills improved in use of digital tools 	<ul style="list-style-type: none"> -Workshop proceedings -Training manuals available on-line -Trainees feedback and use case reports -Project progress report 	-No undue delay in obtaining procurements
	Activity 4.3. National launching of e-seed certification and pest surveillance and reporting portal (with A4.3) [Workshop 4]	<ul style="list-style-type: none"> -Workshop organized and the program availability for official use notified -Two user case studies on cassava and banana pest surveillance, diagnosis and pest reporting from Oyo and Ogun States -e-certification for seed exports validated by the industry (at least 5 user cases) 	<ul style="list-style-type: none"> -Workshop proceedings -Media reports -Project progress report 	
Project management	A5.1. Form "Project Implementation Team (PIT)"	-Core project team comprising IITA, NASC and NAQS	<ul style="list-style-type: none"> -Project reports and websites of IITA/NASC/NAQS -PIT meeting reports 	-Swift organization of project implementation team
	A5.2. Project inception and planning workshop [Workshop 1]	-Inception workshop organized in conjunction implementation plan developed	<ul style="list-style-type: none"> -NASC, NAQS and IITA websites and Newsletter. -Project report. -Workshop proceedings 	-Cordial relationship between the implementation team
	A5.3. Project review and planning meeting (half-year)	-Implementing team meetings	-Workshop proceedings	-Tech transfer agreements signed between IITA, NAQS and NASC
	A5.4. On-line quarterly meetings of the PIT	-Meetings conducted	-Workshop proceedings	-Stable US\$ to local currency exchange rate
	A5.4. Recruitment of staff	-Recruitment adverts and recruitment report	-Hired staff on the job form at least 3 months	

			after signing project contract	
	A5.5. Project conclusion and final report	-Final reports prepared by the implementing team administration office	-Final technical and financial report	

APPENDIX 2: Work Plan²

Output	Activity	Responsibility	2019				2020				
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Output 1. Electronic seed certification with end-to-end seed traceability system established	Activity 1.1. Expert workshop to develop workflow streams for digitalizing the seed certification, integrate domestic and export (phytosanitary) seed certification, from production through to export (jointly with Activity 2.1) [Workshop 1]	IITA, NASC, NAQS									
	<i>A1.1.1. Organize a 3-day workshop (combined with project inception meeting to cover activities 1.1 and 2.1)</i>		x								
	<i>A1.1.2. Design adaptable digitalization plan covering users' operations and functions</i>		x								
	Activity 1.2. Use the 'Seed Tracker' for digitalizing export seed certification operations and train key staff (Activity 1.1) and establish 'Nigerian Seed Information System' for traceability	NASC, NAQS, IITA									
	<i>A1.2.1. Develop web and smartphone versions of the digital e-certification for seed exports aligned to functionalities identified by the users</i>		x	x	x	x					
	<i>A1.2.2. Develop a comprehensive tablet version for inspectors with notes on procedures, reference guides and real time communication system</i>				x	x					
	Activity 1.3. Develop one SOP and one user manual for application and management of 'Seed Tracker' program by NASC	NASC, NAQS, IITA									
	<i>A1.3.1. Establish drafting committee to develop content outline</i>				x						
	<i>A1.3.2. Prepare draft user manual, circulate for comments and produce final draft</i>				x	x	x				
	<i>A1.3.3. Publish the manual on-line</i>						x				
Output 2. Digital pest surveillance and pest information	Activity 2.1. Expert workshop to develop workflow streams for digitalizing pest surveillance and pest reporting based on ISPMs # 6 and 17, respectively (jointly with Activity 1.1) [Workshop 1]	IITA, NASC, NAQS									

² Please shade or otherwise indicate when the activity will take place.

Activity 3.2. Develop three SOPs: (i) export seed certification and traceability, and (ii) pest surveillance and, diagnostics, and (iii) pest reporting	IITA, NASC, NAQS								
<i>A3.2.1. Establish team to draft SOPs outline</i>			x						
<i>A3.2.2. Draft SOPs and circulated for review and comments and to produce camera-ready draft</i>			x	x	x				
<i>A3.2.3. Final SOPs published on-line and circulated to users</i>						x			
Activity 3.3. Develop SOPs [SOP-4 and SOP-5] for management of ICTs and databases in NASC and NAQS	NASC, NAQS, IITA								
<i>A3.3.1. Establish a team to draft SOPs</i>			x						
<i>A3.3.2. Draft SOPs prepared, circulated for review and feedback</i>			x	x	x				
<i>A3.3.3. Final SOPs published on-line and circulated to users</i>						x			
Activity 3.4. Pilot testing and validation by end-users of ICT tools for seed export certification, pest surveillance and diagnosis, and pest reporting.	NASC, NAQS, IITA								
<i>A3.4.1. Pilot testing of seed export certification by NASC</i>					x	x	x		
<i>A3.4.2. Pilot testing of pest surveillance, diagnosis and reporting by NAQS</i>					x	x	x		
<i>A3.4.3. Piloting testing of seed certification by end users (5 users from seed industry)</i>					x	x	x		
Activity 3.5. Train staff of NASC and NAQS on management and maintenance of ICT systems [Workshop 2]	IITA, NASC, NAQS								
<i>A3.5.1. Select two staff from NASC and NAQS for training at IITA</i>						x			
<i>A.3.5.2. Conduct training and post training proficiency testing</i>						x			
Activity 3.6. Training of Trainers (Tot) of NASC and NAQS in application of export seed certification and pest surveillance and pest reporting tools [Workshop 3]	NASC, NAQS, IITA								
<i>A.3.6.1. Profiling and selection of 5 trainers each from NASC and NAQS for TOT training at IITA</i>						x			
<i>A3.6.2. Develop ToT resource manuals, one each for (i) Seed Export certification, (ii) Pest surveillance, diagnosis and reporting</i>						x			

	<i>A3.6.3. Conduct training (1 working week)</i>						x				
	Activity 3.7. Establish e-certification system management facility at NASC and NAQS	NASC, NAQS, IITA									
	<i>A.3.7.1. Needs assessment for ICT infrastructure upgrade including internet and backup servers and solar power systems</i>					x					
	<i>A.3.7.2 Procurement of items (solar power panels, servers and relevant equipment) and installation of equipment, installation and functional testing</i>					x	x	x			
	<i>A3.7.3. Development of plan for routine maintenance, upgrades, risk management as per the SOPs and User guides</i>						x	x	x		
Output 4. Capacity for e-certification for export seed trade and phytosanitary compliance strengthened	Activity 4.1 Develop and place communication materials for awareness creation on regulations and phytosanitary procedures, ICT tools, functions and uses for internal and external stakeholders	IITA, NASC, NAQS									
	<i>A4.1.1. Develop content of communication materials, including regulations on phytosanitary procedures and essential compliance information for all stakeholders</i>		x	x				x	x		
	<i>A4.1.2. Prepare information flyers on SOPs for digital systems and phytosanitary procedures</i>		x	x				x	x		
	<i>A4.1.3. Produce on-line materials (3 modules, Webinars and video clips) and place in relevant websites</i>						x	x	x		
	<i>A4.1.4. Prepare demonstration videos and webinars and place on appropriate websites</i>			x	x			x	x		
	<i>A4.1.5. Conduct at least 5 outreach events per year to communicate e-certification system patronage to stakeholders. (including but not limited to meetings, social media and demonstrations in relevant media events).</i>		x	x	x	x		x	x	x	x
	Activity 4.2. Organize two training workshops on ICT applications for NASC, NAQS and seed sector [Workshop 4] and [Workshop 5]	NASC, NAQS, IITA									
	<i>A.4.2.1. Selection of 20 trainees from public and private sector (workshop 4)</i>								x		
<i>A4.2.2. Prepare and produce Training manual</i>								x	x		

APPENDIX 3: Budget (US\$)³

The following table provides an example to illustrate the budget can be prepared on the basis of outputs identified in the logframe and the activities needed to achieve these outputs.

	Total (US\$)		
	STDF	In-kind	Grand total
Output 1. Electronic seed certification with end-to-end seed traceability system established			
Activity 1.1. Expert workshop to develop workflow streams for digitalizing the seed certification, integrate domestic and export (phytosanitary) seed certification, from production through to export (jointly with Activity 2.1) [Workshop 1]			
Activity 1.2. Use the 'Seed Tracker' for digitalizing export seed certification operations and train key staff (Activity 1.1) and establish 'Nigerian Seed Information System' for traceability NB: Human resources and software licences. Costs indicated below			
Activity 1.3. Develop one SOP and one user manual for application and management of 'Seed Tracker' program by NASC <i>In kind contribution of expert time for SOP development</i>		4,750	4,750
Output 2. Digital pest surveillance and pest information system established			
Activity 2.1. Expert workshop to develop workflow streams for digitalizing pest surveillance and pest reporting based on ISPMs # 6 and 17, respectively (jointly with Activity 1.1) [Workshop 1]			
Activity 2.2. Use the 'Crop Disease Surveillance (CDS)' software to digitalize pest surveillance and diagnostic systems and train key staff NB: In-kind transfer of CST and CDS licences under 'open access' to NASC and NAQS. Costing details of software and in-kind contribution listed below.			
Activity 2.3. Introduce national pest information system NB: Human resources and software licences. Costs indicated below			
Activity 2.4. Develop detailed user manual for application and management of 'pest surveillance and pest reporting' program by NAQS		4,750	4,750

³ Use the headings in the budget table above as a basis to prepare a budget table, preferably as an Excel chart.

<i>In kind contribution of expert time for SOP development</i>			
Output 3. Phytosanitary surveillance and export seed certification actions in NASC and NAQS strengthened			
Activity 3.1. Organize a workshop to develop strategies for promoting adoption of digital tools (together with Activities 1.1, 2.1 and 5.2) [Workshop 1]			
Activity 3.2. Develop three SOPs: (i) export seed certification and traceability, and (ii) pest surveillance and, diagnostics, and (iii) pest reporting <i>NB: Human resources. Contributions from the project staff</i>			
Activity 3.3. Develop two SOPs [SOP-4 and SOP-5] for management of ICTs and databases in NASC and NAQS <i>NB: Human resources. Contributions from the project staff</i>			
Activity 3.4. Pilot testing and validation by end-users of ICT tools for seed export certification, pest surveillance and diagnosis, and pest reporting. Three teams will be formed to assess the functionality of the systems as real-world case studies. 1. Export seed certification by 5 seed industries. 2. Pest surveillance and diagnosis- surveillance surveys on banana and maize in Oyo and Ogun state; 3. Pest reporting - surveillance surveys in banana and maize in Oyo and Ogun state Funds will cover implementation costs, two weeks of surveys for two teams of 3 persons each, transportation by road (fuel and vehicle hire: \$2000), subsistence allowance (8 x 14 @\$30; \$2960; 20 Tablet phones @\$100 each for participating inspectors)	16,000		16,000
Activity 3.5. Train staff of NASC and NAQS on management and maintenance of ICT systems [Workshop 2]			
Activity 3.6. Training of Trainers (Tot) of NASC and NAQS in application of export seed certification and pest surveillance and pest reporting tools [Workshop 3]			
Activity 3.7. Establish e-certification system management facility at NASC and NAQS This activity will contribute to the up-grade of ICT infrastructure and installation of solar power systems to support maintenance of ICT tools at NAQS and NASC with an estimated budget of US\$52,000/-, about 50% each to NASC and NAQS as capital infrastructure. (5200 KW Solar Power system US\$16,000 x 2; equipment and installation; ICT-lab upgrades; HP	52,000		52,000

<p>Workstation Z400, 24GB, 2TB servers x 4 @\$1500; Handheld mobile phone devices 50 x @\$100)</p> <p>Infrastructure will be adopted as fixed assets of NASC and NAQS, with a capacity to operate and manage system as part of the institutional operations.</p> <p>[NB: This amount totals to ~10% of the total budget proposed, and within the STDF limits for capital budget. As per internal practice, we have used capital equipment definition of "USAID Standard Provisions for Non-U.S. Non-governmental Organizations. <i>[Equipment means tangible nonexpendable personal property having a useful life of more than one year, and an acquisition cost of \$5,000 or more per unit; ref. https://www.usaid.gov/sites/default/files/documents/1864/303mab.pdf]</i></p>			
<p>Output 4. Capacity for e-certification for export seed trade and phytosanitary compliance strengthened</p>			
<p>Activity 4.1 Develop and place communication materials for awareness creation on regulations and phytosanitary procedures, ICT tools, functions and uses for internal and external stakeholders</p> <p><i>Cost for development and designing of content, editing and quality control (5 flyers, 5 SOPs; 3 digital modules; 3 training manuals; and 2 user guides; e-book development and hosting on website</i></p>	15,000		15,000
<p>Activity 4.2. Organize two training workshops on ICT applications for NASC, NAQS and seed sector [Workshop 4] and [Workshop 5]</p>			
<p>Activity 4.3. National launching of e-seed certification and pest surveillance and reporting portal (with A4.3) [Workshop 4]</p>			
<p>Project management</p>			
<p>A5.1. Form "Project Implementation Team (PIT)"</p>			
<p>A5.2. Project inception and planning workshop [Workshop 1]</p>			
<p>A5.3. Project review and planning meeting (half-year)</p>			
<p>A5.4. On-line quarterly meetings of the PIT</p>			
<p>A5.4. Recruitment of staff</p>			
<p>A5.5. Project conclusion and final report</p>			
<p><i>Workshops: Five workshops are planned in the project period.</i></p>			
<p><i>Workshop 1: Five-day duration;</i></p> <p><i>First two days for project inception and planning to cover Activities 3.1. and 5.2: work plan and</i></p>	24,000		

<p><i>implementation plan development, and strategy for promoting adoption of digital tool for phytosanitary compliance by public and private sector. A total of 25 persons attend the inception event.</i></p> <p><i>Travel costs (road or air fare @\$280 each for 20; 5 local participants), 3 nights' accommodation (20 x 3 x @\$100), subsistence allowance (@\$30 x 25 x 3)</i></p> <p><i>Second part of the workshop for 3-day duration covers development of digital workflow streams (activities 1.2 and 2.1). This three-day workshop attended by 15 persons from NASC, NAQS and IITA will finalize the digitalization plan and timeline for implementation.</i></p> <p><i>Travel costs (covered above), 4 nights' accommodation (10 x 4 x @\$100), subsistence allowance (@\$30 x 15 x 4)</i></p> <p><i>Meeting organization – meeting room, stationary, AV equipment, secretariat and local transport \$4980</i></p> <p><i>Workshop budget will cover travel cost, accommodation, subsistence allowance and Meeting room, AV equipment and stationary</i></p>			
<p><i>Workshop 2: Training in management and maintenance of digital systems; Two weeks duration; Activity 3.5</i></p> <p><i>Train 4 staff, two each from NASC and NAQS at IITA, for two weeks</i></p> <p><i>Travel costs (road or air fare @\$280 x 4), two weeks accommodation (4 x 14 x @\$100), subsistence allowance (@\$30 x 4 x 14),</i></p>	5,000	3400	
<p><i>Workshop 3: Training of the Trainers in application of export seed certification, pest surveillance, pest report. tools. 5-day workshop for 10 persons (Activity 3.6)</i></p> <p><i>Training of Trainers (Tot) of NASC and NAQS</i></p> <p><i>Travel costs (road or air fare @\$280 x 10), 5 days accommodation (10 x 5 x @\$100), subsistence allowance (@\$30 x 6 x 10), Stationary for workshop (@\$400)</i></p>	10,000		
<p><i>Workshop 4: Joint workshop of the National Launching event and stakeholder training in ICT tools for phytosanitary compliance</i></p> <p><i>National launching of e-seed certification and pest surveillance and pest reporting portal 1-day event; 50 persons [Activity 4.3] (travel cost covered for 25 persons @\$280 per person; subsistence allowance for 50 persons @\$30; meeting organization costs @\$2100)</i></p>	25,000		

Stakeholder training workshop-1, in use of ICT tools for phytosanitary compliance. [Activities 4.3.] 5-day duration; 20 persons trained (travel cost covered above; subsistence allowance for 20 persons @\$30; workshop organization costs @\$2000; 5 days accommodation (20 x 5 x @\$100))			
<i>Workshop 5:</i> Stakeholder training workshop-2 in use of ICT tools for phytosanitary compliance [Activities 4.2] 5-day duration; 20 persons trained (travel cost covered for 20 persons @\$280 per person; travel cost covered above; subsistence allowance for 20 persons @\$30; workshop organization costs @\$2000; 5 days accommodation (20 x 5 x @\$100))	18,000	2600	
Project management			
IITA			
Project coordinator (10% per year) <i>Responsible for overall coordination, implementation and reporting.</i>	36,900	0	36,900
Finance administration (10% per year) <i>Responsible for contract implementation, fund disbursement, finance controls, accounting, expense reporting and audit</i>	30,750	0	30,750
Communication specialist (10%) <i>Responsible for developing communications and outreach plans. Content outline, advisory and editing and quality control</i>	18,450	0	18,450
ICT specialist consultants - (100%) (two persons) Two persons will be spent 100 of the time one each focused on Seed Tracker development and the other on Crop Disease Surveillance program development; establishment of web and smartphone versions of the software; training, capacity development and technology transfer. This appointment will be for the duration of the project for upgrading and assist in transfer of technology. This service can't be provided as in-kind due to limitation of in-house staff time and also for the fact that dedicated staff are necessary for rapid development, training and tech transfer.	123,000	0	123,000
Trainers (IT, seed regulations, pest surveillance and diagnosis) (3%) Expert pool of resources persons from communications, IT, seed regulations, diagnostics and surveillance will work as resource persons in the various workshops planned in the project.		11,070	
Office space For hosting programmers and project coordinator. Rate as per the annual IITA rate for one office	0	4,100	4,100

cubicle, electricity and ICT support (internet) and office consumables.			
Seed Tracker, CDS and other third-party software One-time payment for cloud server and database for hosting 3 rd party functionalities like mapping software, SMS alerts, web and Android hosting and supplies necessary to upgrade and install fit-for-purpose CST and CDS for autonomous operations and management by NAQS and NASC. Infrastructure and software tools will be adopted as fixed assets of NASC and NAQS, with a capacity to operate and manage the system as part of the institutional operations. Seed Tracker and CDS are IITA's programs and offered as in-kind contribution. NB: This allocation of \$60,000 was not considered as infrastructure as this fund does not contribute to procurement of items of value exceeding >\$5000 per unit as per our internal capital equipment definition of "USAID Standard Provisions for Non-U.S. Nongovernmental Organizations [<i>Equipment means tangible nonexpendable personal property having a useful life of more than one year, and an acquisition cost of \$5,000 or more per unit; ref. https://www.usaid.gov/sites/default/files/documents/1864/303mab.pdf]</i> " However, if STDF interpret \$60,000 under infrastructure, we do kindly request you to offer exemption. These are essential elements for successful development of ICT tools and execution of the project. Infrastructure and software tools will be adopted as fixed assets of NASC and NAQS, with a capacity to operate and manage the system as part of the institutional operations.	60,000	10,250	70,250
NASC			
Project manager (15%) A designated senior staff responsible for overall coordination, implementation and reporting of activities at NASC	0	30,750	30,750
Research associate (100%) A associate level staff responsible for day-to-day implementation of the project as per the work plan given, including organization of training courses, communications and interactions with the end users. He/She reports to the project manager. This position required to bridge skill gap in ICT tool use for digital certification and strengthen in-house staff capacity through on-the job training. This position operates for the duration of the project. This service can't be provided as in-kind due to lack of in-house expertise on this matter.	28,700	0	28,700
Office space	0	2,460	2,460

For hosting programmers and project coordinator. Rate as per the annual IITA rate for one office cubicle, electricity and ICT support (internet) and office consumables.			
NAQS			
Project manager (15%) A associate level staff responsible for day-to-day implementation of the project as per the work plan given, including organization of training courses, communications and interactions with the end users. He reports to the project manager	0	30,750	30,750
Research associate (100%) A associate level staff responsible for day-to-day implementation of the project. He reports to the project manager. This appointment is expected to bridge gap in ICT skills in existing set-up. The person will support in-house 'change' to adopt ICT tools for business operations and strengthen in-house staff capacity through on-the job training to support full adoption of new programs and enable change management to digital certification. Resident staff who acquire skills from these staff are expected to continue to support and sustain the functions. This service can't be provided as in-kind due to lack of in-house expertise on this matter.	28,700	0	28,700
Office space For hosting programmers and project coordinator. Rate as per the annual IITA rate for one office cubicle, electricity and ICT support (internet) and office consumables.	0	2460	2,460
Sub-total	491,500	107,340	598,840
Contingency (5%)	24,575		24,575
Grand total	516,075	107,340	623,415

Total budget by center (US\$)			
	From STDF	<i>In-kind</i>	
	US\$	US\$	<i>Comment for in-kind</i>
IITA	227,995	38,320	Staff time, office space & software
NASC	144,060	33,210	Staff time and office space
NAQS	144,060	33,210	Staff time and office space
Total funding	516,115	104,740	

References

- FMARD 2016a. The Agriculture Promotion Policy (2016 – 2020): Building on the Successes of the ATA.Gapshttp://fscluster.org/sites/default/files/documents/2016-nigeria-agric-sector-policy-roadmap_june-15-2016_final1.pdf
- FMARD 2016b. Zero Rejct strategy to promote non-oil exports from Nigeria.
<http://fmard.gov.ng/address-of-hon-minister-agriculture-rural-development-during-the-validation-of-nigerias-strategy-for-zero-reject-of-agricultural-produce-non-oil-exports>Downie, R. 2017. Growing Agriculture Sector in Nigeria. A Report of the CSIS Global Food Security Project. Center for Strategic & International Studies, USA. 20pp.
- Nairametrics 2018. Oil contribution to Nigeria’s GDP remains low.
(<https://nairametrics.com/crude-oil-contribution-to-nigerias-gdp-remains-low/>, accessed on 4 Aug 2018)
- NBS 2018. National Bureau of Statics. <http://www.nigerianstat.gov.ng/>
- Paini, D. R., Shappard, A. W., Cook, A. W., De Barro, P. J., Woomer, S. P., and Thomas, M. B. 2016. Global threat to agriculture from invasive species. PNAS 113: 7575-7579.
- Statista 2018. Nigeria: Distribution of gross domestic product (GDP) across economic sectors from 2007 to 2017. (<https://www.statista.com/statistics/382311/nigeria-gdp-distribution-across-economic-sectors/>, accessed on 1 July 2018)
- USAID 2016. Nigeria Early Generation Seed Study – Country Report by USAID Africa Lead Scaling up for Food Security in Africa. <http://www.africaleadftf.org/wp-content/uploads/2016/09/Nigeria-EGS-Study-Final-Report-August-2016.pdf>
- World Bank 2018. Enabling the Business of Agriculture 2018.
(<http://eba.worldbank.org/data/exploreeconomies/nigeria/2017>, accessed on 26 July 2018)

Appendix 4: Letters of support from organizations that support the project request.

OFFICE OF THE HONOURABLE MINISTER
FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
FEDERAL REPUBLIC OF NIGERIA
P.M.B. 135, Area 11, Garki - Abuja, Nigeria. Tel: 234-9-3141931 Fax: 234-9-3144392

FMA/HMA/057/I

17th September, 2018

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

**LETTER OF SUPPORT TO THE E-CERTIFICATION PROJECT PROPOSAL,
“STRENGTHENING PHYTOSANITARY CAPACITY IN NIGERIA
FOR FACILITATING MARKET ACCESS; DEVELOPING AND
INTEGRATING DIGITAL SYSTEM FOR PEST SURVEILLANCE, PEST
REPORTING, SEED CERTIFICATION AND TRACEABILITY”**

**Ref.- STDF-PPG-626; IITA-NASC-NAQS collaborative project
proposal for STDF funding**

The Federal Ministry of Agriculture and Rural Development (FMARD) is pleased to extend this letter of support to the collaborative project mentioned in the subject line proposed by the two FMARD organizations, NASC and NAQS together with IITA, a CGIAR center headquartered in Ibadan, Nigeria.

2. The proposal plan aligns with FMARD's "High Level Changing Fundamentals in Support for Implementation of the Green Alternative Agriculture Policy Promotion of Nigeria". The "Presidential Presentation Committee 3rd Workshop on Agri-Inputs and Services" held on 28th July 2016 in Abuja, Nigeria, identified pest and diseases and weak phytosanitary capacity as major constraints to competitive seed markets. The FMARD's Agricultural Promotion Policy (APP) 2016 – 2020, focused on developing a more productive, effective, efficient and self-sustaining agribusiness ecosystem.



CONTINUATION

3. Establishment of improved systems for export seed certification, phytosanitary compliance through updated pest information and pest surveillance system are essential inputs for strong positioning of Nigeria as a regional hub for seed export trade. FMARD anticipate proposed initiative serving as a catalyst in lifting basic level production to commercial-level best practices, and attract new private sector partners whilst strengthening existing seed industry to cater the seed demand in Nigeria and West African sub-region.
4. Please be assured of highest support and FMARD extends sincere appreciation to STDF for good support to Nigerian agricultural export promotion schemes.
5. Please accept the assurances of my warm regards.


Audu Ogbeh
Honourable Minister



FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
OFFICE OF THE PERMANENT SECRETARY

OFFICE:
Area 11, P.M.B 135
Garki-Abuja.

Tel: 09-6727283
Fax: 09-6711073

FMARD/PSO/QS/GC/45/V/I/15

24th August, 2018

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, *"Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability"*

Ref.:- STDF-PPG-626; IITA-NASC-NAQS collaborative project proposal for STDF funding

The Federal Ministry of Agriculture and Rural Development (FMARD) is pleased to extend this letter of support to the collaborative project mentioned in the subject line proposed by the two FMARD organizations, NASC and NAQS together with IITA, a CGIAR center headquartered in Ibadan, Nigeria.

The proposal plan aligns with FMARD's "High Level Changing Fundamentals in Support for Implementation of the Green Alternative Agriculture Policy Promotion of Nigeria". The "Presidential Presentation Committee 3rd Workshop on Agri-Inputs and Services" held on 28th July 2016 in Abuja, Nigeria, identified pest and diseases and weak phytosanitary capacity as major constraints to competitive seed markets. The FMARD's Agricultural Promotion Policy (APP) 2016 - 2020, focused on developing a more productive, effective, efficient and self-sustaining agribusiness ecosystem.

CONTINUATION

Establishment of improved systems for export seed certification, phytosanitary compliance through updated pest information and pest surveillance system are essential inputs for stronger position for Nigeria as a regional hub for seed export trade. FMARD anticipate proposed initiative to serve as a catalyst in lifting basic level production to commercial-level best practices, and attract new private sector partners whilst strengthening existing seed industry to cater for the seed demand in Nigeria and West African sub-region.

Please be assured of our support, the FMARD extends sincere appreciation to STDF for the good support to Nigerian agricultural export promotion schemes.

Yours faithfully,


Dr. Bukar Hassan
Permanent Secretary
FMARD



OFFICE OF THE DIRECTOR GENERAL
NATIONAL AGRICULTURAL SEEDS COUNCIL

Federal Ministry of Agric. And Rural Development

KM 29, Abuja - Lokoja Highway, Sheda

P.M.B 716, Garki, Abuja.

Website: www.seedcouncil.gov.ng E-mail: info@seedcouncil.gov.ng

Ref: NASC/FMA/STDF/1024/I/53

6th August 2018
Date:

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, “Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability”

Ref.:- STDF-PPG-626 Expert Consultation Meeting on e-Certification and Pest Surveillance of Export/Import of Seeds in Nigeria, 1st Aug 2018, Rock View Hotel, Abuja, Nigeria

I appreciate invitation to the consultation workshop, and frank communication about the proposal objectives and framework to strengthen phytosanitary capacity in Nigeria. I am of the opinion that development and implementation of this project is much needed for promoting agricultural trade, especially seed exports, efficiently and transparently. I, and my organization, welcome this plan.

I am pleased to inform you that this initiative in line with the activities of NASC as the regulatory agency for seed production and trade in Nigeria with a mission to transform the Nigerian Seed System into a leading seed industry in Sub-Saharan Africa worthy of

generating foreign exchange, key employer of labour and contributing positively to the country's economy, is committed to providing certification services and ensuring traceability of all seeds from Nigeria by ensuring top of the notch quality assurance services in line with international best practices.

While appreciating this initiative I extend our support and look forward to collaboration as a stakeholder, am committed to collaborating in this project.



Dr. Phillip Olusegun Ojo
Director General



NIGERIA AGRICULTURAL QUARANTINE SERVICE
FEDERAL MINISTRY OF AGRICULTURE & RURAL DEVELOPMENT

Plot 81 Raph Sodeinde Street, Enugu State Building Opposite Federal Ministry of Finance Central Business District Abuja
website: www.naqs.gov.ng e-mail: contact@naqs.gov.ng Tel: 08077778943, 08091333385

NAQS/INR/42/I

7th August, 2018

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

Dear Sir/Madam

**Letter of support to the E-certification Project Proposal, Strengthening
Phytopsanitary Capacity in Nigeria for Facilitating Market Access: Developing
and Integrating Digital system for Pest Surveillance, Pest Reporting, Seed
Certification and Traceability.**

***Ref: STDF-PPG-626 Expert Consultation Meeting on E-Certification and Pest
Surveillance of Export/Import of Seeds in Nigeria, 1st August, 2018 Rock View
Hotel, Abuja, Nigeria.***

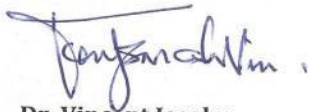
Nigeria Agricultural Quarantine Service (NAQS) is the National Plant Protection Organization of Nigeria and the Contact Point for International Plant Protection Convention (IPPC). It has the statutory function for the prevention of the introduction, establishment and spread of foreign Pest/disease of Plant/plant products, Animal/animal products and Aquatic resource products into Nigeria Agricultural ecosystem.

2. We appreciate invitation to the consultation workshop, and frank communication about the proposal objectives and framework to strengthen phytopsanitary capacity in Nigeria. I am of the opinion that development and implementation of this project is much needed for promoting agricultural trade, especially seed exports, efficiently and transparently. I, and my organization, welcome this plan.
3. We are pleased to inform you that these initiatives are in line with the activities of NAQS Trade Facilitation on export/import of Agro-commodities. E-certification is key to driving these objectives, we will continue to upgrade

and adopt technologies, receive training for phytosanitary inspectors and further train other stakeholders in the export Value Chain.

While appreciating this initiative, we extend our support and look forward to collaborating as a stakeholder. We commit to collaborate in this project.

4. While thanking you in advance for your frank collaboration, please accept, Mr. President, the assurances of my highest consideration.



Dr. Vincent Isegbe
Coordinating Director
NAQS

7th August, 2018



International mailing address
IITA Ltd, Grosvenor House, 125 High Street
Croydon CR0 9XP, UK

Headquarters
PMB 5320, Oyo Road, Idi-Oshe
Ibadan, Nigeria
Tel.: +1 201 6336094
+234 700 800 4482
Fax.: +44 (208) 711 3786 (via UK)

10 August 2018

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
Rue de Lausanne 154
CH-1211, Geneva
Switzerland

Dear Sir/Madam,

Subject: Letter of support to the E-certification project proposal, *"Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability"* in collaboration with NASC and NAQS

I am pleased to inform you of the support of the International Institute of Tropical Agriculture (IITA) for this project proposal. IITA has been working with the National Agricultural Quarantine Services (NAQS) and the National Agricultural Seeds Council (NASC) to improve health systems to safeguard crop and seed production from endemic and invasive threats and to strengthen phytosanitary capacity to enhance access to domestic and international markets of agricultural products generated in Nigeria. A technical group comprising NAQS, NASC and IITA prepared this proposal to strengthen (i) Pest Surveillance and Diagnosis, (ii) Pest reporting, and (iii) Seed Export Certification as a model for implementing effective phytosanitary controls for seed export certification and traceability from farm to port. I understand that addressing these issues will contribute to the IPPC ISPM-6 on Pest Surveillance, ISPM-17 on Pest Reporting, ISPM-7 on phytosanitary certification, and overall improvements to phytosanitary controls in Nigeria.

IITA, in collaboration with NAQS and NASC, fully support this proposed project and will continue to collaborate with relevant stakeholders for improving phytosanitary capacities for safe regional and international trade.

We sincerely hope for the support of STDF for this plan.

Sincerely,

Dr Robert Asiedu
Director, Research-for-Development (West Africa)
r.asiedu@cgiar.org



STANDARDS ORGANISATION OF NIGERIA

Office of the Director-General

Corporate Office: 52, Lome Crescent, Wuse Zone 7, Abuja. info@son.gov.ng
www.son.gov.ng

Lagos Ops. Office: 13/14, Victoria Arobiéke Street, Off Admiralty Way, Lekki Peninsula Scheme, Lekki, Lagos State. P.M.B. 2102, Yaba.

SON/DG/78/IX/502

8 August 2018

The Secretariat

Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

Letter of support to the E-certification project proposal, “Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability”

Your letter reference NAQS/INR/42/I on the Expert Consultative Meeting on E-Certification and Pest Surveillance of Export/Import of Seeds and the subsequent proposal generated on the subject refers.

2. The Standards Organisation of Nigeria (SON) is the apex standardization body in Nigeria, vested with responsibility of Preparation of standards relating to products, measurements, materials and processes among others, and their promotion at the national, regional and international levels.
3. We appreciate your invitation to the consultation workshop and the frank communication about the proposal objectives and framework to strengthen phytosanitary capacity in Nigeria. It is our view that development and implementation of this project is required for promoting agricultural trade, especially seed exports, efficiently and transparently. The Standards Organisation of Nigeria therefore welcomes the plan.
4. The initiative is in line with our mission of promoting consumer confidence and global competitiveness of Nigerian made products and services through standardization and quality assurance. SON is thus committed to providing regulations on seed export trade in the area of inspection and certification.
5. While once again appreciating the initiative, please be assured of our support as we look forward to collaboration as a key stakeholder in actualizing the project.
6. Please accept the assurance of my warm regards.

Osita A. Aboloma (Esq.)

Director General / Chief Executive





SEED ENTREPRENEURS ASSOCIATION OF NIGERIA (SEEDAN) SECRETARIAT

C/O Premier Seed Nig. Ltd., Chikaji Industrial Estate, P.O.Box 1673
Zaria, Kaduna State, Nigeria.
e-mail: seedanigeria@gmail.com

6th August, 2018.

The Secretariat,
Standard and Trade Development Facility (STDF),
World Trade Organization,
CH-121, Geneva,
Switzerland.

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, “Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability”

Ref.:- STDF-PPG-626 Expert Consultation Meeting on e-Certification and Pest Surveillance of Export/Import of Seeds in Nigeria, 1st Aug 2018, Rock View Hotel, Abuja, Nigeria

The Seed Entrepreneurs Association of Nigeria (SEEDAN) appreciates the STDF Project Proposal consultation workshop organized by IITA-NASC-NAQS, and frank communication about the proposal objectives and framework to strengthen phytosanitary capacity in Nigeria. SEEDAN is of the opinion that development and implementation of this project is much needed for promoting agricultural trade, especially seed exports, efficiently and transparently from Nigeria and therefore, support this plan.

I am pleased to inform you that SEEDAN is the foremost private seed body registered in Nigeria and a member of the Africa Seed Trade Association (AFSTA) whose membership comprises numerous Seed Trade Associations of various countries in Africa. The association was formed in 1993 as the apex private sector seed trade body in Nigeria. Currently, SEEDAN has over 67 registered members who are private entrepreneurs engaged in the production and marketing of quality seed across Nigeria and West Africa. In 25 years, SEEDAN transformed from an association with few memberships and very few trained personnel to an association with large membership and well-trained personnel's who were able to produce over 180,000 metric tons of certified seeds not only for Nigeria, but for the West Africa sub region.

SEEDAN's aspiration is to strengthen its members to produce high quality seed for domestic and regional markets. Nigerian has been the seed hub in West Africa, with over 80% members many of whom are involved in seed supply to neighboring countries in the sub-region. Implementation of e-seed certification for seed traceability and phytosanitary compliance is quite essential need to promote seed exports to regional markets. We envisage benefits of pest surveillance system and updated pest information going beyond meeting the export phytosanitary compliance because of its power to offer early warning against invasive threats and safeguard seed sector from threats like maize lethal necrosis that crippled burgeoning seed industry in East Africa.

Mr. Richard Olafare
President

Prof. J. Olarewaju
Vice President

Alh. Ibrahim Abdullahi
Secretary General

Mr. Amos Abba
Publ. Secretary

Mrs. Stella Thomas
Treasurer

Engr. S.D. Yakubu-Atar
Ex-Office

Dr. I.U. Usman
Ex-Office

Prof. C.A Echekwu
Editor-in-Chief

Prof. J.O. Onyibe
Ex-Office

Dr. M.O. Ajala
Ex-Office

SEEDAN appreciates IITA-NASC-NAQS partnership for conceiving this strategy and all the efforts in realizing it. SEEDAN anticipates receiving training to adopt new procedures and benefit from the capacity development to enhance export trade from our members to capture high demand in the regional markets. I am pleased to extend fully, the support of SEEDAN to this plan and wish the proposing team very best.

While sincerely thanking you for providing opportunity for the Nigerian team, and in anticipation of funding support, please accept assurance of my highest consideration.

Best regards,



OLAFARE RICHARD.O
SEEDAN PRESIDENT



PREMIER SEED NIGERIA LTD. (RC 134911)

Head Office: Chikaji Industrial Estate, P. O. Box 1673, Zaria, Kaduna State, Nigeria
e-mail: premierseednigeria ltd@yahoo.com

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland.

8th August 2018

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, "*Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability*"

Ref.:- STDF-PPG-626 Expert Consultation Meeting on e-Certification and Pest Surveillance of Export/Import of Seeds in Nigeria, 1st Aug 2018, Rock View Hotel, Abuja, Nigeria

Premier Seed Nigeria Limited is a successor of Pioneer Hi-Bred International Inc., IOWA, USA. It is the oldest Seed Company in Nigeria and the Nation's leader in Seed Industry. It was incorporated in Nigeria as a Private Limited Liability Company in 1994. The company is involved with Research and Development (R&D), Production/Processing/Packaging and Marketing of improved, well-tested, high-yielding, high-quality seeds. Our crops of interest include Rice, Soybean, Cowpea, Sorghum, Cotton, and Groundnut amongst others, and a wide range of Vegetable seeds (local and exotics). We collaborate with all the National Research Institutes (IAR, NCRI, NIHORT e.t.c.) and International Research System (IITA, WARDA, ILRI, ICRISAT). Our mission is to provide improved seeds for the farmers through the broad application of the science of genetics and technology.

I appreciate invitation to the consultation workshop organized to present the framework of the STDF project proposal plan. Electronic systems for domestic and export seed certification is a welcome development, expected to ease certification process and boost market access. Our company welcome this initiative and look forward to receiving training on use of the system when established. We can also take part in the pilot testing and validation of the programs. I extend our support and look forward to collaboration as a stakeholder in this project.

Yours faithfully,


Prof. A.O. Ogungbile
Managing Director/CEO.

Seeding Nigeria to Feed the Nation

Scanned by CamScanner



DA-ALLGREEN SEEDS LIMITED

HEAD OFFICE/MAIN FACTORY: Plot H9 Kudenda Industrial Layout (Behind Sunglass) Kaduna South, Kaduna State

SUBSIDIARY OFFICE: No. 13A MTD / Chikaji Road, Sabon Gari, Zaria - Kaduna

Tel: +234 806 341 6241, +234 803 507 3470, +234 802 574 1085, +234 703 906 4471, +234 703 893 1860

email: daallgreenseeds@yahoo.com or yakubuatar@yahoo.com website: www.daallgreenseeds.com

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

6th August 2018

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, "*Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability*"

Ref.:- STDF-PPG-626 Expert Consultation Meeting on e-Certification and Pest Surveillance of Export/Import of Seeds in Nigeria, 1st Aug 2018, Rock View Hotel, Abuja, Nigeria

Da-all green seeds limited is a multifaceted agricultural company involved in the production, processing and marketing of improved quality planting materials of various food crops, our vision is to be a top class agricultural professional concern, with special touch of excellence in all our activities ;in producing high quality planting materials, produce and products.

I appreciate the invitation to the consultation workshop, and frank communication about the proposal objectives and framework to strengthen phytosanitary capacity in Nigeria. I am of the opinion that development and implementation of this project is much needed for promoting agricultural trade, especially seed exports, efficiently and transparently. I, and my organization, welcome this plan.

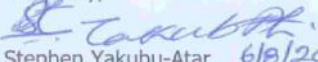
I am pleased to inform you that this initiative in line with the activities of our company to be a viable company of repute, producer of high quality improved seeds and continuously involved in advocacy and awareness creation on the benefits of improved seed usage.

Da-allgreen seeds limited is committed to adopting improved technologies and making improvements in all aspects of seeds production and also to receive trainings to best equip our stakeholders and farmers to have a great produce from our good seeds

While appreciating this initiative I extend our support and look forward to collaboration as a stakeholder committed to collaborating in this project.

While thanking you in advance for your frank collaboration, please accept the Managing Director's assurance of the highest consideration.

Yours faithfully,


Engr Stephen Yakubu-Atar 6/8/2018.
Managing Director/CEO



NIPC/DPA/633/V.1/38

Plot 1181, Aguiyi Ironsi Street
Maitama District
P.M.B 381 Garki, Abuja
+234 (9) 290 0059
+234 (9) 290 0061
www.nipc.gov.ng

17 September 2018

The Secretariat
Standard and Trade Development Facility (STDF)
World Trade Organization
CH-121, Geneva, Switzerland

Dear Sir/Madam,

Sub.:- Letter of support to the E-certification project proposal, "Strengthening phytosanitary capacity in Nigeria for facilitating market access: Developing and integrating digital system for pest surveillance, pest reporting, seed certification and traceability"

Ref.:- STDF-PPG-626 Expert Consultation Meeting on e-Certification and Pest Surveillance of Export/Import of Seeds in Nigeria, 1st Aug 2018, Rock View Hotel, Abuja, Nigeria

Nigerian Investment Promotion Commission (NIPC) was established to encourage, promote and coordinate investments, as part of efforts to create an investment friendly environment for accelerated inflow of Foreign Direct Investment (FDI) into the Nigerian economy.

2. We appreciate the invitation to the consultation workshop held in Nigeria and frank communication about the proposal, objectives and framework to strengthen phytosanitary capacity in Nigeria. We are of the opinion that development and implementation of this project is much needed for promoting agricultural trade, especially seed exports, efficiently and transparently. NIPC welcomes this plan.

3. NIPC will be happy to work with the relevant stakeholders to strengthen the phytosanitary capacity in Nigeria to fully support the development of Nigeria's agricultural sector.

4. Thank you!

Yours faithfully,


Reuben Kifasi
Director, Policy Advocacy
For: Executive Secretary/CEO