



STANDARDS *and* TRADE
DEVELOPMENT FACILITY



Royal
Netherlands
Embassy

PROJECT: STDF/PG/543

ENHANCING THE CAPACITY OF THE FRUIT AND VEGETABLE SECTOR TO COMPLY WITH PHYTOSANITARY REQUIREMENTS FOR EXPORT TO EU, OTHER HIGH-END MARKETS AND REGIONAL MARKETS

FINAL REPORT

30TH NOVEMBER 2022



MAAIF
Ministry of Agriculture
Animal Industry and Fisheries



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PROJECT INFORMATION

Beneficiary

UGANDA

Project number and title

STDF 543 Enhancing the capacity of the Fruit and Vegetable Sector to comply with Phytosanitary requirements for export to EU, other high-end markets and regional markets

Budget

Total project value: US\$ 882,726

Approved STDF contribution: US\$ 484,788

Disbursed STDF contribution (i.e. during the project lifetime): US\$ 387,830

Approved RNE contribution: US\$ 252,565

Disbursed RNE contribution: US\$ 195,791

Approved MAAIF contribution: US\$ 145,373

Period of implementation

1st February 2019 – 30th September 2022 (STDF component)

1st February 2019 – 31st July 2022 (RNE component)

Implementing Agency

Department of Crop Inspection and Certification (DCIC), Ministry of Agriculture Animal Industry and Fisheries (MAAIF)

Partners

Uganda Agribusiness Alliance (UAA)

Uganda Fruits and Vegetables Exporters and Producers Association (UFVEPA)

Horticultural Exporters Association (HORTEXA)

Uganda Horticulture Exporters and Processors Association (UHEPA)

Ministry of Trade, Industry and Cooperatives (MTIC)

COLEACP

Kenya Plant Health Inspectorate Service (KEPHIS)

Uganda Flower Exporters Association (UFEA)

Uganda Export Promotion Board (UEPB)

National Agricultural Research Organization (NARO)

Centre for Agriculture and Bioscience International (CABI)

LIST OF ABBREVIATIONS

CABI: Centre for Agriculture and Bioscience International
EU: European Union
FAW: Fall Armyworm
FFV: Fresh Fruits and Vegetables
FHL: Fresh Handling Limited
GAP: Good Agriculture Practices
GeNs: General Electronic Notification System
GMP: Good Management Practice
HORTEXA: Horticultural Exporters Association
HortiMAP: Horticulture Market Acceleration Program
HOs: Harmful Organisms
IPM: Integrated Pest Management
IPM: Integrated Pest Management
ISPM: International Sanitary and Phytosanitary Measures
KEPHIS: Kenya Plant Health Inspectorate Service
MoFPED: Ministry of Finance, Planning and Economic Development
MRLs: Minimum Residue Levels
MT: Metric Tonnes
MTIC: Ministry of Trade, Industry and Cooperatives
NARO: National Agricultural Research Organization
PIRT: President's Private Investors Round Table
PMC: Project Management Committee
PPE: Personal Protective Equipment
PPG: Project Preparation Grant
PPP: Public Private Partnerships
PSC: Phytosanitary Certificates
PSFU: Private Sector Foundation Uganda
RIA: Regulatory Impact Assessment
RNE: Royal Netherlands Embassy
SOPs: Standard Operating Procedures
SPS MSP: Sanitary and Phytosanitary Multi-stakeholder platform
SSMS: Specific Phytosanitary Survey and Monitoring System
STDF: Standards and Trade Development Facility
ToTs: Training of Trainers
TRASE: Trade of Agriculture Safely and Efficiently in East Africa
TWG: Technical Working Group
UAA: Uganda Agribusiness Alliance
UEPB: Uganda Export Promotion Board
UFEA: Uganda Flowers Exporters Association
UFVEPA: Uganda Fruits and Vegetables Exporters and Producers Association
UHEPA: Uganda Horticulture Exporters and Processors Association
UNBS: Uganda National Bureau of Standards

1 EXECUTIVE SUMMARY

Uganda is a country driven predominantly by its rural agriculture sector, demonstrated by the fact that about 84% of Uganda's working population are employed in agriculture¹ and thus depend on agriculture as a source of livelihood. Agriculture accounts for around 24% of Uganda's GDP and around 40% of its exports (World Bank, WTO).² Though the FFV export sub-sector has great potential to grow, it has over the years been curtailed by high levels of interceptions in the EU market due to harmful organisms (HOs). Exports to the EU amount approximately to 60% of all FFV exports, making it Uganda's most important market. During the years 2014 and 2015, over 81% of the FFV consignments were intercepted with HOs in the EU³, of which most were associated with interceptions of exported chillies with false codling moth. This state of affairs greatly jeopardized Uganda's trade with the EU, and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) decided to address the issue by instituting a temporary ban on chilli exports⁴, in order to prevent Uganda being stopped from exporting to the EU market.

As part of its efforts to reduce interceptions, MAAIF through its Department for Crop Inspection and Certification (DCIC) applied for a project preparation grant which was granted, and through which DCIC prepared and submitted a proposal to STDF for this project. The application was considered and approved during an STDF working Group meeting held on 20th and 21st October 2017.⁵ The Project was co-funded by the Royal Netherlands Embassy (RNE), in Kampala. The funders engaged the Centre for Agriculture and Bioscience International (CABI) as project manager through contractual agreements dated 14th January 2019. The project total value was US\$ 882,726 of which US\$ 484,788 was STDF contribution, US\$ 252,565 RNE contribution and US\$ 145,373 MAAIF's in-kind contribution. DCIC was responsible for technical delivery of the project working closely with a Project Management Committee (PMC) representing both public and private sectors. The Uganda Agribusiness Alliance (UAA) was assigned some work packages for which it was sub-contracted to deliver. The projects started on 1st February 2019 with a completion date of 31st January 2022. Both funders approved a six month no-cost extension from 1st February 2022, which was necessitated by delays in project implementation caused by COVID 19 pandemic restrictions instituted in Uganda early 2021. STDF granted an additional two-month extension from 1st August to 30th September 2022 to allow an end-of-project seminar that could not be implemented at the end of July, as initially planned, due to overwhelming commitments at the DCIC.

The project's overall goal was to improve market access to the European Union (EU), other high-end and regional markets for Ugandan fresh fruits and vegetables (FFVs) with an aim of having FFV trade volumes and values improving by the time of project closure or at least staying the same as when the project was initiated. Its key purpose was to improve Uganda's compliance with international phytosanitary standards for production and export of FFVs with the aim of reducing interceptions of FFVs in the EU by end of project. The project focused specifically on reducing interceptions of chillies (*Capsicum*) due to false codling moth (FCM) and worked around six output areas detailed in section 3 below.

An end-of-project external assessment conducted between August to October 2022 concluded that the project had achieved its purpose by reducing interceptions of *Capsicum* due to harmful organisms, report attached as Annex 1. By September 2022 there were only 3 cases of *Capsicum* interceptions due to OHs compared to 43 reported in 2018. The assessment found that the project had achieved 87.5% of logframe indicators, i.e., 56 indicators out of 64. Those not achieved were mainly from activities that were superseded by other government initiatives and their budgets reallocated to other activities following donor approval.

During an end-of-project seminar held on 29th and 30th August 2022, stakeholders gave feedback on project impacts, difference it had made to their endeavours, lessons learned and recommendations

¹ Source : <https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=UG> & https://www.wto.org/english/res_e/statis_e/daily_update_e/trade_profiles/UG_e.pdf

²Source: <http://ea-agribusiness.co.ug/prospects-of-uganda-agricultural-trends-in-2015/>

³Source: STDF Project Application Grant, Application Form, Enhancing the capacity of the fruits and vegetable sector to comply with EU Phytosanitary requirements.

⁴ Source: Final Report of an Audit carried out in Uganda from 06 September 2016 to 15 September 2016 in Order to Evaluate the System of Official Controls for the Export of Plants and Plant Products to the European Union.

⁵ Summary report of the STDF Working Group Meeting 20-21 October 2016, WTO, Geneva. www.standardsfacility.org/sites/default/files/STDF_WG_Summary_Report_Oct-16.pdf

for follow-up, see Annex 2 for full report. The project generated good rapport and collaboration amongst public and private sectors through meetings, joint training activities and dialogues hosted by the Sanitary and Phytosanitary Multi-stakeholder platform (SPS MSP), which was established by the project. The platform gained a membership of over 168 persons representing government, private sector, projects and donors. It evolved to be a vibrant forum where information was shared and joint learning undertaken, for example on GlobalGap. The SPS MSP was an effective building stone for the evolution of the FFV public private sector partnership. Before the project inception, there was no such system for building a common vision on what the sector aimed to achieve, there was little trust and synergy, all of which were achieved through these collaboration mechanisms carried out through the project.

Stakeholder's capacity was built in line with a systems approach to the extent that each party in the FFV value chain understood their collective and individual roles that would facilitate the sector to meet EU SPS export requirements. Producers benefited from various interventions aimed at reducing pests on the farm including training on good agriculture practices (GAP), Integrated Pest Management (IPM), and how to produce their chillies guided by a system-based capsicum dossier that was developed with the support of COLEACP in collaboration with the project. The project produced awareness and training materials for farmer and extension staff levels such as fact sheets, and videos, some of which were translated into local languages for better assimilation by beneficiaries. The number of exporters rose during the project from 67 in 2019 to 125 by 2020 and 150 active in 2022, which the stakeholders attributed to a successful streamlined registration and certification process of those interested in the business, clarity of processes and export requirements, and efficiency in issuing phytosanitary certifications. These enablers were instituted through the project that developed guidelines for registering exporters; training inspectors and exporters on the use of e-phyto; and equipping inspectors with computers which enabled them to issue the e-phytos. Information collected through e-phyto is enhancing DCIC's data base on exporters and will be used to enhance traceability. There was no system for traceability prior to these interventions. E-phyto improved documentation and has reduced incidences of certificate forgery. Since its onset, the project consistently lobbied producers and exporters associations to form an Apex body. After many attempts and challenges, an Apex body named Hortifresh was launched in November 2021. Hortifresh was formed through a concerted effort involving this project, organizations such as SwissContact, TRASE and the government. This apex body in collaboration with relevant government institutions has embarked on harmonizing operations of the FFV export sector and eased mechanisms for Public Private Partnerships (PPP). It is expected that its members will benefit by having a stronger voice when negotiating with government and input supplier companies, among others.

Adequate capacity was built for DCIC staff to perform their inspection and certification duties. The staff better understood their role and that of other stakeholders. They were able to prioritize areas which the project should focus on after appreciating the approach that had made Kenya's horticulture sector successful. MAAIF increased the number of inspectors by 25 during project implementation, 20 of whom were deployed to man the exit points 24/7, which was impossible at the onset of the project as there were only 4 inspectors, who by then were deployed at the airport and to packhouses. The morale and efficiency of staff were boosted through the project, which issued Personal Protective Equipment (PPE) to 70 DCIC staff; 25 persons were also equipped with computers, tablets and inspection kits. Various technical reference materials were produced by the project including Standard Operating Procedures (SOPs) for inspection, SOPs for specific survey and monitoring of five priority FFV quarantine pests - *Thaumatotibia leucotreta* (False Codling Moth (FCM)), *Potato Virus Y* (PVY); *Dacus* spp, *Bactrocera* spp (Fruit flies); *Helicoverpa armigera* (African bollworm); *Spodoptera frugiperda* (cotton bollworm).

The Project supported meetings to review the SPS policy and Regulatory Impact Assessment (RIA) which, when implemented, will be a key facilitating pillar for sustaining compliance to market requirements and hence sustain gains made by the project. The project was successful to a great extent because of the interactions and collaboration built with both government and private sector initiatives. This collaboration will continue post project, particularly through direct MAAIF Private sector and NGO partnerships, as well as the SPS MSP for which UAA secured its funding to 2025. The findings from a market study funded by the project and conducted by UAA to "assess opportunities for increasing fruit and vegetable exports to both new and current markets with improved SPS compliance", will continue to guide decision makers on the importance and potential of the horticulture sector, in order to garner their support. These findings were shared with MAAIF top leadership and other government institutions and were being referred to by the President's Private Investors Round Table (PIRT) for Agriculture and the Horticulture Stakeholders consultation

meetings held by the Ministry of Finance, Planning and Economic Development (MoFPED). Overall, the project's objectives and impacts will continue to be pursued by the DCIC where the project was domiciled. During the end-of-project seminar, a number of NGO and development partner initiatives indicated that they would be willing to support both government and private sector to address gaps in the horticulture sector identified at the meeting.

Stakeholders shared lessons learned from the project and made recommendations for enhancing what the project had initiated, see Annex 1 and 2 for details. Key highlights are: the project's success was attributed to effective stakeholder engagement and ensuring that the project was contributing directly to government's initiatives aimed at streamlining the sector and hence it remained relevant in a rapidly evolving sector. This approach should be encouraged in future projects; it was challenging to consolidate environmental and gender related impacts because these aspects were not comprehensively catered for during project formulation and hence a recommendation is made for this to be done in future projects; EU audit conducted in 2016 and 2019 helped to take account of the systems in place and also build urgency that hastened action. The lesson is that such pressure is important to build momentum, which a project can have through a requirement for an external mid-term evaluation, so we recommend consideration for such an evaluation in future projects.

It is also recommended that DCIC finds resources to continue with or scale out farmer training using the curriculum and TOTs developed and trained by the project respectively. It should consider constituting a team to conduct regular specific surveys and monitoring of the five priority pests and others, in order to make good use of capacity built by the project. The new Food Law and the Revised Plant Protection, Health Regulations and SPS policy, will enable MAAIF and in particular DCIC regulate the FFV sector in an effective and sustainable way and therefore, DCIC needs to continue lobbying for their enactment. Against this background of recommendations, DCIC has developed a concept note together with the European Union Delegation in Kampala to develop a project proposal that will scale up and address some of the project activities and identified gaps. The total project amount is estimated to be €8M.

2 BACKGROUND

The proposal for this project was written in the year 2016 through a project preparation grant (PPG) applied for by DCIC with support from the Ministry of Trade, the Uganda Agribusiness Alliance (UAA), a number of private sector organizations such as HORTEXA, UHEPA, UVEAPA, FAUEX, HOPE and UFEA and CABI.

The purpose of the project proposal was to address high non-compliance levels in the European market especially due to the detection of quarantine pests. During the year 2015 about 86% of the FFV consignments were intercepted with HOs (harmful organisms) in the EU and 81% were intercepted in the year 2014⁶; and in the period 1 January 2015 – 31 October 2017 a total 203 interceptions of exported chillies with false codling moth were reported. The European Commission sent several warning letters to Uganda's National Plant Protection Organisation (DCIC), due to the high number of interceptions of chillies with false codling moth and fresh curry leaves with *Trioza* spp. This was a big threat to Uganda's access to the EU market and in response Uganda submitted an action plan to deal with the issues, including temporary ban on chilli exports⁷.

The project was designed mainly to address incompetence in the management of harmful organisms regulated in the EU particularly FCM on chillies by building the capacity of both the public and private sectors to meet EU export SPS requirements. Challenges identified were:

- Low awareness and capacity of public and private partners about phytosanitary market requirements and phytosanitary application methods;
- Lack of a streamlined inspection and export certification system
- Gaps in the regulatory framework, not sufficiently in line with market import standards and regulatory framework
- Lack of adequate human and financial resources to deal with all plant health regulatory aspects

⁶Source: STDF Project Application Grant, Application Form, Enhancing the capacity of the fruits and vegetable sector to comply with EU Phytosanitary requirements.

⁷ Source: Final Report of an Audit carried out in Uganda from 06 September 2016 to 15 September 2016 in Order to Evaluate the System of Official Controls for the Export of Plants and Plant Products to the European Union.

- Stringent numerous specific requirements to be met by exports but exporters not adequately sensitized
- Poor control of exporter certification procedures to prevent export of non-compliant products and smuggling
- Fragmented exporter associations leading to poor coordination and compliance among value chain stakeholders
- Low awareness (capacity gaps) for SPS issues amongst stakeholders hence serious consequences due to non-compliance
- Inadequate infrastructure and equipment to support SPS inspection and certification, e.g. laboratories, inspection facilities and equipment
- Lack of a farmer, producer traceability and registration mechanisms
- Poor agronomic practices and extension systems, weak producer organizations
- Lack of a marketing strategy for FFVs

It was designed to promote the sharing of phytosanitary responsibility between stakeholders in the FFV value chain using a public private partnership (PPP). The PPP would guarantee a financially sustainable approach. A private sector-led SPS Multi-Stakeholder Platform would be established to complement and support the existing (and more permanent) national coordination mechanisms.

Justification for this project was based on the fact that the agriculture sector contributed to 42 per cent of the national gross domestic product and 80 per cent of the export earnings⁸. These export trade flows gave support to rural employment and economic development. Focus on the EU market was justified because approximately 60 percent of all FFV exports were to the EU.

The application STDF/PPG/543 was approved by the STDF Working Group in a meeting in Geneva, 20-21 October 2017.⁹ A contract for implementation was signed with CABI dated 14th January 2019 (STDF) with a project start date of 1st February 2019 and 31st January 2022 as the end date. The project period was extended to July 2022 for the RNE funding and September 2022 for STDF funded activities. Project extension was sought due to delays in project implementation that was caused primarily by COVID 19 pandemic related restrictions.

3 PROJECT GOAL

The project's overall goal was to improve market access to the European Union (EU), other high-end and regional markets for Ugandan fresh fruits and vegetables (FFVs). The indicator of success being that FFVs Trade volumes and value improve or at least stay the same as at the project onset.

The project's impact was expected to contribute to poverty reduction, given that farmers that grow commodities exported to EU, such as chillies, would have the capacity to adequately manage pest and diseases resulting to reduced production costs, have higher yields of good quality from which they would fetch higher prices. Traders and exporters would improve their incomes by exporting produce that is free of quarantine pests and hence not make huge losses associated with interceptions.

Its key purpose was to improve Uganda's compliance with international phytosanitary standards for production and export of FFVs. The indicator for success being reduced interceptions of FFVs in the EU. The project would improve inspection and certification of produce earmarked for export thus reduce incidences of interceptions and therefore, enhance the market access for Uganda's FFVs in the EU and other regional markets. Eventually this would lead to bigger volumes being exported leading to higher incomes for those in the value chain.

The project had six result/outputs areas, namely:

⁸Source: <http://ea-agribusiness.co.ug/prospects-of-uganda-agricultural-trends-in-2015/>

⁹ Summary report of the STDF Working Group Meeting 20-21 October 2016, WTO, Geneva.
www.standardsfacility.org/sites/default/files/STDF_WG_Summary_Report_Oct-16.pdf

- Output 1: A diagnostic mapping of public and private partners and SPS services along the horticulture value chain is completed. A private sector-led SPS Multi-stakeholder platform is developed to complement and assist national coordinating mechanisms
- Output 2: A capacity development plan is implemented, upon validation by the results of diagnostic mapping in Output 1, which confirms and prioritizes the capacity gaps identified in the planned activities for this Output
- Output 3: A streamlined inspection and export certification system through the value chain for horticulture products based on public-private partnership (PPP) is designed and adopted in accordance with the results of the diagnostic mapping and with international sanitary and phytosanitary measures (ISPM) 14
- Output 4: Specific phytosanitary survey and monitoring systems in the FFV value chain based on public private partnership (PPP) are effectively operational
- Output 5: Based on a market study to assess opportunity to increase fruit and vegetable exports to both new and current markets with improved SPS compliance, realistic Uganda Export Marketing Strategy for FFVs is developed and agreed upon by the key stakeholders of the FFV export value chain
- Output 6: Improved awareness at national levels of inspection and certification systems in the horticulture sector as a whole and based on the experiences, recommendations on improvements to be made for the FFV Export Value Chain and expansion of the results to other horticulture sub-sectors are made

4 PROJECT IMPLEMENTATION AND MANAGEMENT

The project was implemented by DCIC, which was responsible for overall project technical implementation; DCIC appointed a national project coordinator to liaise directly with national stakeholders, CABI and the funders. CABI was responsible for managing the project in consultation with DCIC, which included:

- overseeing progress of project activities against agreed timelines
- overseeing disbursement and monitoring the use of donor funds as per agreed budgets
- supporting the development of good working relations and partnerships
- reporting to the funders and disseminating project results

CABI appointed a specific officer to be responsible for administering the project and providing liaison with the Uganda National Coordinator, sub-contractors and funders. The UAA was sub-contracted to lead a number of activities that were outlined in the project document. A project management committee (PMC) was constituted at the beginning of the project and met at least once a year in Entebbe. Its role was to give direction for project implementation and in particular advice on any adjustments needed for the project to be in sync with a rapidly evolving FFV export sector and other emerging priorities; it was responsible for reviewing and approving half-yearly workplans and terms of reference for sub-contracted work packages. It had the following representation:

- DCIC
- CABI Africa
- Five members of Producer and Exporter Association (HORTEXA; UFVEAPA, FAUEX, HOPE and UHEPA)
- Ministry of Trade, Industry and Cooperatives (MTIC)
- Uganda Agribusiness Alliance

The PMC constituted task forces or teams to address specific issues during project implementation, for example, in designing a specific survey and monitoring system; while the Uganda Flower Exporters Association was consulted on need basis.

Monitoring project progress in order to make adjustment, learn lessons and make recommendations for improvement was undertaken during the PMC meetings, whereby the project manager and administrator would provide an overview of progress and challenges for PMC inputs. An end of project assessment was undertaken at the end of project implementation using the STDF framework and a report is shared as part of this final project reporting, Annex 1.

A document with contacts of key persons engaged in the project's implementation is attached to this report, Annex 3.

5 PROJECT OBJECTIVE, OUTPUTS AND ACTIVITIES

5.1 Project objective

Achievement of project objective and purpose

The project's purpose was to reduce the number of interceptions as a result of regulated pests being found in produce exported to the EU, see project logframe, Annex 4. The project focused on reducing interceptions due to FCM on Chilies. An independent end-of-project external assessment concluded that the project achieved 56 of a total of 64 (87.5%) indicators that it had across the 6 result (output) areas. As indicated in the assessment report, the project achieved the intended purpose by reducing interceptions due to harmful organisms as shown in figure 1 below. In 2018, a total of 43 interceptions of Capsicum were recorded, while by September 2022 only 3 had been recorded for this export commodity. This achievement was attributed to: (i) capacity built through this project that led to improved inspections and certification – see specific achievements made per output area detailed under sections 5.1.1-5.1.6 below; (ii) only vetted and approved companies were allowed to export from 2019; and (iii) these companies were adequately orientated and trained on EU export requirements.

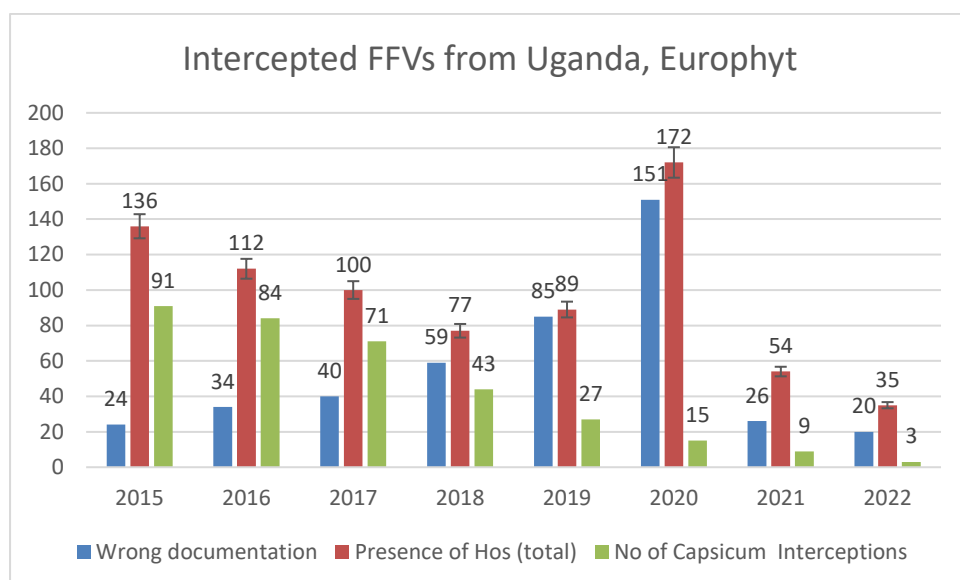


Figure 1: Intercepted consignments from Uganda reported to EUROPHYT-Interceptions, 2015 to August 2022. Further information about EUROPHYT-Interceptions is available on the website of DG Health and Food Safety: https://food.ec.europa.eu/plants/plant-health-and-biosecurity/europhyt/interceptions_en

Trade in FFVs did not however, reach an increment of 10,000 metric tonnes (MT) that were projected to be achieved during the project period, see table 1 below. In 2018 the exports were 95,215 MT which fluctuated from year to year for a couple of reasons including that: in 2019 Uganda made a self-imposed ban on exports for four months in October 2019 to January 2020, in order to give itself time to put in place urgent measures that were required by the EU and hence prevent a possible trade ban by the EU. The DCIC, with support from this project, successfully addressed key issues such as, only allowing vetted companies to export again; having adequate inspection facilities at the point of exit and putting in place inspection protocols. COVID 19 restrictions had intrinsic negative effects on growth of the horticulture export sector across the globe and its impact also contributed to slow growth in Uganda. The number of exporters however, increased from 67 in 2019 to 125 in 2021 and 250 in 2022, which the project team attributed to improved clarity of exporter requirements, transparency and increased trust between the public and private sector.

Table 1: Fruit and vegetable volumes, values and exporting companies, from 2014 to 2021

Trade Elements	2014	2015	2016	2017	2018	2019	2020	2021
Export Volumes	27,916	57,358	82,358	97,028	95,215	68,862	83,554	68,769
Values (in US\$ million)	20.77	32.10	43.20	38.46	40.62	36.11	45.23	44.48
Exporting companies	7	10	25	45	52	67	120	125

Source: <https://www.ubos.org/explore-statistics/10/>

Project's impact on beneficiaries

The project made a positive impact on the operations of farmers, exporters and DCIC individually as well as collectively. Over 1400 individuals benefited with knowledge on how to manage pest and diseases on their farms, which will potentially enable them cut on-farm losses, reduce their cost of production and hence accrue higher incomes from their farming activities. Farmers benefited from a Good Practice Guide Capsicum Dossier developed with support from COLEAP in collaboration with the DCIC and private sector, which they are using as a guide on practices that will enable them meet EU SPS requirements. Inspectors reported that their morale to work, competency and efficiency had improved greatly as a result of the project. They became confident in their work because they understood their roles and were equipped and trained to carry-out their tasks effectively. Seventy (70) staff were equipped with PPEs and 25 staff issued with laptops, tablets and inspection kits. The electronic equipment enabled them to use e-phyto, which hastened time required to apply and issue phytosanitary certificates.

The project successfully initiated and stimulated collaboration between the public and private sectors, which is benefiting both parties by enabling a common understanding of their individual and joint roles which has smoothened transactions between the parties. This was achieved through a number of interventions: an SPS Multi-stakeholder platform was established which provided an open forum for sharing and exploring avenues for collaboration for 168 individuals representing government, producers, exporters and donors, details under 5.1.1. When the project started there was no formal or informal space for government institutions, private sector and development partners to meet, discuss and cultivate synergy to build the horticulture sector.

One of the key outputs expected from the project was the formation of an Apex body that would bring producer and exporter associations to work together in order to enable self-regulation and streamlining of their collaboration with the public sector. The project managed to lobby and convince majority of these associations to join an Apex body that was formed through a concerted effort with other government initiatives. A number of training and field activities were undertaken jointly for producers, exports and inspectors. These ensured that the different parts of the FFV value chain understood their individual and joint responsibilities in order to enhance overall capacity to meet SPS requirements, see details under 5.1.2 and 5.1.4. Through a consultative process, the Plant Protection & Health Regulation for Import and Export 2020 (PPHR 2020) policy as reviewed to include private sector contribution through fees, which are expected to help sustain activities, such as, inspections. The project also supported registration of all exporters and producers, which has made it easier to monitor their activities and traceability. All these efforts have enhanced trust and built synergy between different players who are benefiting from more efficient business transaction.

Factors contributing to success and hindrances

A couple of factors led to the project's success: both public and private sectors were willing to engage in dialogue; the project steering committee encouraged joint action between these parties; there was political goodwill from the highest levels of government, which helped to provided a very positive environment for this project to implement its activities particularly its efforts to strengthen PPP and the establishment of an Apex body; over 20 new projects targeting the horticulture were initiated during the life of the project some of which the project collaborated with directly or collaborated between themselves facilitated through the dialogue that was initiated by the SPS MSP; collaboration with institutions such as COLEACP strengthened the projects outputs for example in the training of

inspectors through on-line courses when face to face training was impossible due to COVID 19 restrictions.

Like most initiatives, this project was adversely affected by COVID 19 travel restrictions to the extent that at one point no work was possible for six months. This eventually led to the need for a no-cost-extension in order to complete project activities.

Success Stories

The project contributed to several success stories, which are detailed in the end of project external assessment, key among them was a breakthrough in establishing mechanisms for private public partnerships particularly the formation of an Apex body for the horticulture sector and a functional SPS multi-stakeholder forum. When the project started, there was disarray in the horticulture export sector but as a result of projects interventions in collaboration with other initiatives, the sector was streamlined resulting to an increase in registered exporters. Inspectors morale and confidence were built as a result of the project's capacity building initiatives, which contributed to their efficiency. Overall the project itself is a success story given that it achieved its intended purpose of reducing interceptions due to harmful organisms in chilies exported to the EU markets.

Action Photos

Action photos were shared with project interim reports and additional ones shared in a separate document as Annex 5.

5.1.1 Output 1: A diagnostic mapping of public and private partners and SPS services along the horticulture value chain is completed. A private sector-led SPS Multi-stakeholder platform is developed to complement and assist national coordinating mechanisms

The output was fully achieved and all indicators attained. The main purpose of this output was to bring stakeholders in the FFV sector on board at the onset of the project in order to build a common understanding of what the project aimed to achieve, and agree on their roles in the project. It also aimed to establish a mechanism through which the public and private sector would dialogue and seek ways of collaborating during and post the project period. These two objectives were achieved.

The initiation workshop and diagnostic mapping guided the key training areas that the project needed to focus on. The SPS multi-stakeholder platform was established and was very successful in enabling PPP. The project contracted the Uganda Agribusiness Alliance (UAA) to initiate and manage an SPS Multi-Stakeholder Forum (SPS MSP) whose objective was primarily to be a platform where all stakeholders in the FFV value chain can meet and interact. The forum has been very successful with a membership of over 168 persons representing government, private sector, projects and donors. It enabled updates on vital information for the horticulture sector, including developing a map of all horticulture related projects – see initial map attached as Annex 6. The forum provided a safe space to discuss possible solutions and collaboration. Horticultural projects have been given an opportunity to share information on what they are doing amongst them: the TRade of Agriculture Safely and Efficiently in East Africa (TRASE) of LandOLakes; Horticulture Market Acceleration Program (HortiMAP) of TechnoServe, "Easing the path for horticulture exports to benefit MSMEs, women-led businesses" of Swiss Contact; Packhouse Facility and Horticultural Export Project of CURAD; the VINES (vanilla) project of Catholic Relief Services; and the GlobalG.A.P. Tour potential for Uganda.

Some of the spin-offs realized from the forum are:

- Funding was provided to conduct training for areas that were identified as urgent for the sector, specifically, an SPS training was conducted for producers organized by UAA on behalf of the Platform and carried out by MAAIF with funds from the Private Sector Foundation Uganda (PSFU) and other two trainings by Chemiphar Uganda, respectively
- UAA also formed a WhatsApp group through which members of the SPS MSP and other stakeholders share information including alerts on when meetings are scheduled; new policies and new export requirements

- Based on the realisation by MAAIF that there was need for coordination and streamlining of development support in the sector, with MAAIF strategies and plans, a Technical Working Group (TWG) was initiated in response to a request made by SPS MSP members in the September 2021 meeting. This was after many projects had presented what they were doing and it became apparent that a TWG would enable these projects to have more detailed discussions in order to identify overlaps, duplication, gaps and possibilities for collaboration and coordination. The TWG had met twice since September 2021. UAA volunteered and was approved to provide this coordination of stakeholder sector projects.
- UAA was also tasked by the TWG, to map all horticulture projects and initiatives and create a space on its website where the map can be accessed by stakeholders and updated continuously. The map shows what issues each project is addressing, who is funding and the geographic scope in a bid to generate partnerships, build synergy and avoid duplication, see initial map attached.

Challenges: A key challenge was having to meet on-line, which was not possible for some stakeholders, as face to face meetings were curtailed as a result of COVID 19 restrictions.

The output had a total of 6 activities, listed below, which were completed:

- Activity 1.1 General Project Initiation Workshop
- Activity 1.2 A diagnostic mapping of public and private partners and SPS services along the horticulture value chain is completed in order to identify priority areas for capacity building (which is developed for phytosanitary compliance of public and private partners) and to provide input to the streamlining of the inspection and certification system (implemented by UAA)
- Activity 1.3 Preparation of Concept Note for a private sector-led SPS Multi-Stakeholder Platform, based on mapping (implemented by UAA)
- Activity 1.4 Initial meeting of key public and private stakeholders to validate/adopt Concept Note for a private sector-led SPS Multi-Stakeholder Platform (implemented by UAA)
- Activity 1.5 Revision of Concept Note based on input at initial key stakeholders meeting (implemented by UAA)
- Activity 1.6 Quarterly meetings of SPS Multi-Stakeholder Platform to assist national coordinating mechanisms in improving communication, coordination, accountability, and ownership of responsibility for improvement in SPS compliance by private sector actors (implemented by UAA)

5.1.2 Output 2: A capacity development plan is implemented, upon validation by the results of diagnostic mapping in Output 1, which confirms and prioritizes the capacity gaps identified in the planned activities for this Output

The output was achieved with adjustments made to accommodate capacity building activities that emerged as priority as the project evolved and to take due consideration of training needs emerging as the appreciation of the systems approach improved.

The key deliverables expected from this output were to: (i) expose stakeholders in the FFV sector to the systems approach that had been put in place in Kenya in order to enable them identify gaps in the Ugandan system and better finetune the projects training and capacity building activities; (ii) train farmers, and exporters on good agricultural practices in order to comply with EU requirements ; (iii) review and develop Standard Operating Procedures (SOPs) along the capsicum value chain; and (iv) train inspectors on the SOPS and enable them implement the e-phyto.

The project succeeded in building the capacity of DCIC staff and stakeholders to the extent that they were able to implement a systems-based approach in managing pests of concern and addressing SPS requirements. Below are key milestones:

- Staff from DCIC, exporter and producer associations got motivated to collaborate in order to improve the sector having seen, during a study tour sponsored by the project, the fruitful PPP in the Kenya's horticulture sector; the tour also enabled them identify gaps in their capacity & prioritized what this project could address

- Farmers, exporters and inspectors have improved in their compliance to EU requirements having been capacity build by the project through a series of training activities. DCIC developed a training curriculum on Good Management Practice (GMP) that covered Integrated Pest Management (IPM), GAP, and code of practices based on the concept of Hazard Analysis of Critical Control Points (HACCP). Over 1400 farmers and 30 Inspectors were trained on Good Agriculture Practices (GAP); Integrated Pest Management (IPM); food safety and SPS export requirements. This done with support of project funds, in collaboration with CHEMIPHAR (the only EU accredited lab in Uganda) and the UAA. Some of the trainings were co-funded through funds provided to UAA by the PSFU and HORTIMAP/ Technoserve.
- There was increased intensity and effectiveness of inspections by DCIC staff as a result of being equipped and trained through the project – this improved their motivation and ability to conduct their duties:
 - 70 staff (inspectors and commissioners) were equipped with Personal Protective Equipment (PPEs) and inspection kits procured by the project; before the project the inspectors were devoid of these equipment and kits
 - The ministry recruited 25 additional inspectors meeting a project funding requirement which demonstrated commitment to improving DCIC's services. Twenty (20) were deployed to airport making it possible for staff to man the point exit 24/7; the other 5 were deployed to packhouses; at the onset of the project 4 inspectors were manning the airport and at the same time had to work at the packhouses
 - DCIC staff were enabled to enforce traceability and improve their efficiency by using e-phyto; this was made possible by equipping 25 staff with computers and tablets enabling them to work on-line and training them on how to use the e-phyto; having this computer-based certification system also reduce fraud and forging of certificates
 - DCIC staff were more effective in conducting inspections as a result of improved understanding of phytosanitary requirements, which was made possible by their active engagement in the development of Standard Operating Procedures (SOPs) for certification of exports to the EU and a Phytosanitary Field Inspection Manual supported by the project. They were trained through a piloting exercise with the support of an expert from Tanzania. The SOPs provided harmonized procedures for inspection at point of export and approval at packhouses and covered:
 - Inspection procedures and sampling methodology
 - Resources needed (human and equipment)
 - Traceability systems
 - Actions on notification of Non-compliance
 - Roles and responsibilities of various persons (private and public sectors)
 - Issuance of Phytosanitary Certificates (PSC)

The Phytosanitary Field Inspection Manual covered features, symptoms and techniques for detection of regulated harmful organisms including fall armyworm (FAW), false codling moth (FCM), thrips, fruitflies, leaf miners, whiteflies, Spodoptera spp among others. The manual has clear images of different stages of development of the respective pests, symptoms of infestation on different produce and the EU's phytosanitary requirements for each pest
- Producers and other actors along the capsicum value chain improved their compliance to EU SPS requirements because they were clear of what was required. They were trained on these requirements and issued with a Capsicum Dossier, for reference, which was produced through a collaborative effort between the project and COLEACP. The dossier was approved by the EU in 2021
- DCIC's developed internal audit procedures (with COLEACP collaboration), and conducted a survey and mini-pack house Audit in collaboration with a team from Uganda Export Promotion Board (UEPB); DCIC; Ministry of Trade and industry and Uganda National Bureau of Standards (UNBS), where 37 of 61 companies targeted provided information. The overall objective was to assess the handling capacity and compliance of existing quality management systems and practices in existing packhouses, with reference to international health, safety sanitary and sanitary requirements. Findings would be used to develop a training programme for packhouse operators. A needs assessment was conducted among agronomists, pack house quality controllers, and packhouse Inspectors, with support from SwissContact and training conducted

Challenges: Implementation of most of the training activities under this output were seriously delayed due to COVID 19 restrictions which contributed greatly to the need for a no-cost extension.

The output had a total of 10 activities, listed below, activities 2.5 and 2.9 & 2.10 were implemented through support from Technoserve and COLEACP respectively.

- Activity 2.1 Continuous specialised training of trainers (ToTs) on integrated pest management (IPM) geared to harmful organisms (HOs) causing interceptions. Includes training extension workers in the use of healthy planting material, recommended pesticides and cultural controls (sanitation and weeding) during pre-harvest, proper timing of harvest and removal of infested material and trash at harvest, and other integrated phytosanitary measures.
- Activity 2.2 Conduct demonstrations on recommended technologies in an IPM system for management of HOs (harmful organisms) from elsewhere for adaptation under the Ugandan agro-ecological systems and the type of farming e.g. use of radiations and Cryptogram. This will also include locally available pesticides. Reference to be made to guidelines for the use of integrated measures in a systems approach for pest management ISPM 14.
- Activity 2.3 Develop practical farmer's / extension guides on the most important HO's and make these available to leaders of farmers' groups, growers, extensionists and agronomists of export companies. Guides include practical information on management of FCM & Psyllids using a systems approach.
- Activity 2.4 Training of farmers involved in FFV export
- Activity 2.5 Specialised training on managing pack houses and transport of FFVs.
- Activity 2.6 Recruitment by MAAIF of about 7 new Agricultural Inspectors
- Activity 2.7 Review and update of DCIC's procedures, documentation and reference materials related to specific issues of FFVs' export certification system with technical assistance from an international specialist.
- Activity 2.8 Study tour supported by a phytosanitary specialist for DCIC PQIS inspectors and other staff and stakeholders involved in implementing phytosanitary measures
- Activity 2.9 Specialized and detailed hands-on training for (new) Agricultural Inspectors and other phytosanitary staff
- Activity 2.10 Further development and improvement of the existing operational manual for phytosanitary inspection and compilation of other reference materials for HO of FFVs for export.

5.1.3 A streamlined inspection and export certification system through the value chain for horticulture products based on public-private partnership (PPP) is designed and adopted in accordance with the results of the diagnostic mapping and with ISPM 14

This output aimed to streamline the export certification system and build systems for partnerships between the public and private sectors. It was achieved through numerous negotiation meetings, drafting of guidelines and MoUs, and training activities. A number of milestones in putting these systems in place were achieved notably: lobbying private sector to form an Apex body, which was eventually achieved in November 2021; developing guidelines for and registering producers and exporters which enabled outreach and monitoring the operations of the FFV sector; supporting training and use of a computer-based system to issue phytosanitary certificates and thereby reducing forgery of phytos and inaccurate documentation as well as enhancing data capture; reviewing SPS policy and regulatory framework which is a key pillar for implementing and sustaining compliance to market requirements which in turn contributed positively to the projects efforts of streamlining inspection procedures and ensuring plant health control systems

Below are specific contributions and achievements:

- Supporting the formation of an Apex body by lobbying private sector and demonstrating the benefits of having such a body to enable PPP. HortiFresh was launched on 21st November 2021; Having an Apex body in place is a key achievement of the project and will ease collaboration between DCIC, producers and exporters
- Funded stakeholder meetings to address EU audit 2019 concerns, which were successfully addressed enabling Uganda to continue exporting FFV to the EU. The meetings created synergy, a common cause and willingness to improve phytosanitary compliance.
- Discourse, development of guidelines for and actual registration of FFV exporters & producers into one data base which was done in collaboration the National Task Force for compliance on fresh fruits and vegetable exporters and the Uganda Export Promotions Board. The database will enable traceability mechanisms through the value chain and thus delivering on the project output for increased efficiency for export certification and procedures
- The project equipped inspectors with computers and tablets, which enabled use the General Electronic Notification System (GeNs), a computer-based system that issues e-phytos. In July 2020 DCIC made it compulsory for all exporters to use the system. It will not only enhance data capture but reduce forgery and smuggling resulting to fewer interceptions.
- During farmer training, it emerged that for improved compliance farmers needed to comprehend the audit checklist and the project support development of the checklist as well as its translation into local languages
- DCIC in collaboration with Fresh Handling Limited (FHL), which handles FFV export cargo, put in place a suitable exit inspection point at the airport to comply with the recommendations of the EU Audit 2019; the project contributed inspection point tables and lights
- Inspectors were supported by the project to attend on-line training offered by COLEACP on official controls and surveillance; 5 private sector and 4 public sector persons were certified as Global Farm Assurers
- The Project supported technical working meetings to develop UgandaGAP/LocalGAP Hortifresh was been given the responsibility to oversee the next steps
- The project facilitated consultation and stakeholder dialogue for the review and Repeal of the Plant Protection & Health Regulation for Import and Export 2020 (PPHR 2020) to include various fees, penalties and other recent SPS related requirements, some of which were as a result of this project's intervention, to encourage adherence to enhance the export market. They included new inspection fees; e-phyto system; export farmer registration and documentation; wood treatment procedures; requirements for pest reporting; phytosanitary quality management system audits
- Supported a Regulatory Impact Assessment and subsequently a re-align of the National SPS Policy & its Implementation Plan. This was necessitated by a change in cabinet procedures. The RIA covers cost-benefit analysis; impact to various stakeholders; ease of implementation and of monitoring and evaluation

Challenges: It took a lot of time and effort to convince the producers and exporter associations to agree on forming an Apex body; many dialogue meetings were held and MoU's for collaboration drafted and debated. Through these efforts 90 percent of the members of the project's implementation committee eventually agreed to form the Apex body that was launched in November 2021.

The output had a total of 10 activities, listed below:

- Activity 3.1 Dialogue and agreement on (i) Certification improved institutionalized inspection arrangements and requirements between DCIC and stakeholders in FFV chain (funds used to support establishment of an apex body)
- Activity 3.2 Development (coordinated by UAA) of high-level strategic plan for streamlining inspection and export certification and strengthening institutionalization of the coordination, monitoring, consultation, communication and advocacy roles in SPS sector (funds used to review plant health policy, and same for activity 3.3)
- Activity 3.3 Elaboration (coordinated by UAA) of prioritized actionable areas & relevant SPS requirements identified by the high-level strategic plan, including innovative solutions in the areas of training, promotion and motivation for good agronomic practices, certification systems (funds used as in 3.2)
- Activity 3.4 Procurement of small equipment and tools for export inspectors to be used in the field and at pack houses by inspectors and agronomists of export companies
- Activity 3.5 Technical assistance on the needs of the Plant Health Laboratory in Namalere in order to become a fully functional laboratory with accreditation in order to be able to provide comprehensive diagnostic services, or alternative options, including on HOs (harmful organisms) and minimum residue levels (MRLs) (funds reallocated to support end of project seminar)
- Activity 3.6 Multi-stakeholder workshop to explain the proposed export certification system, create support and receive feedback. Project funds were used to support training of Inspectors and some FFV private sector on board the e-phyto system
- Activity 3.7 Further development of a computer-based format of the export certification system for document storage and retrieval (funds used to support DCIC use the e-phyto by training inspectors)
- Activity 3.8 Develop advisory material for the export certification system and carefully rollout the system. The project facilitated training of Inspectors on the Agro traceability system to support export certification and product traceability system
- Activity 3.9 Develop a GAP manual for Uganda
- Activity 3.10 Adapt existing international training material for use in training of inspectors, extension workers and producers. COLEACP supported this through the trainings of inspectors and the development of the Capsicum Good Practice Guide

5.1.4 Specific phytosanitary survey and monitoring systems in the FFV value chain based on public private partnership (PPP) are effectively operational

This output aimed to build capacity for the establishment of a specific phytosanitary survey and monitoring system (SSMS) with public and private sector partnership. It was undertaken successfully with guidance from an expert from the region working closely with DCIC and a stakeholder task team. Implementation included stakeholder meetings to agree on pests to focus on, training of SSMS TOTs, developing SOPs and piloting an SSMS framework. Following the activity lessons learned and recommendations were documented in the activity report including the need for the NPPO to create a surveillance unit and further seek the contribution of the private sector who demonstrated existing capacities that can supplement and enhance the NPPOs operations in pest surveillance.

The activities under this output were all successfully implemented, and the following milestones made:

- An overall approach in establishing a Specific Phytosanitary Survey and Monitoring system (SSMS) for Uganda agreed and a generic SSMS protocol developed with stakeholder inputs during an inception workshop.
- An SSMS task team constituted based on an agreed criteria to work closely with the expert

- A training curriculum covering 5 priority pests was developed; the pests were:
 - *Thaumatotibia leucotreta* (False Codling Moth (FCM))
 - *Potato Virus Y* (PVY)
 - Fruit flies (*Dacus* spp, *Bactrocera* spp)
 - *Helicoverpa armigera* (African bollworm)
 - *Spodoptera frugiperda* (cotton bollworm)
- 5 SOPs for SSMS of the priority pests developed
- 50 persons (ToTs) trained on how to conduct an SSMS. Participants represented DCIC, producer & exporter associations, scouts from production entities, district extension staff, crop protection, and crop production departments
- A pilot SSMS was conducted by trained TOTs who were able to collect pest data, record, preserve, process, identify, transform, analyse and produce generic reports on presence or absence of specific pest (*Bactrocera latifrons* and *B. Zonata*), extent of distribution of FCM, PVY, Mango mealy bugs and fruit fly in piloted locations
- A summary report was made which identified lessons and recommendations based on the pilot for consideration by the NPPO

Challenges: This activity was postponed several times because of the COVID 19 restrictions because face to face training was necessary.

The output had a total of 7 activities which were all implemented:

- Activity 4.1 Development and design of specific FFV phytosanitary survey and monitoring system based on clear public and private roles, including PPP (completed)
- Activity 4.2 Creation of a small task force on the development of a specific phytosanitary survey and monitoring and technical assistance on the practical set-up of such a system in concert with the private sector (completed)
- Activity 4.3 Specialized and practical training of trainers (ToT) on quarantine pest surveillance systems. (completed)
- Activity 4.4 Procurement of surveillance equipment including traps, data capture devices and software (completed)
- Activity 4.5 Implementation of specific phytosanitary surveys and monitoring, including use of pest surveillance traps, geospatial data/ weather stations and analysis of captured data in reference to ISPM 6, 8 & 9 (completed)
- Activity 4.6 Strengthen the Pest Risk Analysis Team in its on-going Pest Risk Analysis work (availability of desk computers, printers and Internet) with reference to ISPM 2 (completed)
- Activity 4.7 Strengthen field and exit inspection for phytosanitary compliance (availability of tablets, laptops, motorcycles, uniforms and signage at border posts) (completed)

5.1.5 Based on a market study to assess opportunity to increase fruit and vegetable exports to both new and current markets with improved SPS compliance, realistic Uganda Export Marketing Strategy for FFVs is developed and agreed upon by the key stakeholders of the FFV export value chain

This output aimed to develop an Export Marketing Strategy for FFVs in Uganda that was agreed upon by stakeholders and that was based on a market study to access existing opportunities for the sector to grow either by reaching new markets, increasing volume and range of commodities being exported. The Ministry of Trade embarked on developing an export strategy during the project implementation period and hence activities 5.2 to 5.4 were not undertaken. DCIC requested the STDF for a budget reallocation which was approved to supplement activities 3.4 (purchase inspector uniforms and Personal Protective Equipment (PPE)); activity 6.5 (creation of communication products) and to support review of policy and the RIA reported under output 3 above.

A market study (activity 5.1) to “assess opportunities for increasing fruit and vegetable exports to both new and current markets with improved SPS compliance”, was undertaken in 2019 by UAA.

The objectives of the study were to (i) investigate opportunities and gaps, in Uganda’s policies; infrastructure; and producers/exporters self-regulating environment (for ensuring competitiveness

and sustainability), that would support or limit the establishment of trade in the selected commodities; and (ii) draw recommendations on how opportunities can be utilized and gaps addressed (where possible) in order to support export trade of selected commodities. It was conducted through desk reviews and interviews and recommendations made using a criteria to determine which commodities should be considered for exports.

Recommendations to improve the enabling environment for FFV exports in Uganda were identified for sharing during the government's Comprehensive Horticulture Sector Development Programme including putting in place: (i) horticulture-specific institutions (such as the Directorate Kenya has within its Agriculture Ministry); (ii) horticulture-specific policy and strategy (which both Kenya and Ethiopia have); and (iii) concrete and effective incentives for private sector investment in horticulture export (such as tax relief, access to land and energy like Ethiopia has done).

Findings from the market study were very useful in demonstrating to decision makers the importance and potential of the horticulture sector, challenges and opportunities for growth. They were disseminated at the Agriculture Committee of the President's Private Investors Round Table (PIRT) for Agriculture and a written report shared with the Ministry of Finance, Planning and Economic Development (MoFPED) during Horticulture Stakeholders consultation meetings in order to guide discussions.

Challenges: No major challenges were noted

The output had a total of 4 activities, which only activity 5.1 was undertaken and within budget reallocated as indicated above:

- Activity 5.1 Market study conducted to assess opportunity to increase fruit and vegetable exports to both new and current markets if SPS compliance is improved, & relevant SPS requirements (implemented by UAA) (completed)
- Activity 5.2 Drafting workshop for Uganda Export Marketing Strategy for FFVs. (activities 5.2 to 5.4 were superseded and funds reallocated to support policy review, RIA, purchase of uniform for inspectors)
- Activity 5.3 Multi-stakeholder validation workshop on the draft Uganda Export Marketing Strategy for FFVs
- Activity 5.4 Finalising Uganda Export Marketing Strategy for FFVs

5.1.6 Improved awareness at national levels of inspection and certification systems in the horticulture sector as a whole and based on the experiences, recommendations on improvements to be made for the FFV Export Value Chain and expansion of the results to other horticulture sub-sectors are made

This output aimed to enable improved awareness of inspection and certification, improvements that are required in the FFC export sector and to extend results to other horticulture sub-sectors. Communication with senior government officials and executives of exporter and producer associations was sustained through targeted briefing meetings, through DCIC's commissioner and the project manager who were both members of high-level task forces set up to streamline the sector, and during the end-of-project seminar and the independent external assessment. Farmer training and awareness materials were designed and produced. Below is a list of milestones made:

- Communications strategy was developed through stakeholder consultations. It was used to guide stakeholder SPS communication and will further be incorporated into the MAAIF communication strategy under the USAID FEED the Future project on Institutional System Strengthening Activity
- An end-of-project seminar was held in August 2022; it brought together at least 65 number of participants from across the FFV value chain. Project outputs, lessons, impacts and recommendations for the sector were shared and documented in proceedings, see Annex 2
- The project communicated through the public media: Radio Uganda Broadcasting Network, New Vision Citizens Television links via <https://www.newvision.co.ug/category/news/govt-intensifies-inspection-of-fruits-and-veg-141861>, <https://youtu.be/ePyCmHBXkcY>, <https://we.tl/t-8DkX6tas0Z>

- Detailed technical briefs for each commodity and Communication materials were produced as listed below, for detailed report on the production of communication materials, see Annex 7:
 - Capsicum flipchart and brochure on good agronomic practices for chilli production
 - False Codling moth (FCM) on chilli management poster
 - Garden eggs/ aubergines booklet on good agronomic practices
 - Garden eggs/aubergines poster on pests and disease management
 - Bitter gourd (Karela) story chart and brochure on good agronomic practices (applicable to bottle gourd as well)
 - Bitter gourd (Karela) pests and disease management poster (applicable to bottle gourd as well)
 - Certification process videos

Challenges: Producing awareness materials is expensive and the initially allocated budget was augmented with other reallocations authorised by the donor.

The output had 5 activities and were accomplished:

- Activity 6.1 Development of a communication strategy on Phytosanitary issues in reference to the IPPC Pest Risk Communication Guide.
- Activity 6.2 Organization of a final seminar.
- Activity 6.3 Compile proceedings of the seminar and other relevant results of the project not discussed during the final seminar and publish.
- Activity 6.4 Awareness creation of project's main findings and procedures to limit the non-compliance of FFV export crops through public media.
- Activity 6.5 Creation of communication product e.g. short video, highlighting the impact of the project

A list of documents produced through the project is attached as Annex 8

6 CROSS-CUTTING ISSUES

6.1 Gender

Women farmers are highly involved in production of horticulture produce exported to the EU, such as chillies, which the project was focusing on. Women were targeted for capacity building activities together with men and youth including those working as official government staff, exporters, producers and farmers. In order to enhance gender mainstreaming into project action we recommend that future projects include a gender analysis to identify barriers that different genders face in the sector in order to develop a gender action plan which will be incorporated into the project.

6.2 Environmental aspects

Uganda faced challenges in increasing its horticulture exports due minimum residue levels (MLRs). Even though the project was not directly addressing this issue it supported training of over 1400 persons on GAP and IPM, in collaboration with other actors which will contribute directly to environmental protection. DCIC developed a training curriculum on Good Management Practice (GMP) that covered IPM, GAP, and code of practices based on the concept of Hazard Analysis of Critical Control Points (HACCP); training was conducted in collaboration with CHEMIPHAR (the only EU accredited lab in Uganda). The project helped to put in place a systems approach outlined in a Capsicum Dossier that was produced through collaboration with COLEACP. Farmers implementation of the GMP will help prevent incidence of pests and diseases through activities such as rotation and planting less susceptible varieties as well as reducing misuse of pesticides.

7 SUSTAINABILITY

The project was successful in its overall objective of reducing interceptions due to harmful organisms because it built capacity in a systems approach for addressing SPS export requirements. Various structures that the project instituted provide good basis for future sustainability of achievements including:

- The legislative frameworks have been improved and established, such as the Plant Protection and Health Regulations that will provide guidance to both public and private sector.
- The Regulations will eventually pave way to a better fees structure to be paid by private sector to support comprehensive regulatory inspections after ring fencing the funds for SPS inspections.
- The NPPO staff and value chain stakeholders have had their capacity built in areas such as monitoring quarantine pests as well as setting up a PPP framework for conducting and conducting pest surveillance activities (with support from COLEACP).
- SOPs were developed to guide the NPPOs operations, reference and communication materials that will continue to guide stakeholders to meet SPS requirements.
- The FFV apex body will collaborate and build synergies through self-regulation, improve coordination and communication between private sector and Government entities and support sensitization on SPS requirements to members.
- The SPS MSP will continue to provide a transparent coordination framework for continued PPP as regards to SPS in the FFV sector. UAA secured funding to support the SPS MSP for 3 years post project closure.
- Other ongoing projects initiatives were brought on board, to create synergy with the ongoing initiatives or new ones that have been either identified or developed to address identified gaps during project implementation and evaluation process. For example, HORTIMAP delivered by Technoserve, USDA's Trade in Agricultural Food Safety and Efficiently (TRASE), USAID Feed the Future Institutional Systems Strengthening Activity (USAID -ISSA and the UK Export Finance Facility.
- For example, the DCIC submitted a support request to the European Union, represented by their delegation in Kampala to develop a Fruits and Vegetable SPS project in consultation with private sector. A Project amounting to 8 million Euro to support improvement of SPS compliance for the Uganda fruits and vegetable sector was approved by the European Union. The support will be targeted to both public and private sector improvements. The EU SPS project is expected to commence financial year 2023/2024 and will scale up the activities, address gaps and new constraints identified during and after project implementation STDF PG 543. Currently MAAIF, Ministry of Finance Planning and Economic Development (MOFPED) together with Private sector are holding final discussions on the project scope and expected specific outputs. The Government's increased willingness to support the sector sustainably on top of elevating it to a sub sector is indicated by: MOFPED approval of a development project amounting to ~USD 8 million over a 5-year period to support SPS improvements in the Fruits and Vegetable Sector and recruitment of 35 Phytosanitary Inspectors within 3 years.

8 FINANCIAL OVERVIEW

Below is a combined financial summary for project budgets under the STDF and RNE. The total project budget was \$737352.94 (\$384,787.93 STDF; 252,565.01 RNE). The overall expenditure was \$685,844 (\$445,063 STDF; 240,781 RNE). Overall, 93% of the budget from both funders was spent (92% of STDFs budget; 95% of RNE budget). Total funds disbursed by the funders to CABI amounted to \$ 583,621 (\$387,830 STDF; 195,791 RNE). CABI has therefore spent \$102,223.26 (57,233.31 STDF; 44,989.95 RNE) more than what has been received to date and will place requests for a final funding transfer for this amount.

Budget reallocations were requested from the funders and granted as follow:

STDF budget

- Balances from activities 3.2, 3.3 and 3.5, after these activities were completed, as reported in project interim report 4; the funds were used to augment funding under activities 6.4 & 6.5 for communication and awareness raising

- From activities 5.3 and 5.4 after the activities were superseded by government and COLEACP interventions, as reported in interim reports 4 & 5; the funds were used to augment funding activities 6.4 & 6.5; and to support (i) review and repeal of the Plant Protection & Health Regulation for Import and Export 2020 (PPHR 2020); and (ii) conducting a Regulatory Impact Assessment and subsequently re-aligning the National SPS Policy & its attendant Implementation Plan
- From activity 3.5 after the activity was superseded by government and COLEACP interventions, as reported in interim report 5; the funds were used to augment funding under 6.2 for the final project seminar
- From the contingency budget to support staff inputs in developing communications and awareness materials as well as manage the project during the No-Cost Extension (NCE) period.

RNE Budget

- From the contingency budget to support staff inputs in developing communications and awareness materials

Combined financial summary in USD

	STDF		RNE		MAAIF	Total
Total project budget	484,787.93		252,565.01		-	737,352.94
Total amount received to date	387,830.20		195,791.00		-	583,621.20
Total expenditure in the reporting period	153,209.12		99,165.96		-	252,375.08
Total expenditure to date	445,063.51		240,780.95		-	685,844.46
Unspent funds (US\$)	57,233.31		(44,989.95)		-	(102,223.26)

* Figures in brackets are funds spent by CABI in excess of funds received

Overall the project under-spent by \$51,508 which is 7% of the total funding (\$39,725 STDF; \$11,784 RNE). The main reason was a result of travel and other restrictions associated with the COVID 19 pandemic which caused suspension of project activities for several months in 2021.

The project collaborated with several related initiatives that came on board during the life of the project as reported in the narrative above. Details of contributions from MAAIF and other key institutions were still being anticipated by the time of submitting this draft report and hence will be shared once available.

A detailed financial report is annexed to the report, see Annex 9.

9 LESSONS LEARNED

- Having strong engagement of a key beneficiary during project formulation, in this case the NPPO, is important for project implementation because there is good ownership.
- It is also important to have a project management team that brings on board representation of beneficiaries so as to ensure stakeholder views, experience and needs are catered for in the project and guide implementation.
- It is good practice to have a process of gathering and sharing information on which other initiatives are addressing similar issues in order to build synergy and collaborate where possible. Sensitivity to onboarding other collaborative initiatives has led to synergies and

project sustainability. This project benefitted from having the SPS MSP where information was shared and collaboration explored, a list of initiatives that the project engaged with is included in the end-of-project external assessment report.

- Increased farmer interface with regulators enhances compliance levels.
- Having the right political environment to support the FFV export market is critical for a project such as this one to succeed, for example influence from high government officials enabled the formation of the apex body.
- Feedback from engaging with farmers showed that communicating in the local language especially at the farmer level is more effective, and
- Having dedicated staff to run a multi-year project is necessary for institutional memory and maintains liaison generated with the different stakeholders during the life of the project
- A formal external (or internal) mid-term review would have been useful in supporting the project to take stock of achievements and make a thorough review of changes necessary for the project's success, as well as to document successes.
- Low female participation in the sector beyond sorting stages. Future STDF/RNE project would benefit from having a gender mainstreaming plan agreed at formulation stage to ensure adequate consideration and resource allocation.
- Private sector appreciation of NPPO roles, paves way for private sector investments in self-regulation.
- Uniforms increase regulatory visibility and private sector compliance.
Private sector self-regulation requires time, backed by practical solutions and investments. SPS terminology and requirements are sometimes difficult to understand by farmers and exporters. Therefore, market SPS requirements should be made easily available by regulators in simplified forms.

10 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Specific recommendations related to this project

Stakeholders had the opportunity during the end-of-project seminar and during consultation with the external end-of-project assessment team to share their experiences with the project including, what worked, what didn't work and recommendations for the future, see Annex 1 and 2 for the full lists:

- Communication materials developed by the project need to be translated into local language and widely shared
- The SPS MSP to continue providing a forum for FFV sector stakeholder engagement given how successful it was – UAA secured funding for operations to 2025
- DCIC and UAA to make use of TOTs and curricula developed by the project so as to train more stakeholders along the value chain
- A surveillance team at DCIC is needed in order to steer specific survey and monitoring pests, as currently such a team doesn't exist.
- Investment support in heavy and light public and private infrastructure to ensure maintenance of SPS integrity for perishable fruits and vegetables is key.
- Capacity building for apex sector associations is important to enhance self-regulation and compliment public sector service.
- Use of E-Phyto should be supported by increased use of electronic PCs worldwide.
- Development partners and STDF could consider supporting national traceability systems since it is increasingly becoming a market requirement.
- There is need for targeted support for increased participation of women in FFV export business value chains.
- Short term (1 to 2 season) research to tackle SPS challenges in the FFV sector may be key to solving certain SPS challenges.

Suggested policy change

- There is need for the government to enact the new Food Law and Revised Plant Protection and Health Regulations and SPS policy which will enable the MAAIF to regulate the sector effectively

11 ANNEXES

Annexes 1 & 9 have been submitted with this draft

- Annex 1 – End of project external assessment
 - Annex 2 – Proceedings end of project seminar
 - Annex 3 – Project contact list
 - Annex 4 – Logical framework
 - Annex 5 – Selected action photos
 - Annex 6 – Map of actors involved in the FFV sector
 - Annex 7 - Report on awareness and communication materials developed by the project
 - Annex 8 – List of documents and reports produced by the project
 - Annex 9 - Financial report
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