

Using Evidence to Prioritize SPS investments in Kenya: Policy Brief



Introduction

Like many other developing countries, Kenya faces considerable demands to strengthen its Sanitary and Phytosanitary (SPS) capacity to boost exports of food and agricultural products, yet resources are limited. SPS capacity varies across countries, occasionally translating into trade related barriers. Within the COMESA region for example, it is estimated that 70 percent of the reported Non-Tariff Barriers are constituted by Technical Barriers to Trade (TBT) and SPS measures. COMESA further notes that low SPS capacity amongst the value chain actors limit intra-regional trade and undermines industry competitiveness for food and agricultural products. SPS issues matter; they are a priority for Africa and the African Continental Free Trade Area (AfCFTA).

As part of an STDF regional project led by the COMESA Secretariat, in partnership with the EIF and AGRA, public and private stakeholders in Kenya came together to use STDF's evidence-based approach to Prioritize SPS Investments for Market Access (P-IMA). The aim is to leverage additional resources to address SPS capacity gaps under national investment frameworks for agriculture and trade, as well as from other sources. Kenya's horticulture, tree nuts, honey and fish value chains were prioritised under the P-IMA initiative and are considered of great potential in boosting agriculture exports once the key SPS issues associated with their trade flows are addressed.

About P-IMA

[P-IMA](http://www.standardsfacility.org/prioritizing-sps-investments-market-access-p-ima) is an evidence-based approach to inform and improve SPS planning and decision-making processes, developed by the STDF with other partners. P-IMA helps to show how different SPS investments are likely to impact policy goals like export growth, agricultural productivity and poverty reduction in order to inform decision-making and support resource mobilization. In the process, P-IMA encourages public-private dialogue, boosts transparency and accountability, and encourages greater efficiency in SPS investment decisions. See: www.standardsfacility.org/prioritizing-sps-investments-market-access-p-ima

Mainstreaming SPS Investments into CAADP and other frameworks (STDF/PG/606)

Beneficiaries: Ethiopia, Kenya, Malawi, Rwanda, Uganda

Implementing organization: Common Market for Eastern and Southern Africa (COMESA)

Partners: STDF, EIF, European Union, AGRA

Timeframe: July 2018 - December 2021

Donor funds: STDF (USD 221,025); EIF (USD 207,400)

Total budget: US\$502,425

www.standardsfacility.org/PG-606

“COMESA views the P-IMA framework as a unique planning and sector-wide engagement and resource mobilization tool”. “We encourage our Member States to use P-IMA to take stock of SPS capacity building needs, prioritize and cost investment options with the best returns and integrate them into national agriculture sector investment plans.”

COMESA Secretary General – H.E. Chileshe Mpundu Kapwepwe



Opportunities and challenges for Kenya's agri-food exports

Agricultural products, particularly black fermented tea and partly fermented tea; fresh cut roses and buds; coffee and fresh or chilled beans have dominated Kenya's exports in the last decade. On average, agricultural exports constitute about 60% of total exports over the period 2009-2018, of which coffee, tea, maté and spices alone accounts for around 43%. According to the most recent WTO Trade Policy Review (2019), agriculture accounted for 37.7 percent of Kenya's GDP in 2017. Other agricultural products of significant exports include fresh or dried avocados and fresh or dried macadamia nuts.

Key SPS challenges impacting Kenya's export growth

Despite great export potential, various SPS compliance issues undermine Kenya's access to regional and international markets. For instance, Kenya has been subject to various export bans, border rejections and export interceptions by the European Union, the United States and South Africa due to SPS non-compliances. Over 80% of these SPS issues in the EU market are in fruits and vegetables and fish and fish products. Other products affected are dietetic foods; food supplements; fortified foods; cereals and bakery products; alcoholic beverages; food additives and flavourings; feed additives; herbs and spices; cocoa and cocoa preparations; coffee and tea; milk and milk products; cephalopods and products thereof; and feed for food-producing animals.

The EU Rapid Alert System for Food and Feed (RASFF) has listed 133 SPS notifications against Kenya since 1993, out of which 101 occurred in the past 10 years. The SPS issues listed range from ochratoxins/aflatoxins, salmonella, pesticide residues and other contaminants, to unauthorized substances of various nature. In addition, there were 874 interceptions of harmful organisms in horticulture products exported to the European Union. The United States Import Refusal Report (IRR) has listed 67 export rejections from Kenya, with 29 of them pertaining to SPS issues. These issues range from pesticide chemicals, salmonella, mycotoxin, hygiene issues and contamination.

Over the last decade, Kenyan authorities have recognized the need to address issues related to pest and disease control and adopt measures to prevent, control and eradicate pests and diseases to improve agricultural productivity. For instance, Kenya's Agricultural Sector Development Strategy 2010-2020 identifies the need to conduct research and implement interventions to ensure the quality of livestock products, as well as the need to promote fish safety and quality assurance and improve SPS facilities to access international markets.

The second phase of the Agriculture Sector Development Support Programme serves as another example of Kenya's efforts to increase productivity of priority value chains, improve market access of these value chains and strengthen structures and capacity for consultation, collaboration and cooperation in the agricultural sector.

Key steps in the P-IMA process in Kenya

1. Collection and review of relevant existing information from sector-specific capacity needs assessments (May 2019)
2. High-level inception meeting (24th June 2019)
3. SPS stakeholder workshop to identify various SPS investment options (25th-27th June 2019)
4. Four sector-specific working sessions to review, "sift" and validate investment options (4th -7th November 2019)
5. SPS stakeholder workshop to define decision criteria and weights to be used for priority-setting process (4th -7th November 2019)
6. Development of information cards for SPS investment options (December 2019)
7. Data analysis and ranking using decision criteria and weights (February-March 2020)
8. SPS stakeholders review draft report and findings (June-July 2021)

Validation workshop to present preliminary findings to all stakeholders (1st December 2020)

1 ITC Export Potential Map: <https://exportpotential.intracen.org/>

2 Ibid.

3 Kenya's Agricultural Sector Development Strategy 2010-2020. See: <http://extwprlegs1.fao.org/docs/pdf/ken140935.pdf>

4 Agriculture Sector Development Support Programme Phase Two (ASDSP II): <https://asdsp.kilimo.go.ke/>

Stakeholder engagement

A wide range of stakeholders took part in a total of six workshops aimed at mainstreaming SPS priorities into national policy investments, "sift" and validate investment options, and present the preliminary findings.

Over 130 representatives participated from different government agencies, private sector groups, donors and development partners. Almost eight different government agencies (ministries of agriculture, industry and trade, education, health, standards authorities, etc.) were involved.

Key questions asked in the sifting exercise - Step 4 on the P-IMA Process

- Is the problem recorded a real SPS issue?
- Is the option really related to trade?
- Is the option economically viable?
- Are the sectors concerned and the level of existing and/or potential exports substantive?

Making the decision criteria explicit

When investment decisions concern complex issues, have major implications on resources and/or are likely to affect multiple stakeholders, identifying the range of decision-making options and decision criteria can help to promote transparency and clarity. This is the P-IMA approach.

In Kenya, stakeholders involved discussed and agreed on 10 key decision criteria related to costs, trade impact and domestic spillovers to drive the priority-setting process and assigned weights to them.

Prioritisation Results

16 SPS investment options were identified and ranked in table 1 below.

Table. 1

Priority Investment Option
1. Capacity building in Systems Approach along Horticulture value chains: cut-flowers, mango, avocado, capsicum, and beans and peas in pods have been identified as priority value chains. The investment option will provide regulators and private sector stakeholders with an opportunity to create synergies in employing systems approach to meet the destination markets requirements.
2. Capacity building in post-harvest treatment for fruits & flowers: to comply with mandatory destination market requirements, Kenya requires investment to set up postharvest treatment facilities for fumigation and hot water dipping.
3. Capacity building in laboratory testing, diagnostics, and accreditation for horticulture products: there is need for investment in laboratories for pest detection and control at an early stage.
4. Clean planting material (support plant breeding & plant propagation, virus cleaning): there is need to enhance application of in vitro techniques to ensure clean planting materials and efficiency of breeding.
5. Establish/Strengthen digital traceability system in the horticulture supply chain: building and implementing a traceability system through supply chain mapping, effective chain of custody, standardization of data collection and transmission methods.
6. Monitoring, surveillance and animal disease control measures: institute and/or implement disease control measures such as disease-free zones and quarantine facilities, to improve export market access.
7. Accreditation of DVS food laboratory: need for investment in testing capacity of residues in honey, meat, and milk by acquiring modern equipment, training, and accreditation for the testing laboratory.
8. Capacity building in GAPs & GMPs for Honey: to meet the requirements of the destination market regarding products of animal origin such as residues monitoring and health certificate.
9. Monitoring and surveillance of residues in feeds: improve laboratories, undertake training of staff, and implement the feed residue surveillance plan.
10. Accreditation of national fish quality control laboratory: laboratories will analyze sediments, heavy metals and water for microbiological and physio-chemical parameters.
11. Capacity building in GAPs & procurement of testing kits: to provide hands-on-training for newly recruited officers.
12. Strengthen Implementation of the national fish residue monitoring plan: to address challenges related to lack of consistency from fish farmers and the scope of the plan.
13. Implementation of HACCP at fish aggregation level: to provide continuous training to ensure that fish handlers comply with food safety requirements.
14. Establishment/upgrading cold chain system: to provide instructions on the management of cold chains as well as the requirements for ice to fish ratios.
15. Establishment a digital traceability system for aquaculture: prospects for uptake of digital traceability are high in Kenya and could be easily integrated with other mobile phone technologies.
16. Capacity building in System Approach including GAPs, GHPs, & GMPs, and monitoring and surveillance of Pathogens, Allergens, etc. for tree nuts value chain: there is need to establish effective risk management practices, need for initial sampling and testing to provide baseline data on product safety, and need for awareness creation for farmers and relevant stakeholders.

⁵ For more information on the decision criteria and assigned weights, see [Kenya's full P-IMA report](#).

The prioritisation of the investment options was conducted using the following three models:

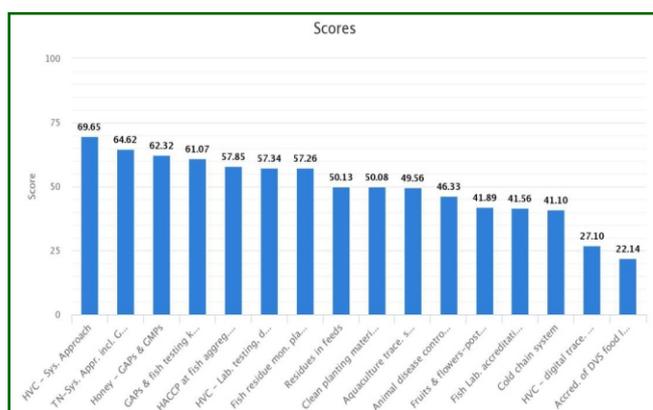
- Baseline model: reflects the weights assigned by participants at the stakeholder workshop
- Trade and costs model: only include decision criteria related to costs and trade impacts
- Equal weights: each of the weights has the same value

Findings

The study estimated a total cost of approximately **US\$37.7 million** needed to implement all 16 SPS investment options, which is estimated to generate about **US\$2.3 billion** worth of additional exports. Figures 1 to 3 show the results of the different models employed.

Figure 1 displays the main result using the baseline model. This shows that capacity building in Systems Approach along horticulture value chains; capacity building in Systems Approach, and monitoring and surveillance of pathogens, allergens, etc. for tree nuts value chain; capacity building in GAPs and GMPs for honey; capacity building in GAPs and procurement of fish testing kits; and implementation of HACCP at fish aggregation level are the top five best ranked SPS investment options.

Figure 1: Ranking of SPS investment options Using Baseline Model



To test the robustness of the results from the baseline model, two sensitivity analyses were performed by setting the weights on all decision criteria equal (Figure 2) and running a cost and trade impact only analysis (Figure 3).

In the equal weights scenario presented in Figure 2, despite slight shifts in the position of certain options, results are relatively similar to the baseline model:

- The top five ranked options in the main results remained the same.
- The two lowest ranked option, digital traceability system in the horticulture supply chain and accreditation of DVS food laboratory also remained the same.

There are, however, slight changes in positions:

- For instance, the establishment or upgrading of cold chain system, and accreditation of national fish quality control laboratory moved up a step each in the equal weights scenario, displacing the option capacity building in post-harvest treatment for fruits & flowers from its position as the fifth lowest in the main result to the third lowest in this model.

On the other hand, the cost and trade model presented in Figure 3 (below), shows drastic movements. Monitoring and surveillance of residues in feeds; strengthen implementation of the national fish residue monitoring plan; and capacity building in post-harvest treatment for fruits & flowers, which ranked 8th, 7th and 12th in the baseline model, ranked 1st, 2nd and 3rd, respectively, in the cost and trade model. Capacity building in Systems Approach along horticulture value chains and capacity building in GAPs and procurement of testing kits which ranked 1st and 4th in the baseline model and equal weights model, ranked 9th and 14th, respectively, in the cost and trade model.

Notwithstanding, capacity building in GAPs & GMPs for honey; capacity building in System Approach, and monitoring and surveillance of pathogens, allergens, etc. for tree nuts value chain; implementation of HACCP at fish aggregation level; and capacity building in laboratory testing, diagnostics, and accreditation for horticulture products remained in the top half of the ranking.

Figure 2: Ranking of SPS investment options Using Equal Weights with Criteria Contribution

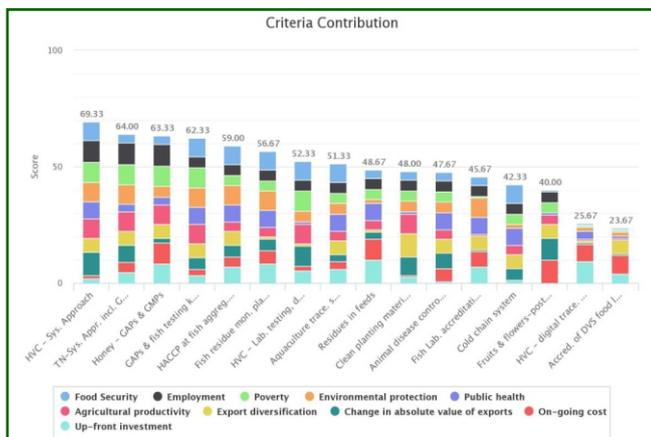
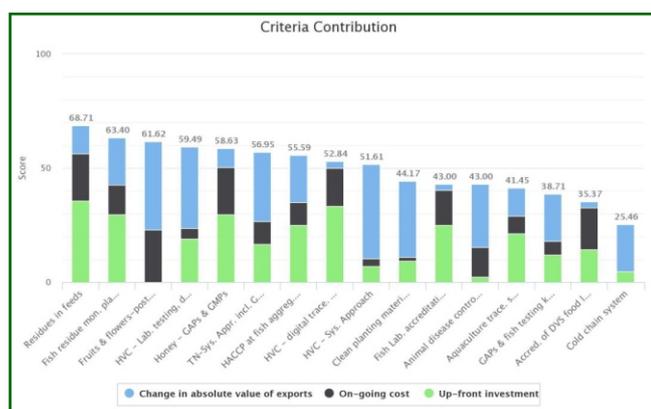


Figure 3: Ranking of SPS investment options Using Cost and Trade Model



What do these findings mean for Kenya?

The analysis shows sensitivities to changes in the parameters when considering only the cost of implementation and the trade impact. If investments are to be made solely on the basis of returns to trade, then the baseline analysis may not be the most appropriate approach but rather the cost and trade model.

Despite the sensitivity analyses carried out, the following five options are more desirable as first best choices for immediate investment, particularly if trade considerations are not the sole objective:

- Capacity building in Systems Approach along horticulture value chains;
- Capacity building in System Approach, and monitoring and surveillance of pathogens, allergens, etc. for tree nuts value chain;
- Capacity building in GAPs and GMPs for honey;

- Capacity building in GAPs and procurement of fish testing kits; and
- Implementation of HACCP at fish aggregation level.

At the other end, the following five options ranked lower:

- Accreditation of DVS food laboratory;
- Establishment/upgrading cold chain system;
- Establish/Strengthen digital traceability system in the horticulture supply chain;
- Capacity building in post-harvest treatment for fruits & flowers; and
- Accreditation of national fish quality control laboratory.

It should, however, be noted that these rankings do not suggest that a low ranked option is not important for implementation, but rather, it simply shows that, in terms of priority, based on assigned costs and flow of benefits, a lower ranked option is not the best option to be implemented first given limited resources.

Challenges and opportunities

The results from this framework are based on the availability and quality of data. As such, the results must be revised in an on-going basis once a better data becomes available. In this regard, as part of the COMESA P-IMA project, a minimum of two (2) persons were trained as P-IMA National Experts to assist in subsequent revision/re-application of the framework.

It is also important to remember that this document is a 'living document', thus, it must be revised regularly, particularly, once new SPS challenges emerge.

Next steps

Experiences with the use of the P-IMA framework show that the immediate outputs produced, including the prioritization itself as well as the information sheets, may be used in a number of ways. For instance, to:

1. Provide compelling evidence to support SPS project development.
2. Enable more coherent funding requests to be compiled. The prioritization provides a concrete basis on which to base requests for funding from bilateral and multilateral donors.

3. Guide the development of a national action plan for the enhancement of SPS capacity, based on clear and coherent evidence of the trade and other impacts of potential investments, and a clear and justifiable prioritization of these investments.
4. Improve SPS planning and decision-making processes. The framework can also be used to stimulate and/or inform discussions among relevant stakeholders about potential future SPS capacity-building needs.

Whilst the P-IMA framework is designed to be applied to the specific context of SPS capacity-building investments that cut across the areas of food safety, plant health and animal health, it can be easily adapted to other uses. For example, it might be applied only to SPS capacity-building investments within priority export commodities (e.g. fresh produce, milk and dairy products, fish and seafood, etc.), or to analyse the different options to solve a particular challenge (e.g. aflatoxin control).

Data sources

A wide variety of data and information sources were consulted and used for the P-IMA work. Key data sources included the following:

Assessments of SPS, food safety, animal and/or plant health capacity-building needs and costs for Kenya

- Listing of Kenyan Beans at 10 Per Cent Sampling at The European Union, Letter to All Members, Fresh Produce Exporters Association of Kenya (2020)
- A. Edewa, W. Otieno, U. Kleih (2010); Report of Impact Assessment of Sanitary and Phytosanitary (SPS) Measures: A case Study of South Africa's Ban on Imports of Kenyan Avocado due to Fruit Fly
- A. Edewa, L. Obungu, U. Kleih (2010); Impact Assessment of SPS Measures Nile perch case study – Kenya
- E. Papyrakis, and L. Tasciotti (2019); A Policy Study on the Implementation Challenges of Phytosanitary Standards: The Case of ISPM 15 in Botswana, Cameroon, Kenya, and Mozambique.
- Dr. Mulat Abegaz, SPS Balance Sheet for Kenya

Official trade data from national and international sources

- Trade Policy Review: East African Community, World Trade Organization (2019)
- Kenya Trade Flow Synthesis Report, Common Market for Eastern and Southern Africa (2019)
- ITC Export Trade Map: <https://trademap.org/>
- ITC Export Potential Map: <https://exportpotential.intracen.org/>
- Implementing an Integrated Approach to Food Safety, Plant and Animal Health (Biosecurity), Case Study 6, Food and Agriculture Organization of the United Nations (2009)
- Mapping of production of fruits and Vegetables in Kenya, Kingdom of Netherlands (2017)
- Evaluation of Sanitary and Phytosanitary (SPS) Trade Policy Constraints Within the Maize and Livestock/Animal-Sourced Products Value Chains in East Africa. LEO Report #12, United States Agency for International Development (2015)
- Kenya Sanitary and Phytosanitary (SPS) Capacity Building Needs Assessment, United States Agency for International Development (2018)
- U.S. End Market Analysis for Kenyan Cut Flowers, United States Agency for International Development (2017)
- EU Rapid Alert System for Food and Feed (RASFF)

List of acronyms and abbreviations

- **AfCFTA**- African Continental Free Trade Area
- **AGRA** - Alliance for a Green Revolution in Africa
- **CAADP** - Comprehensive Africa Agriculture Development Programme
- **COMESA** - Common Market for Eastern and Southern Africa
- **DVS** - Department of Veterinary Services
- **EIF** - Enhanced Integrated Framework
- **GAP** - Good Agriculture Practices
- **GHPs** - Good Hygiene Practices
- **GMPs** - Good Manufacturing Practices
- **HACCP** – Hazard Analysis and Critical Control Points
- **ITC** – International Trade Center
- **P-IMA** - Prioritizing SPS Investments for Market Access
- **STDF** - Standards and Trade Development Facility
- **SPS** - Sanitary and Phytosanitary
- **WTO** - World Trade Organization

