



Using Evidence to Prioritize SPS investments in Rwanda: Policy Brief

Introduction

Like many other developing countries, Rwanda 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 (ACFTA).

As part of an STDF regional project led by the COMESA Secretariat, in partnership with the EIF and AGRA, public and private stakeholders in Rwanda 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. Rwanda's horticulture, livestock and grains value chains 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, Enhanced Integrated Framework (EIF), European Union, AGRA

Timeframe: July 2018 - Dec. 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 Rwanda's agri-food exports

According to the most recent WTO Trade Policy Review (2019), agricultural products constitute about 40% of Rwanda's total exports from 2009-2018. Major agricultural products exported in 2018 included wheat, vegetable saps and extracts, beans, fresh cut rose and buds, milk and cream, and raw hides and skins. The ITC Export Potential map further shows that agricultural products, particularly raw hides and skins, and vegetable saps and extracts hold the greatest export potential for Rwanda.

The 2019 WTO Trade Policy Review further highlights how regional markets have replaced Europe as Rwanda's main exports destination, especially for live animals and animal products, horticulture, agro-processed goods, and hides and skins. Key regional markets include the Democratic Republic of the Congo (DRC), Kenya, and Uganda. With the AfCFTA, exports to regional markets are expected to grow further.

Despite the huge untapped export potential in the affected value chains given the demand for agri-food products in international markets, the various SPS compliance issues undermine Rwanda's market access.

Key SPS challenges impacting Rwanda's export growth

SPS issues are highly relevant in the pursuit of product and market diversification, particularly in high-value markets. Regional markets such as South Africa and the East Africa region also pay great attention to SPS compliance. For instance, Kenya has recently banned the import of certain peanut butters and maize flours due to high levels of aflatoxin. Over the last decade, Rwandan authorities have also recognized the need to develop SPS capacity to promote growth of agri-food exports. Both Rwanda's Strategic Plan for Agriculture Transformation (2018-2024) and the National Agricultural Policy (2018) identify the requirement to improve capacity to meet SPS requirements in order to access regional and international markets to promote competitiveness and increase trade.

The Strategic Plan highlights the importance of appropriate legislation for plant and plant products, animal products and agro-chemicals, with the aim to strengthen the regulatory framework in the country. Its strategic orientation also points to the need for capacity building to meet SPS requirements of relevant certifications and standards for the vegetable, poultry, pork, and fisheries sectors, specifically regarding two

broad value chains: animal resources and horticulture. The National Agricultural Policy finds SPS requirements, quality standards certification to be essential in improving access to high-end food markets.

Interestingly, Rwanda has had few export rejections by the US and EU due to SPS issues. For instance, from 2008 to 2019, the EU Rapid Alert System for Food and Feed (RASFF) listed eight (8) SPS notifications against Rwanda, while the US Import Refusal Alert (IRR) had only two SPS notifications. It is worth mentioning that Rwanda has an export certification system that makes sure that contaminated exports are intercepted at the national level before they get to the importer's border. Notwithstanding, most agri-food exports from Rwanda are susceptible to SPS compliance requirements. Main markets with SPS concerns resulting in export bans, border rejections, and export interceptions include the European Union (EU), the United States (USA) and South Africa.

SPS issues in Horticulture Value Chain

Horticulture products, mostly fruits, vegetables and flowers, are priorities for Rwanda's agriculture transformation and drive for export diversification.

The only reported SPS issue in this sub-sector was glass fragments in cherries in glass jar by the EU in 2014. Irrespective of this, horticulture products are susceptible to fruit flies, pesticide residues, salmonella, dimethoate and omethoate, and other unauthorised substances, as well as manufacture, packing or processing under insanitary conditions.

SPS issues in Livestock Value Chain

The livestock sector contributes to about a quarter of Rwanda's Agriculture GDP and is the fastest-growing sector at an average growth of 5.2% p.a. between 2000-2016 as well as a vital income source for the rural poor.

Livestock products are mostly exported to the regional market, with the Democratic Republic of Congo (DRC) being the largest importer. There is no reported incidence of SPS issues by high-value markets, such as the EU and U.S. against Rwanda. However, generally, the livestock sector is prone to the following SPS issues: Foot and Mouth Disease, Rift valley fever, highly pathogenic avian influenza, Crimean Congo Haemorrhagic Fever, Tick-borne diseases, trypanosomiasis, East Coast Fever, anti-microbial residues, New castle disease, and poor hygienic practices.

Key steps in the P-IMA process in Rwanda

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

Validation workshop to present preliminary findings to all stakeholders (March 2021)

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?

Stakeholder engagement

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

186 representatives participated from different government agencies, private sector groups, international financial institutions, international organizations, academia, donors and development partners. Almost 10 different government agencies (ministries of agriculture, trade and industry, competition and consumer protection authorities, standards authorities, etc.) were involved.

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 Rwanda, 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

14 SPS investment options were identified and ranked. The table below details the capacity building options and provides a breakdown of estimated investments costs, financing gap, and potential trade revenue.

¹ For more information on the decision criteria and assigned weights, see [Rwanda's full P-IMA report](#).

Priority Investment Option	Estimated Implementation Cost (US\$)	Financing Gap (US\$)	Estimated exports (US\$)
1. Capacity Building in Good Agriculture Practices (GAPs), Pre & Post-Harvest Management, Good Hygiene Practices (GHPs), & Good Manufacturing Practices (GMPs) for Horticulture Crops: Training of Trainers inspectors to develop and implement food safety and quality standards, as well as providing skills and capabilities in post-harvest management, GHPs and GMPs for HACCP systems compliance.	1,050,000	900,000	
2. Pesticides Residues Monitoring Plan for Horticulture Products: contribute to the implementation of food safety standards as the basis of SPS measures.	85,000	65,000	
3. Develop Food Safety Policy and Legislation on Plants and Livestock Products: aims to lay the ground for an effective and efficient food safety system.	50,000	-	
4. Develop Pest Control Mechanism for Pest and Diseases Surveillance: cover key activities such as early detection of pests new to an area and compilation of host pest lists.	374,000	336,700	
5. Accreditation of Pesticide Testing Lab at Rwanda Standards Board (RSB): existing facilities and basic equipment to be upgraded to meet requirements for international standard compliance.	1,361,000	1,111,000	
6. Aflatoxin Control and Management in Cereals: areas that need addressing include effective surveillance systems, collaboration, research and capacity development and training of stakeholders.	1,500,000	1,490,000	
7. Aflatoxin Control and Management in Dairy Products: investment option will focus on awareness creation of feed manufacturers and dairy farmers.	1,500,000	1,468,000	
8. Establish a Structured Animal Disease Surveillance System: need for a well-structured animal disease surveillance system including disease reporting systems, surveys, risk-based methods, ante-mortem and post-mortem inspections, etc.	355,000	333,000	
9. Capacity Building in Traceability System for Livestock and Livestock Products: assist business operators by building their capacity in putting in place and operationalize traceability in their respective food production chains.	195,000	188,000	
10. Establish and Operationalize Residue Monitoring Plans for Animal and Animal Products: to be developed for livestock value chains such as meat, dairy, poultry and eggs.	195,000	178,700	
11. Upgrade and Strengthen the Slaughter Chain: strengthen and upgrade the existing abattoirs infrastructure and facilities.	870,000	813,000	
12. Capacity Building in Apiculture: to facilitate knowledge and skill disbursement amongst producers.	665,000	644,000	
13. HACCP Certification for Honey Cooperatives/Honey Processing: to address export limitations due to the requirement by international buyers.	107,000	67,000	
14. Capacity Building in GHPs, GVPs, and GMPs for the Dairy Sector: capacity building among dairy value chain actors to increase both quantity and quality of Rwandan milk.	700,000	640,000	
Total Estimate	9,007,000	8,234,400	

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

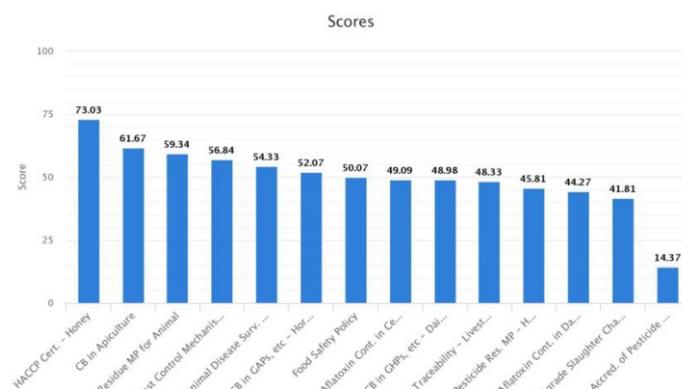
- Baseline model: reflects the weights assigned by participants at the stakeholder workshop
- Trade and costs model: only includes decision criteria related to costs and trade impacts
- Equal weights: each of the weights has the same value

Findings

The study estimated a total cost of approximately **US\$9 million** needed to implement all 14 SPS investment options, which is estimated to generate about **US\$255.5 million** 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 HACCP certification for Honey cooperatives and honey processors, capacity building in apiculture, establishing and operationalizing Residue Monitoring Plans for animal and animal products and development of pest control mechanism for pest and disease surveillance in horticulture are the top four 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, results are relatively similar to the baseline model:

- The top four ranked options in the main results remained the same.
- The lowest ranked option, accreditation of pesticide testing laboratory at RSB also remained the same.

There are, however, observable movements from the 5th to the 13th positions:

- For instance, the development of Food Safety Policy and Legislation on plants and livestock products moved from its seventh position in the main result to tenth place in this model.

On the other hand, the cost and trade model presented in Figure 3 (below), shows that the top and bottom options remained in their original positions as in the previous two scenarios. The most dramatic movements are the following:

- Capacity building in apiculture
- Development of pest control mechanism for pest and diseases surveillance

These two SPS investment options moved from their usual second and fourth top positions to seventh and eighth positions, respectively. Similarly, the capacity building options in traceability system for livestock and livestock products, and pesticides residues monitoring plan for horticulture products have moved from the bottom-five to the top-five.

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

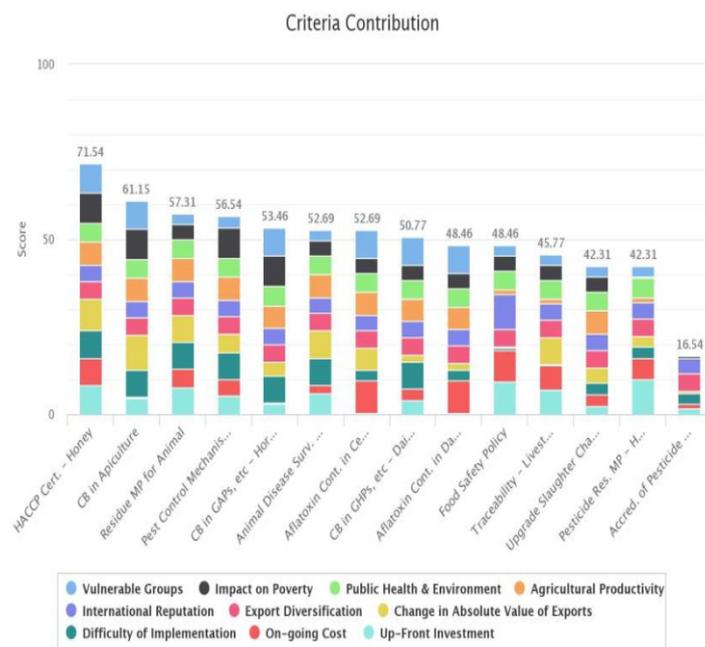
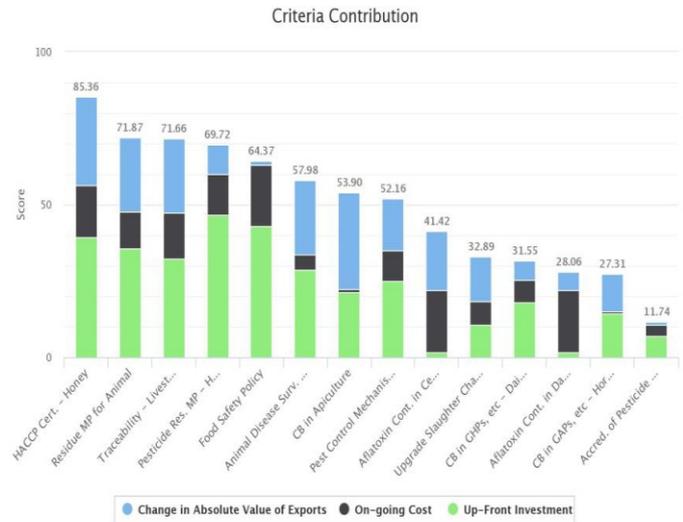


Figure 3: Ranking of SPS investment options Using Cost and Trade Model with Criteria Contribution



What do these findings mean for Rwanda?

Despite the sensitivity analyses carried out, the following four options consistently ranked at top positions:

- HACCP certification for Honey cooperatives and honey processors
- Capacity building in apiculture
- Establish and operationalize Residue Monitoring Plans for animal and animal products
- Development of pest control mechanism for pest and diseases surveillance

At the other end, the following three ranked lower:

- Accreditation of Pesticide Testing lab at Rwanda Standards Board (RSB),
- Upgrade and Strengthen Slaughter Chain; and
- Aflatoxin control and management in dairy products

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 analysis had to contend with considerable difficulties obtaining data for the compilation of the information cards in all sectors. Therefore, 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 eight (8) 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 Rwanda

- Ministry of Agriculture and Animal Resources of Rwanda. (2018). Strategic Plan for Agriculture Transformation (2018-2024)
- Ministry of Agriculture and Animal Resources of Rwanda. (2018). National Agricultural Policy
- Ministry of Agriculture and Animal Resources annual report for FY 2016/17
- Cassidy, D. (2012); Establishing Priorities for Sanitary and Phytosanitary Capacity-Building in Rwanda Using a Multi-Criteria Decision-Making Framework

Official trade data from national and international sources

- Rwanda Trade Policy Review, World Trade Organization (2019)
- Trade Policy Review: East African Community, World Trade Organization (2019)
- ITC Export Trade Map: <https://trademap.org/>
- I T C E x p o r t P o t e n t i a l M a p : <https://exportpotential.intracen.org/> U.S. Import Refusal Report: <https://www.accessdata.fda.gov/scripts/ImportRefusals/index.cfm>
- 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
- **EIF** - Enhanced Integrated Framework
- **GAP** - Good Agriculture Practices
- **GHPs** - Good Hygiene Practices
- **GMPs** - Good Manufacturing Practices
- **GVPs** - Good Veterinary Practices
- **HACCP** - Hazard Analysis and Critical Control Points
- **ITC** - International Trade Center
- **P-IMA** - Prioritizing SPS Investments for Market Access
- **RSB** - Rwanda Standards Board
- **STDF** - Standards and Trade Development Facility
- **SPS** - Sanitary and Phytosanitary
- **TOT** - Training of Trainers
- **WTO** - World Trade Organization

