

PRIORITIZING SPS INVESTMENTS FOR MARKET ACCESS (P-IMA)

An evidence-based
approach to inform
and improve SPS
decision-making
processes



Food and Agriculture
Organization of the
United Nations



World Organisation
for Animal Health
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Work to develop and apply the P-IMA framework has involved several people in different countries. USAID, USDA and COMESA provided initial support to the use of the P-IMA framework in some countries in Africa. Since then, other organizations have used the P-IMA framework in different ways, often as part of STDF projects. All of this work has contributed to valuable experiences, results and learning on the use of P-IMA's evidence-based approach to inform SPS decision-making.

This publication updates the STDF P-IMA Guide (2016) by Spencer Henson, University of Guelph, Canada. It was written by Marlynne Hopper (STDF Secretariat) and Spencer Henson.

ACRONYMS

AGRA	Alliance for a Green Revolution in Africa
APHIS	US Animal and Plant Health Inspection Service
COLEAD	Committee Linking Entrepreneurship-Agriculture-Development
COMESA	Common Market for Eastern and Southern Africa
EIF	Enhanced Integrated Framework
FAO	Food and Agriculture Organization of the United Nations
FMD	Foot and Mouth Disease
GAP	Good agricultural practice
IICA	Inter-American Institute for Cooperation on Agriculture
IPPC	International Plant Protection Convention
MCDA	Multi-criteria decision analysis
MRL	Maximum residue level
NPPO	National Plant Protection Organization
PCE	Phytosanitary Capacity Evaluation Tool
P-IMA	Prioritizing SPS Investments for Market Access
PVS	Performance of Veterinary Services
SPS	Sanitary and phytosanitary
STDF	Standards and Trade Development Facility
TMA	TradeMark Africa
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WHO	World Health Organization
WOAH	World Organisation for Animal Health
WTO	World Trade Organization

INTRODUCTION



Developing countries face many demands to improve sanitary and phytosanitary (SPS) capacity to boost agri-food exports and support policy objectives. Yet, the resources available from government budgets and donors are usually insufficient to meet all the needs. Not only do tough choices have to be made, but resources need to be used as effectively and efficiently as possible given the extent of economic and social development priorities.

Prioritizing SPS investments when resources are limited is not easy. Hard choices need to be made between competing investments. Proponents will almost always be able to make compelling cases as to why particular gaps should be addressed immediately, while others can wait. This makes it critical to set priorities in a coherent and transparent manner so that the rationale behind investment decisions is clear and resources are allocated efficiently.

Evidence helps to improve the effectiveness of SPS policy and investment decisions. It is important to show impact and demonstrate value for money. Without a transparent, evidence-based approach, poor decisions can be made, or resources can be invested in areas that do not lead to the greatest impacts.

The P-IMA framework is an evidence-based approach to inform and improve SPS planning and decision-making processes. It helps to link SPS investments to policy goals from export growth to agricultural productivity, poverty reduction and cross-cutting impacts (including on gender equality and the environment), in support of the UN Sustainable Development Goals. It provides a structured process to establish priorities among a set of multiple SPS capacity-building needs, where available resources are insufficient to address all of these needs at the current point in time.¹ This is the situation in which most governments find themselves, especially in developing countries where food safety, animal health and/or plant health capacity tends to be weak and resources are limited in both the public and private sector.

Use of P-IMA helps governments and donors to move towards greater efficiency in the use of scarce resources. It encourages a change in the way decisions on SPS investments are made, based on the use of evidence and engagement with relevant stakeholders. This helps to inform and improve decision-making processes, and to enhance the transparency and accountability of resource allocation. While decisions might still be made (for political or other reasons) to support SPS investments that are not prioritized highly, using P-IMA makes transparent all the information on which priorities are established and requires decision-makers to justify their choices.

The P-IMA framework was developed by the STDF, in cooperation with USAID, USDA and COMESA and members of STDF's global partnership. The initial demand came from some developing country delegates to the WTO SPS Committee during an STDF workshop on the use of economic analysis and other methodologies to inform SPS decision-making processes.² Since then, in-country pilots and demand-driven projects, supported by the STDF in partnership with other national, regional and international partners, have helped to test and refine the methodology. Governments in a number of developing countries, as well as representatives of the private sector and diverse other international and regional organizations – including AGRA, COMESA, IICA, TMA and others – have been involved. In the process, the framework has been adapted and used by different stakeholders to inform SPS planning and decision-making processes.

¹ This framework takes as its starting point work on the development of a decision tool for priority-setting in the context of microbial food-borne disease in Canada. See: Henson, S. J., Caswell, J. A., Cranfield, J. A. L., Fazil, A. F., Davidson, V. J., Anders, S. M. and Schmidt, C. (2007). A Multi-Factorial Risk Prioritisation Framework for Food-Borne Pathogens. Amherst MA: Department of Resource Economics, University of Massachusetts.

² Henson, S. J. and Maskaure, O. (2009). Guidelines on the Use of Economic Analysis to Inform SPS-related Decision-Making. Geneva: Standards and Trade Development Facility. See: http://standardsfacility.org/sites/default/files/STDF_Coord_291_Guidelines_22Jan10_0.pdf

ABOUT THIS GUIDE

This Guide provides an introduction to the P-IMA framework and the steps to use it in practice. It shares examples of P-IMA's use in developing countries, highlighting key results, experiences and lessons. It updates the original P-IMA Guide by Spencer Henson for the STDF, published in 2016. More information on the use of P-IMA is available on the [STDF website](#).

This Guide is targeted at officials in SPS authorities in developing countries, as well as departments and ministries of planning or finance, donors and development partners, who are interested in making use of evidence-based approaches to improve SPS decision-making processes.

[An online training programme](#) and complementary [STDF P-IMA Facilitators Handbook](#), including more in-depth guidance and practical resources, is also available for experts tasked with leading P-IMA work at the country and regional level.



A photograph of two men in a field, overlaid with a red tint. The man in the foreground is wearing a cap and a high-visibility vest, looking down. The man in the background is also wearing a cap and a short-sleeved shirt, looking towards the camera. The background shows trees and foliage.

P-IMA: THE EVIDENCE-BASED APPROACH

The P-IMA framework provides a structured process to establish priorities among a set of multiple SPS capacity-building needs, where available resources are insufficient to address all of these needs. This is the situation in which most governments find themselves, especially in developing countries. Not only are funds in the public and private sector scarce, but there are many different and competing priorities and needs, and an expectation that available funds should be used as effectively and efficiently as possible.

Using P-IMA helps to inform SPS decision-makers by allowing SPS investment priorities to be established based on clear criteria and a transparent process. The process engages all relevant stakeholders (including different government authorities, the private sector, civil society, academia and others) in an open discussion on the investments needed to address specific SPS challenges facing trade. The stakeholders discuss what decision criteria should be used to set investment priorities, and the respective weights used for the prioritization. During this process, SPS investments are considered in relation to the expected impacts on policy goals from agricultural productivity to export growth, socio-economic and other cross-cutting impacts (for instance on gender equality and the environment). The findings, as well as all the data and information used, are documented and discussed transparently. This helps to facilitate an open exchange on SPS priorities, deliver impartial information to inform priority policy decisions, and increase clarity on why SPS investments matter for policy goals. Key guiding principles are presented in Box 1.

Box 1: Guiding principles

- **Flexibility:** The P-IMA framework can be applied to as many potential capacity-building needs as considered relevant, as well as diverse decision criteria that might be measured in distinct ways given available data.
- **Pragmatism:** The design balances rigour in establishing priorities with the almost inevitable problem of scarce and/or weak data. It seeks to make use of the best data and information available. When new or better data become available, this can be easily incorporated.
- **Participation:** Inputs are encouraged from relevant stakeholders including government authorities, the private sector, civil society, research and academia.
- **Transparency:** The P-IMA framework makes clear the criteria and information on which priorities are established so that they are open to scrutiny and can be challenged.

Ideally the P-IMA framework would be used on an ongoing basis to inform SPS decision-making and resource allocations, rather than as a one-off exercise. This would enable the resulting analysis to be reviewed and updated. For instance to take account of new SPS capacity-building options that emerge, incorporate new data and information, and to remove capacity needs that have been addressed or are no longer relevant.

Experiences and results

The P-IMA framework has been used and/or adapted by stakeholders in developing countries in different ways, based on their needs. In several cases, it has been applied with the support of STDF projects and project preparation grants, for instance, to provide evidence that supports project development and resource mobilization, or to guide the development of a national SPS action plan. This has ensured a more robust basis for funding requests, avoiding funding applications that are not prioritized and/or well justified in terms of their likely impacts. See Annex 1 for more information on STDF PPGs and projects that included use of P-IMA.

In other cases, the P-IMA framework has been adopted and adapted by other organizations for their particular needs. For instance, TradeMark Africa used the framework to prioritize SPS needs for regional trade and inform programmatic resource allocation decisions. In the Horn of Africa, the International Livestock Research Institute (ILRI) adapted the framework as part of a feasibility study to inform the design of the Better Enforcement of Standards for Safer Trade (BESST) initiative led by the World Organisation for Animal Health (WOAH).³

³ <https://cgspace.cgiar.org/handle/10568/107951>

In addition to generating rankings of SPS investment options, use of the P-IMA framework has helped to generate a compilation of available data and information on diverse SPS capacity development needs, including key data gaps. It has also helped to encourage dialogue across government agencies and with the private sector, and to promote collaboration among donors and others for transparency and reduction of duplication in SPS capacity development and Aid for Trade initiatives.

Overall, a number of key benefits have emerged:

- Improved dialogue between diverse public, private and other stakeholders with an interest in SPS capacity building, and more inclusive decision-making processes.
- Evidence on the likely impacts (e.g. on trade, poverty reduction, public health) of investing in SPS capacity that can help to obtain additional resources from national sources or donors.
- More transparent and accountable choices between multiple investment options.
- Greater economic efficiency of SPS investment decisions. Scarce resources are more likely to be allocated in a way that supports policy objectives including economic development, poverty reduction, public health or agricultural development.

Scope of the P-IMA Framework

The P-IMA framework was developed to prioritize food safety, plant and animal health investments related to trade, reflecting the STDF's focus on facilitating safe trade. The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) sets out the basic rules on how governments can apply food safety and animal and plant health measures (sanitary and phytosanitary or SPS measures) to protect health and facilitate trade. It aims to achieve a balance between the right of WTO Members to implement legitimate health protection policies and the goal of allowing the smooth flow of goods across international borders without unnecessary restrictions.

Developing countries typically face a variety of SPS capacity-building needs related to weaknesses in their ability to protect domestic health and/or meet SPS requirements in export markets. Reflecting the STDF's mandate, the focus of the P-IMA framework is on SPS weaknesses that impede exports of agri-food products. Clearly this represents only part of the rationale for investing in SPS capacity. Other food safety, plant health and/or animal health issues are often of major domestic concern, even if they may have a more limited direct influence on exports. Additional factors, such as transportation or compliance with technical regulations and standards, also influence trade. It is recommended that use of the P-IMA framework is preceded by efforts to fully understand and evaluate capacity-building needs in the areas of food safety, plant health and animal health (see pages 16-17).

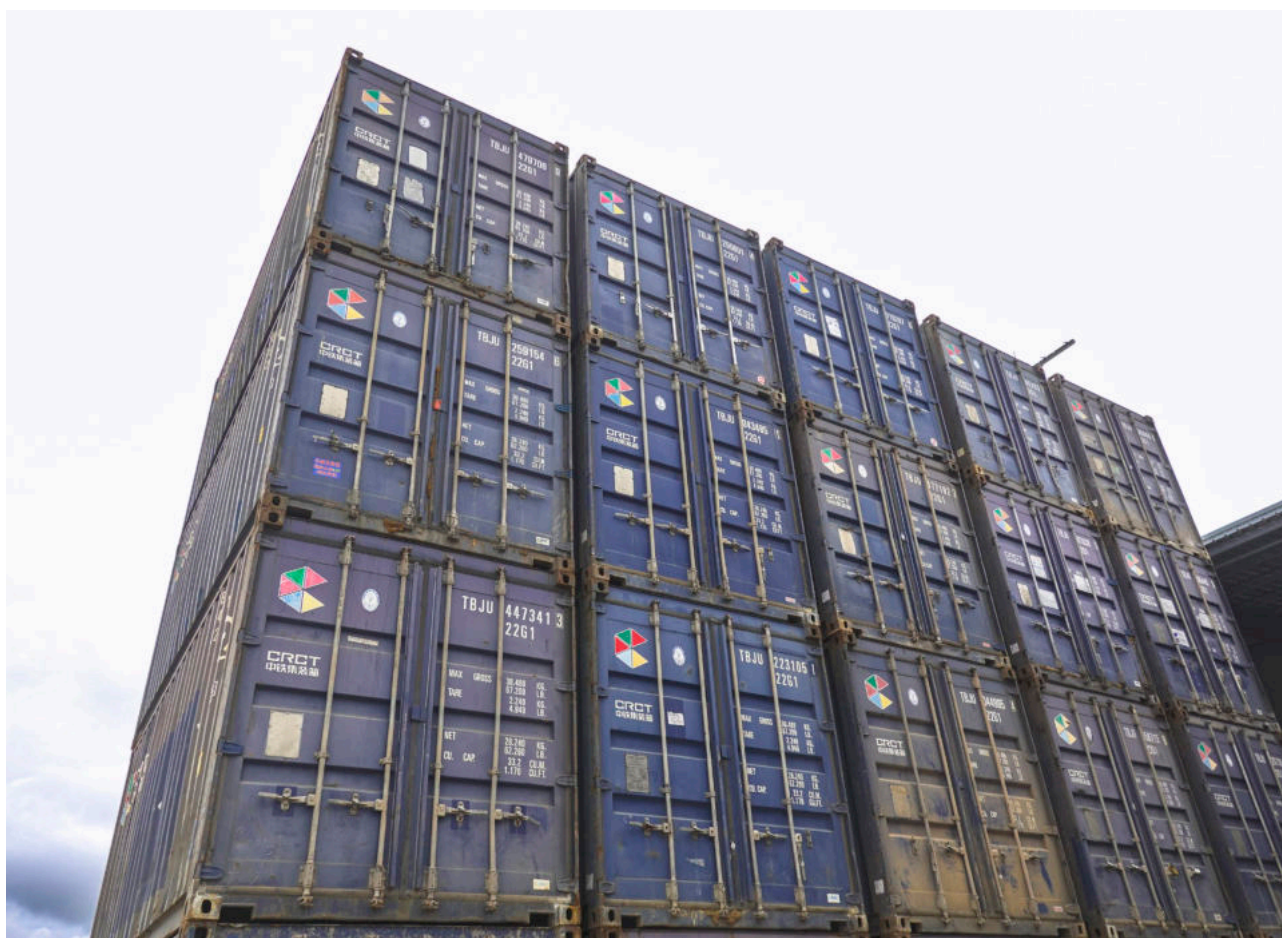
In addition to prioritizing SPS investments that address food safety, animal and plant health for trade, the P-IMA framework may be adapted for other uses. For instance, to prioritize capacity development investments related to:

- a particular SPS area (food safety, plant health or animal health)
- a particular priority export value chain (e.g. fresh produce, milk and dairy products, fish and seafood)
- a particular SPS challenge (e.g. aflatoxin control, fruit flies) affecting trade in different products
- non-SPS concerns relevant for domestic markets, TBT requirements for market access, or agriculture or trade facilitation interventions, more broadly.

Use of multi-criteria decision analysis

In making decisions in our daily lives or in professional settings, we usually consider and evaluate a number of different criteria. In many decisions, these different criteria are considered implicitly and decisions are often made based mainly on intuition. When decisions concern complex issues, have major implications on resources and/or are likely to affect multiple stakeholders, it can be valuable to clearly identify the range of decision-making options and explicitly evaluate multiple criteria. This process, when well-structured and carried out, tends to result in more informed and better decisions.

The P-IMA framework enables SPS decision-makers to use and benefit from multi-criteria decision analysis (MCDA) to set priorities, based on available information and data. Multi-criteria decision analysis offers an approach to consider and evaluate different criteria to support decision-making. Governments and the private sector have been using MCDA to inform decision-making processes since the 1960s, especially in areas like natural resource management or transportation where decisions relate to very large investments. In the public health area, authorities in Canada have used a multi-criteria decision analysis framework to rank foodborne risks.⁴ Some STDF partners, notably FAO, have used MCDA, including to support evidence-informed food safety policies and risk management decisions.⁵



⁴ This framework takes as its starting point work on the development of a decision tool for priority-setting in the context of microbial food-borne disease in Canada. See: Henson, S. J., Caswell, J.A., Cranfield, J.A.L., Fazil, A.F., Davidson, V.J., Anders, S.M. and Schmidt, C. (2007). A Multi-Factorial Risk Prioritisation Framework for Food-Borne Pathogens. Amherst MA: Department of Resource Economics, University of Massachusetts.

⁵ See <http://www.fao.org/3/a-i3944e.pdf> and <https://www.fao.org/3/bc265e/bc265e.pdf>

The example below illustrates how MCDA can be used to inform decision-making on the purchase of a car (Box 2).

Box 2: A practical example of the use of MCDA to inform decision-making

In this example, multi-criteria decision analysis is used to inform a decision on the purchase of a new car. The decision-maker is considering three car models, and considers three criteria as important: i) cost (in this case, the person purchasing the car can afford to spend more, rather than less, for a “better” car); ii) recommendation of a friend (to help select a car that is seen as a good choice to the people that matter); and iii) fuel consumption (preference for greater fuel efficiency because it is cheaper to run and better for the environment).

Choosing between the three cars is difficult because none of the models performs the best with respect to all three of the criteria. This means a trade-off needs to be made in terms of their relative performance on the three criteria. In addition, the three criteria are not considered equally important. Most important to the decision maker, is whether a car is recommended by a friend (72%), followed by cost (20%) and fuel consumption (8%).

MCDA provides a way to choose between the three cars given the criteria that are considered important, and the weights attached to them. The power of MCDA (and the approach used in the P-IMA framework) is that the decision criteria do not need to be monetized, and they do not have to be measured in the same way. This means that MCDA is sufficiently flexible to be used where data are scarce or where there is limited scope to quantify the impact of options with respect to decision criteria.

Criterion	Weight	Car models		
		Audi	Smart Car	Ferrari
Cost	20%	22	13	70
Recommended by a friend	72%	1	0	7
Fuel consumption	8%	8	2	20

COMPLEMENTING SECTOR-SPECIFIC CAPACITY EVALUATION TOOLS

The P-IMA framework is most easily used where there is sound awareness and detailed knowledge of prevailing weaknesses in SPS capacity. Most efforts to identify and/or prioritize SPS-related capacity-building needs adopt a sectoral perspective, whereby existing food safety, animal health and/or plant health capacity is assessed to identify weaknesses and capacity building needs to address them. Ideally, countries should first have applied SPS-related capacity evaluation tools to properly understand the specific weaknesses in SPS capacity that exist in the context of efforts to promote agri-food exports.

Countries are encouraged to review and assess their capacity on food safety, animal and plant health using the tools developed by STDF partners:

- **FAO/WHO Food Control System Assessment Tool:** Building on the Codex Principles for Guidelines on National Food Control Systems and other Codex guidelines, and FAO/WHO good practice, this Tool supports countries to review their national food control system and its global performance. Results from the assessment process guide the development of well-defined priorities and roadmaps to improve food control systems and provide a useful baseline to monitor progress. Published in 2019, the tool has been piloted and used in more than 20 countries.
- **IPPC Phytosanitary Capacity Evaluation (PCE) Process:** The PCE process is a fully comprehensive NPPO-led, facilitator-enabled, IPPC Secretariat supported process of multiple phases, enabled by a web-based evaluation tool made up of 13 modules. Each module represents the elements of an effective phytosanitary system. NPPOs can select and apply these modules as a whole or in clusters. The PCE helps a country identify strengths and gaps in phytosanitary systems. The strategic plans developed through PCEs provide the basis for dialogue with donors, improving the likelihood of accessing funding to strengthen phytosanitary systems. To date, over 70 countries have benefitted from the PCE, including the evaluation of capacities in some countries more than once.
- **WOAH Performance of Veterinary Services Pathway (PVS):** This is a voluntary, multi-step process to help country's Veterinary Services meet WOAH international standards for terrestrial and aquatic animal health and welfare, including zoonoses. The Pathway comprises the WOAH Tool for the Evaluation of Performance of Veterinary Services and the WOAH Tool for the Evaluation of Performance of Aquatic Animal Health Services (PVS Tools), based on the WOAH Codes. The Programme also offers the WOAH PVS Gap Analysis that supports WOAH Members to develop strategic and costed actions to improve the performance of Veterinary and Aquatic Animal Health Services, based on PVS evaluation mission results and country priorities. The PVS Programme is evolving to better satisfy Members' needs and has been used successfully in over 140 countries. Many countries are at the PVS Evaluation Follow-Up stage, have carried out a gap analysis and accessed the targeted support options offered by the Programme, using a consistent methodology to track and improve performance of veterinary services over time.

The three above-mentioned tools help to benchmark food safety, animal and plant health capacity to international standards and/or established norms. They provide the in-depth evidence and knowledge for countries to make informed decisions about SPS investments that can drive change, identify priority actions and next steps. Use of these capacity evaluation tools is strongly encouraged to enable countries to properly identify and fully understand the full range of weaknesses that exist in the area of food safety, animal and plant health capacity, whether related to domestic health or trade. It is strongly recommended that these tools have been used prior to the application of the P-IMA framework.

With its focus on prioritizing SPS investments for market access, the P-IMA framework complements use of the SPS-related capacity evaluation tools. The P-IMA approach recognizes that SPS capacity across the public and private sector (including institutional capacity) is relevant to export performance.

Box 3. Synergies between the IPPC PCE Tool and P-IMA in Madagascar

In Madagascar, use of the P-IMA framework helped to mobilize resources for phytosanitary investments following an evaluation of phytosanitary capacity needs, using the IPPC PCE Tool.

Supported through an STDF [project preparation grant](#) (PPG), the P-IMA process brought together the Ministry of Agriculture and Livestock, other relevant government authorities, the private sector, consumer associations and development partners to prioritize investments in priority export value chains. It complemented and built on the findings and results of the PCE Tool. Having access to the PCE findings gave stakeholders confidence that the phytosanitary investment options reflected real needs, linked to the National Phytosanitary Strategic Plan.

The P-IMA analysis delivered evidence on the expected impacts of these investments linked to policy goals on trade, agricultural productivity and poverty reduction. This helped to mobilize resources to address some of the key priorities, including funding from COLEAD to control risks related to quarantine pests like fruit fly and False Codling Moth in capsicum exports to the EU.

The IPPC Secretariat shared the experiences and results from Madagascar with its Strategic Planning Group at the FAO to identify further opportunities for synergies between the PCE and P-IMA to improve phytosanitary capacity development.

In addition to these three comprehensive evaluation tools, other organizations have developed SPS assessment tools and approaches, which generate useful information that can also inform the P-IMA process. These include:

- [IFC Scan Guide](#) to support the analysis of the policy and regulatory dimensions of four aspects of a national food system: i) food safety; ii) food fortification; iii) food loss and waste; and iv) livestock production (animal welfare and use of antibiotics).
- Sectoral Performance, Vision and Strategy tools developed by the Inter-American Institute for Cooperation on Agriculture (IICA) for [National Food Safety Control Systems and Services](#), [National Plant Protection Organizations](#), [National Veterinary Services](#), and [Sanitary and Phytosanitary Measures: An Institutional Vision](#).
- IICA tools for [Sanitary Program Design and Intervention Strategies](#) (in Spanish only) and [Economic Evaluation of Animal Health Programs](#) (in Spanish only).

USING P-IMA TO UNDERSTAND HOW SPS INVESTMENTS AFFECT CROSS-CUTTING ISSUES

What are the expected impacts of SPS investments on gender equality?

Evidence suggests that, in some circumstances, women face greater challenges when complying with SPS measures, mainly because of the unequal distribution of caring responsibilities, gendered social norms, labour market segregation, lower skills, and restricted access to information and financing. The impact is significantly pronounced in value chains where women represent a large share of the workforce and are substantially involved in cross-border trade. Investments to improve SPS capacity measures may therefore empower or disempower women, and/or impact the burden they face on a day-to-day basis, as well as their social position and overall welfare.

Using the P-IMA framework encourages public and private sector stakeholders to explore and understand the expected impacts of SPS investments through a gender lens:

- Gender can be included as a specific decision criterion so that the impacts (positive, negative or neutral) on women and men are estimated for the prioritizations generated.
- Representatives of stakeholders focused on trade-related gender issues (e.g. women producer/trader associations) are fully engaged to help ensure that gender aspects are considered, and to benefit from their knowledge and information.
- Where available, gender-disaggregated data related to trade and SPS measures is included.

Asking the following key questions during the P-IMA process can help to tease out and better understand the gender dimensions of SPS investments:

1. What particular assumptions, constraints and/or opportunities are there for women and men related to compliance with SPS measures for trade?
2. How are women and men producers/traders/employees likely to be impacted (positively and/or negatively) by the SPS investments being prioritized?
3. Do the identified SPS investments respond to the needs of men, women and other key groups, and how should they be addressed as part of the identified SPS investments?
4. To what extent, and how, are women, engaged in value chains that are part of the SPS investments, being prioritized (e.g. value chains that employ a significant share of women or in which women lack access to resources required for compliance)?
5. What options are available to minimize the potential negative impacts on women and men?
6. Have relevant stakeholders for gender issues been included and/or consulted in the P-IMA process?
7. How to ensure gender-disaggregated data and information is collected and available and used to inform the P-IMA analysis?

What are the expected impacts of SPS investments on the environment?

Effective implementation of SPS measures has positive long-term development impacts, including protecting the environment in areas linked to agricultural production. For example, SPS measures can prevent drinking water, farm soils or fish stocks from being contaminated by heavy metals, and help protect biodiversity. They can also help to develop agricultural systems that are more resilient to climate change, minimizing the negative effects on food security. In addition, building SPS capacity supports small-scale farmers and MSMEs to reduce costs associated with the use of chemicals, to increase their productivity, improve product quality and safety, and gain market access.

Developing countries with weak SPS capacity may face challenges around emerging SPS risks linked to rising temperatures and extreme weather events. Building SPS capacity helps to mitigate and adapt to the effects of climate change on agricultural production, which is vital for food safety, disease and pest control, alongside trade and food security.

Using the P-IMA framework encourages public and private sector stakeholders to explore and understand the expected impacts of SPS investments on the environment:

- Environment can be included as a specific decision criterion so that the impacts (positive, negative or neutral) on different environmental aspects (including biodiversity and climate change) are estimated for the prioritizations generated.
- Representatives of government authorities working on the environment linked to SPS measures are engaged to help ensure that environmental aspects are considered, and to benefit from their knowledge and information.
- Where available, environmental-related data can be included.

Asking the following key questions during the P-IMA process can help to tease out and better understand the expected impacts of SPS investments on the environment (including biodiversity and climate change):

1. What assumptions, constraints and/or opportunities exist with respect to with compliance with SPS measures and the environment?
2. How is the environment likely to be impacted (positively and/or negatively) by the SPS investments being prioritized? For instance, to what extent, and how, do the investment options under consideration have implications for the use of pesticides, crop protection products or veterinary drugs?
3. How could environmental aspects be addressed as part of the identified SPS investments? For instance, what are the links (if any) to climate-smart agriculture?
4. Have relevant stakeholders (e.g. Ministry of Environment) been included and/or consulted in the P-IMA process?
5. What environment-related data and information may be collected and used to inform the P-IMA analysis?

SELECTED NATIONAL/ REGIONAL EXPERIENCES



Use of P-IMA to prioritize SPS investments in Belize

The Belize Agricultural Health Authority (BAHA) was an early adopter of the P-IMA framework in 2012. Building on already strong relationships with other parts of government and the private sector, use of P-IMA helped to improve awareness of what is required to gain and maintain market access for agri-food products, resulting in more support for BAHA's work. The analysis helped to secure new investments to improve animal health controls for export of live cattle to Mexico, and identified new data to correct oversights in previous work to estimate SPS investment costs. Based on the experiences, BAHA used P-IMA to support strategic planning, and inform priority setting and resource allocations under the Agricultural Services Project funded by the Inter-American Development Bank (IDB). The Belize Trade and Investment Development Service (BELTRAIDE) also used the P-IMA approach to prioritize actions to support micro and small and medium-sized enterprises (MSMEs). The Ministry of Natural Resources and Agriculture then used the framework to prioritize programmes related to food and nutrition security.

[Find out more](#)



Adapting P-IMA for trade facilitation action planning in Malawi

In Malawi, use of the P-IMA framework in 2012 encouraged dialogue across food safety, animal and plant health and trade authorities as well as with the private sector. This led to increased confidence about where to invest in SPS capacity development, and informed the development of project proposals. Following this experience, the Ministry of Industry and Trade (MOIT) saw another opportunity to use the P-IMA approach to inform development of the Consolidated National Trade Facilitation Action Plan (2014). This helped to set priorities across multiple trade facilitation interventions identified and recommended by national authorities, development partners and donors in different reports. In turn, this supported a more coherent approach to trade facilitation, that avoided duplication and misalignment.

[Find out more](#)



Using evidence to support aflatoxin control in Ghana

In Ghana, the Science and Technology Policy Research Institute (STEPRI) of the Council for Scientific and Industrial Research (CSIR) teamed up with AGRA, government authorities responsible for agriculture, trade, and public health, the private sector, academia and civil society to use P-IMA's evidence-based approach to support implementation of the National Policy for Aflatoxin Control in Food and Feed. The Policy sets out a framework to reduce aflatoxin contamination for improved safety of food and animal feed, with several different investments included. P-IMA's evidence-based approach was used as part of an STDF PPG, led by AGRA and STEPRI, to facilitate an evidence-based discussion and prioritization of these diverse interventions, based on expected impacts related to public health, agricultural productivity and trade.

[Find out more](#)



Leveraging resources for SPS capacity development in Africa

The COMESA Secretariat saw an opportunity to use P-IMA to inform decision-making processes and leverage resources for SPS capacity development, including as part of broader agriculture and trade programmes. In a project funded by the STDF in partnership with the EIF, government authorities in Ethiopia, Kenya, Malawi, Rwanda and Uganda came together with the private sector, academia and others to discuss SPS investments needed to facilitate regional and international trade. Decision criteria and weights were identified, so that the investment options could be prioritized linked to policy goals. Five country reports were produced that collectively identified some 60 investment options costed at US\$165 million, with benefits estimated at over US\$6 billion in agricultural exports.

The P-IMA analysis was used to inform programming and mobilize funds, including to improve food safety in key value chains under an EU-funded Trade Facilitation Programme. COMESA Agriculture Ministers are keen to use the analysis to leverage more resources to address SPS challenges, including as part of agricultural, environment and trade investment plans at national and regional. The COMESA Secretariat plans to re-apply P-IMA, and sees opportunities to use P-IMA to mobilize resources for SPS capacity development, in support of the Africa Continental Free Trade Area and AUC SPS Policy Framework.

[Find out more](#)

USE OF P-IMA TO INFORM SPS DECISION-MAKING PROCESSES: KEY LESSONS

Based on experiences to date with the use of P-IMA, the following key lessons have been identified.

1. **The P-IMA framework encourages a collaborative, multi-stakeholder perspective to SPS challenges, supporting a food systems and One Health approach.** By bringing together diverse parts of government, as well as the private sector, academia, STDF partners and other relevant stakeholders use of the framework promotes dialogue about key SPS investment needs linked to policy goals and the SDGs, as well as interdisciplinary, holistic approaches like food systems and One Health.
2. **The P-IMA framework helps to show how investing in SPS capacity investments contributes to national policy objectives from agricultural productivity to economic development or food security.** The analysis provides compelling evidence that can help to convey the value and public good nature of national sanitary and phytosanitary systems. It also demonstrates that SPS stakeholders are thinking critically about SPS investment needs and weighing up different options and trade-offs. This can help to convince national governments and donors about the business case for SPS investments and leverage additional resources. Engaging senior policymakers and donors from the outset, as well as experts from planning and finance ministries, is key to encourage buy-in and use of the resulting analysis to inform decision-making processes.
3. **The P-IMA framework offers a flexible methodology that can be adapted and used in different ways to inform priority-setting across SPS investments or within specific areas of food safety, animal or plant health, provided the relevant stakeholders are engaged.** It has been applied in countries that differ widely in terms of their size and development status, as well as the scale and diversity of their agri-food exports and SPS needs. It has also been used to prioritize interventions related to aflatoxin control, as well as trade facilitation. What is critical is to ensure agreement on the scope, to engage all the relevant stakeholders as part of the process, and to make use of relevant existing information including the findings of SPS capacity evaluation tools and other assessments, where available. The resulting analysis can also be useful to facilitate an evidence-based discussion among relevant stakeholders, for instance as part of national or regional SPS Committees.
4. **The P-IMA framework pushes stakeholders to consider how SPS investments are likely to affect cross-cutting issues, including gender equality and the environment, which is often not well understood.** Having this dialogue helps to increase understanding about how SPS investments are likely to impact men and women differently, or have varying effects on the environment. This is an important initial step to mainstream cross-cutting issues in SPS decision-making.
5. **The P-IMA framework adds value to decision-making, even in cases where there is limited experience with structured approaches to priority-setting or little quantitative data available.** Clearly identifying different criteria that are used as part of the decision-making process improves clarity on why some investment options rank higher (or lower) than others. This increases awareness of the trade-offs involved in decision-making, promotes more accountable and transparent decisions, and also helps to increase buy-in for decisions. When quantitative data is limited, use of qualitative data can be insightful. Focusing on data also helps to identify, and ideally then address, significant data gaps.

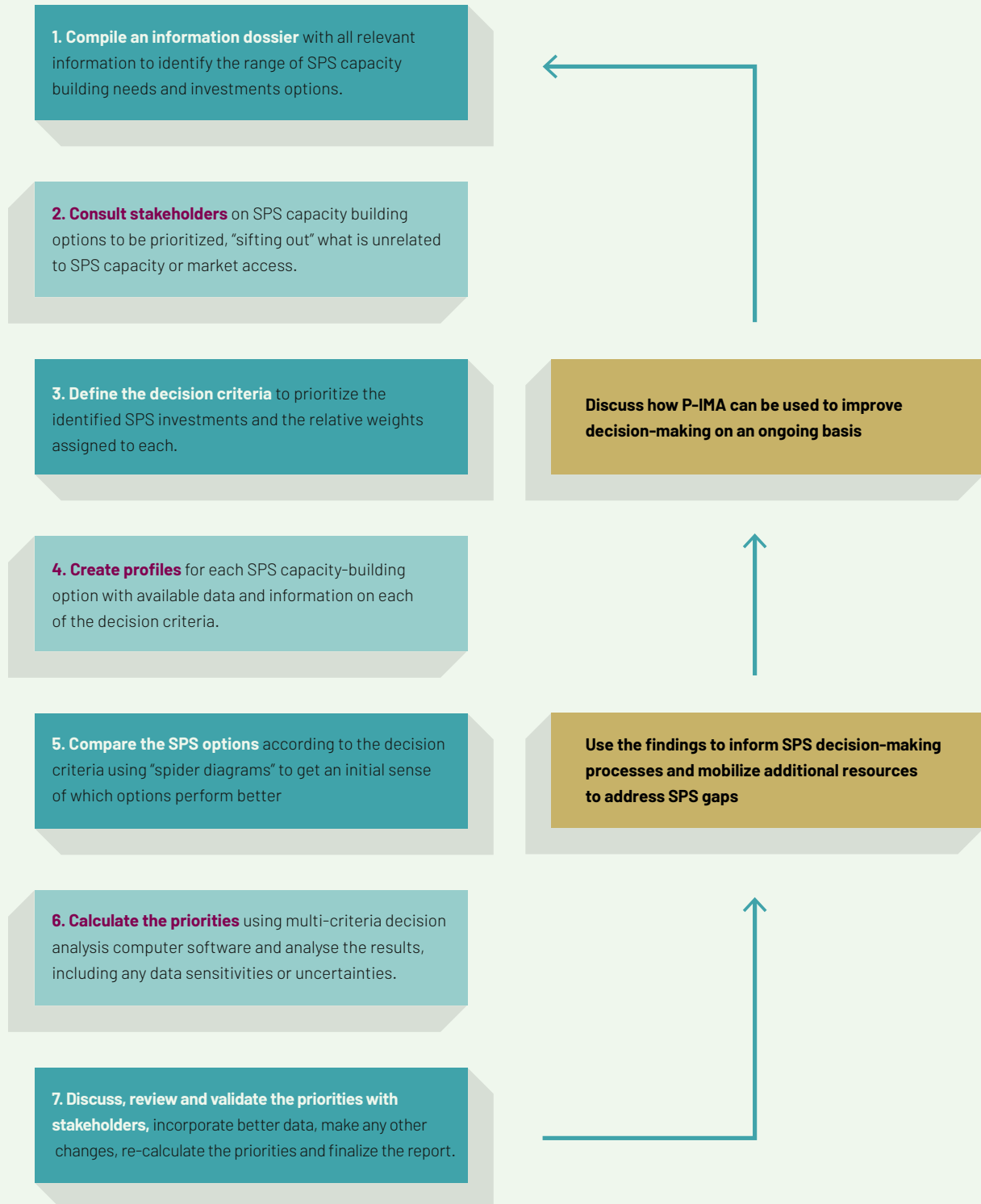
6. **The P-IMA framework provides key information on SPS priorities visually at-a-glance in a way that can support decision-makers, who are often inundated with information and short of time.** This provides compelling evidence to make the business case for SPS capacity development and support resource mobilization. Linking SPS investments to policy goals, from poverty reduction to increased agricultural production and exports, further helps to illustrate why SPS investments matter.
7. **The P-IMA framework delivers the best results when it is led by a small team with a facilitator, SPS sector experts and an economist.** Access to a trained facilitator who has followed the online STDF P-IMA training and/or observed the use of P-IMA in practice promotes neutrality and helps to ensure all voices are heard. Including an expert with economic analysis skills is critical to ensure that the quantitative and qualitative data available is robust and correctly compiled, and to consider the sensitivity of the rankings to any changes in the assumptions or values of measurements used, etc.
8. **The P-IMA framework will encourage a shift in decision-making that can support more efficiency in the allocation of resources, and increased transparency and accountability, provided it is used on an ongoing basis.** For this to happen, more needs to be done to build local capacity on P-IMA, clearly demonstrate the value and benefits of using P-IMA, build more effective engagement with officials in planning and finance ministries. While one-off applications of the P-IMA framework are useful, most benefits will accrue when the framework is used to inform decision-making on an ongoing basis so that new investment needs are incorporated.





STEPS IN THE P-IMA FRAMEWORK

Figure 1. Steps in using the P-IMA Framework



Using the P-IMA framework: What's required?

The time and resources needed to apply the P-IMA framework depends on the local context, access to data and availability and commitment of key stakeholders. In general, approximately six months may be required.

Some resources are required to effectively use the P-IMA framework from the initial planning stage to the collection and analysis of data, organization of meetings and workshops, preparation of reports, and discussion and validation of the findings with stakeholders. Thought should be given to the longer-term arrangements to re-use the framework, including to update priorities, as circumstances change over time.

The following is normally required:

- Team including experts on food safety, animal and plant health, trade, and economic analysis to drive the analysis. These experts need to be ready and able to commit a certain amount of their time to the P-IMA process including training, data collection and analysis, and consultations with stakeholders.
- P-IMA facilitator to setup and moderate workshops with stakeholders, provide overall guidance and oversight during the process, train stakeholders on the P-IMA methodology and software. In case an external expert is required, his/her time will need to be financed.
- Some funds to cover the costs of organizing stakeholder workshops (if meeting rooms cannot be provided by relevant government authorities or other stakeholders), as well as any other expenses that may include tea/coffee breaks or lunch, travel of working group members, data collection, computer software, etc.

1: Compile an information dossier

The first step involves the compilation of a dossier of information on SPS capacity-building needs to inform the priority-setting process, including the initial selection of SPS capacity-building options. The information dossier simply compiles available information on SPS weaknesses and capacity-building needs, including existing secondary sources (published and unpublished reports). It is not a complete or in-depth assessment of SPS capacity needs.

The purpose of the information dossier is to:

- Build on and provide input from past efforts to identify weaknesses in SPS capacity and/or SPS capacity-building needs.
- Ensure that the identification of SPS capacity-building needs takes as its starting point existing information to avoid “reinventing the wheel”.
- “Level the playing field” across stakeholders giving input to the priority-setting exercise by providing advance access to a common set of information.

A range of information may be included in the information dossier (see Box 4). Annex 2 includes selected online sources of SPS-related information. In reviewing information to be included, it is important to consider how the data was collected, as well as the nature and magnitude of weaknesses and/or biases in the data, if any.

Box 4: Contents of the information dossier

While the contents of the information dossier will vary from country to country, the following reports would ideally be referenced and included:

- Reports from application of SPS capacity evaluation tools including the WOAHP PVS Pathway, IPPC's PCE tool, and the FAO/WHO tool to evaluate food safety capacity.
- Less formal and even ad hoc assessments of SPS capacity undertaken by public authorities in the country itself, donors, researchers, etc.
- Data and/or reports on the value and volume of agri-food exports over time.
- Data and/or reports on border rejections in key export markets.
- Reports of export problems from exporters.
- Records of specific trade concerns raised at the WTO.
- Interviews and/or surveys undertaken with agri-food exporters, government officials charged with SPS controls, etc.
- Results of national testing or surveillance programmes related to SPS issues of relevance to agri-food exports.

The process of compiling the information dossier involves identifying as much relevant information as possible. In some countries, information might be relatively easy to obtain. In others, more extensive work may be required involving consultation with stakeholders across the public and private sectors, academic researchers, donors, international organizations, etc. In such cases the information dossier will tend to emerge gradually in a "snowball" fashion. In all cases, having spent time raising awareness of the P-IMA framework before getting started will make this task much easier.

Once identified, a bibliography with details on the sources in the information dossier should be prepared and the contents made available (e.g. weblinks, distribution as email attachments, on a USB drive or in hard copy form). Ideally this information should be as easy to obtain as possible to encourage stakeholders to review it. It should be included in the P-IMA report.

Given that the P-IMA framework is designed to be used on an ongoing basis, the information dossier should be updated on a fairly regular basis as new information and data become available.

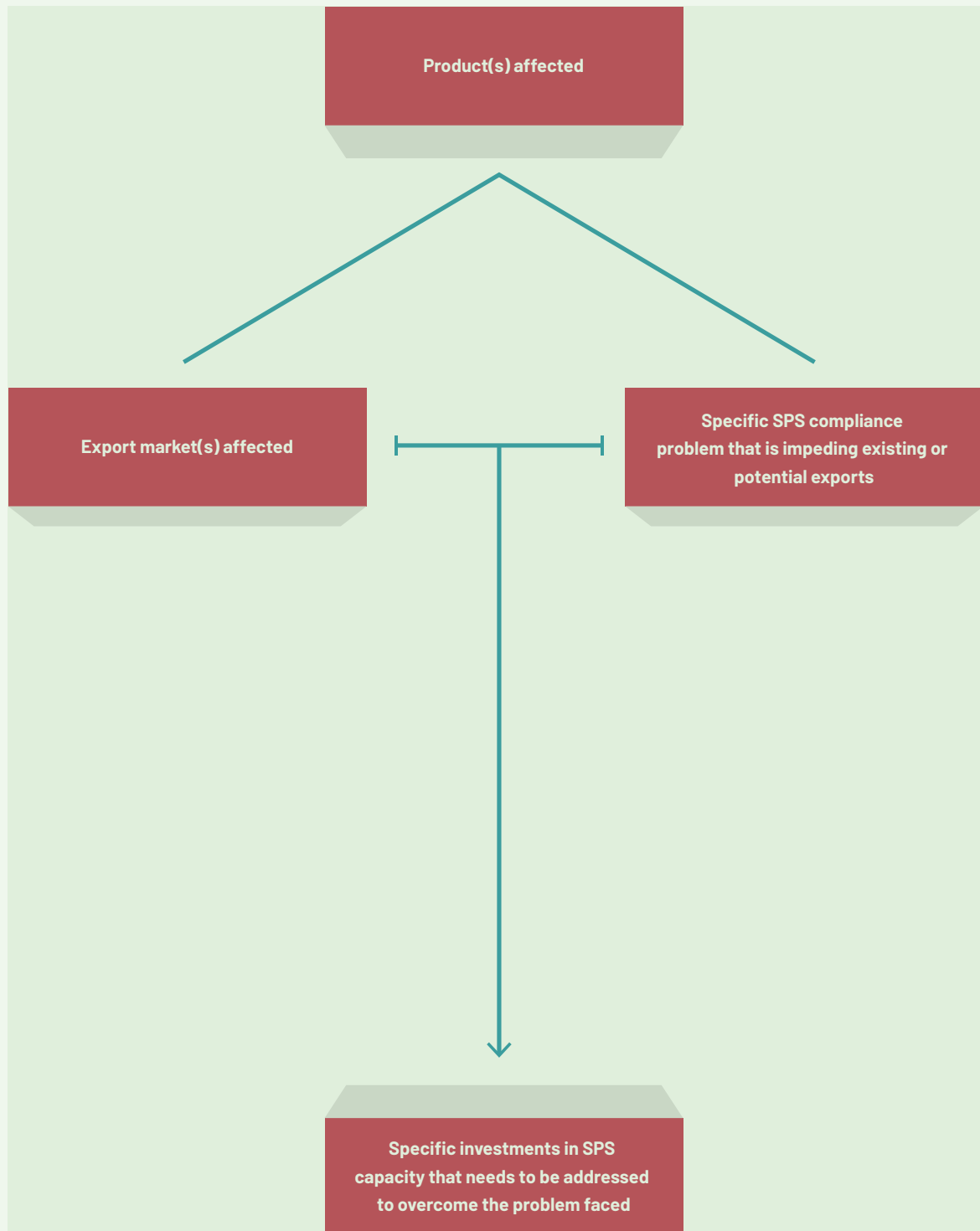
2: Identify the SPS capacity-building options

The second step is to define the set of SPS capacity-building options to be considered in the prioritization process, the so-called "choice set". The options are defined based on the information dossier and a structured process of consultation with stakeholders. It is crucial that the relevant individuals (i.e. government officials and private sector representatives with knowledge about the key SPS constraints faced) are involved so that the full range of potential SPS capacity-building options is identified.

Any SPS capacity-building option not included in the choice set will be excluded from the prioritization. Therefore, the initial focus should be on capturing the full range of SPS capacity-building needs, which can then be "slimmed down" at a later stage, as necessary. At the same time, the task of applying the framework gets more demanding as the number of options increases.

The SPS capacity-building needs included in the choice set need to be clearly-defined and mutually-exclusive. Each option should consist of four components (see Figure 2). This structure helps to ensure that the options can be linked directly to trade impacts. It also helps to exclude more general weaknesses (e.g. out-dated legislation and/or shortage of trained personnel) if they cannot specifically be linked to trade. For instance, in some cases, enterprises export particular products, even though SPS legislation may be out-dated. In cases where such general weaknesses have a clear impact on trade they may be included in the relevant SPS capacity-building option.

Figure 2: Definition of SPS capacity-building option



The SPS capacity-building options to be included in the P-IMA analysis can be identified in different ways. This usually happens through a half-day workshop, led by a P-IMA expert or facilitator, with the relevant stakeholder (public and private sector, academia, civil society, etc.). More recently, a Delphi-style survey has been used (for instance, in Armenia and the Bahamas) to solicit, collect and synthesise inputs from relevant stakeholders in an efficient, user-friendly and inclusive way.

The amount of time required for the stakeholder workshop will reflect the expected number of issues to be raised, which will tend to be greater in a large country with substantive and/or more diversified exports, and less in a smaller country with relatively small and/or less diversified exports. In planning the workshop, it is important to consider: (i) how to maximise stakeholder engagement, while taking account of any particular constraints (e.g. limited time of the private sector); and (ii) an appropriate balance between the number and diversity/representativeness of participants.

During the workshop, the participants are actively involved in identifying the potential SPS capacity-building options to be considered in the initial choice set. Participants provide details on the SPS capacity-building options they consider important in an individual and anonymous way. The P-IMA facilitator leads an open discussion on the options put forward to clarify any ambiguous or incomplete options, group similar options, etc. All the options are discussed and treated equally, regardless of how many participants put them forward.

Box 5. Key questions to ask in the P-IMA sifting exercise

- **Does the option relate to an SPS problem?** In other words, are exports constrained by weaknesses in food safety, plant health or animal health capacity? If instead the option relates to a non-SPS issue (for example quality or labelling) it will be excluded.
- **Does the option relate to trade?** Sometimes needs are defined that focus on food safety, animal health or plant health issues that have no direct consequence for exports. These are normally excluded since the focus of the analysis is on export oriented SPS capacity-building investments.
- **Does the option relate to a current SPS problem affecting trade?** If instead the option relates to a historic problem that has been rectified and/or that has not been experienced for a significant time, it will be excluded.
- **Is the option economically viable beyond the SPS issue identified?** If there is evidence of wider issues that might constrain/prevent exports (for example, production costs, transport costs, lack of access to appropriate transport facilities, insufficient productive capacity, etc.), it will be excluded.

This process normally results in a large number of potential SPS capacity-building options. After this, the options are “sifted” to remove ones that are not related to trade (Box 5). In some cases, the P-IMA facilitator may consider (for political or other reasons of relevance to the country) to retain some investments that are not specifically export-focused. The sifting process usually begins during the workshop and is finalized afterwards by the P-IMA Facilitator who should consult relevant stakeholders for further information and/or clarification, as necessary. It is recommended that representatives of relevant STDF partners are engaged to provide technical guidance to the sifting process.

Through this process, some capacity-building options may be excluded from the choice set, some options may be combined or even divided. The end result should be a set of mutually-exclusive capacity-building investments that are truly trade and SPS-related. Any capacity-building option that is excluded should be noted, with the reasons why this decision has been made, and listed in the report to ensure transparency and enable stakeholders to challenge such decisions if they so desire. The exclusion of these options does not mean that they are unimportant, but that they do not fit within the trade-related confines of the analysis.

3: Define the decision criteria and weights

The next step is to define the decision (or choice) criteria against which the options will be compared. Which criteria should be used to determine which trade-related SPS capacity-building options should be given greater or less priority? The choice of decision criteria is arguably the most critical element of the P-IMA framework.

The decision criteria capture the potential impacts of trade-related SPS capacity-building that are considered relevant in deciding which capacity-building options should be prioritized ahead of others. Therefore, the set of criteria should capture all the costs and benefits that are considered important. Any criterion that is excluded from the analysis will have no influence on the eventual prioritization of the various options under consideration.

The decision criteria should reflect the specific country context, prevailing development priorities, etc. There are no right or wrong decisions regarding the decision criteria. However, it is strongly recommended that the decision criteria used (and the associated weights) are broadly consistent with goals and priorities defined in national development plans and other important policy documents. The decision criteria can be revised at any point in the P-IMA process. In experiences to date, most countries have used a fairly similar set of decision criteria (Box 6).



Box 6. Potential decision criteria to prioritize SPS capacity-building options

CRITERIA	DECISION CRITERIA	WHAT IS COVERED
Cost and complexity of implementation	<ul style="list-style-type: none"> • Up-front investment • Ongoing costs • Difficulty of implementation • Sustainability of capacity 	<p>This covers up-front (non-recurring) investments as well as recurring costs of establishing, operating and maintaining the respective element of SPS capacity. The aim is to minimize these costs, and also the difficulties likely to be faced in upgrading capacity. As such export-oriented SPS capacity-building options with lower costs and that are easier to implement will tend to be preferred, everything else being equal.</p>
Trade impacts	<ul style="list-style-type: none"> • Growth/avoided losses in value of exports • Diversification of exports • International reputation • Capacity to prevent future problems 	<p>The potential direct benefits of SPS capacity-building are captured here. These include the change brought about by a particular SPS investment option in the value of exports or losses of exports averted, degree to which trade becomes more diversified (and therefore presumably more robust), reputational gains on the part of export partners from improved SPS capacity and the ability to deal with future trade problems. Taken together, these capture both the immediate and direct gains from SPS capacity-building as well as the longer-term and more diffused impacts.</p>
Domestic spillovers	<ul style="list-style-type: none"> • Agricultural productivity • Public health • Environmental protection 	<p>These criteria capture the domestic spillovers of SPS capacity-building through improvements in agricultural productivity, domestic public health (predominantly improved food safety) and local environmental impacts. In the longer term, gains in agricultural productivity, in particular, might lead to gains in trade through enhanced cost competitiveness, although the chief focus of this group of decision criteria is on more immediate spillovers</p>
Social impacts	<ul style="list-style-type: none"> • Level of poverty • Gender impact • Impact on marginalized groups in vulnerable settings 	<p>These criteria cover the wider socio-economic impacts of SPS capacity-building (e.g. employment, levels of poverty). The impacts of gains in SPS capacity are somewhat ambiguous. For example, gains that boost trade could provide new income-earnings opportunities for smallholders, thus reducing poverty. Conversely, they may bring about consolidation of agricultural production, possibly excluding smallholders.</p>

In assessing the potential impacts of a particular SPS capacity-building option, care needs to be taken to avoid over-attribution and to include spillover effects. For example, numerous factors may explain future export flows and these factors must be taken into account when predicting the impact of a particular improvement in SPS capacity. At the same time, while a particular investment may be focused on specific weakness (e.g. pesticide residue analysis for fresh fruits and vegetables), the associated infrastructure could have wider benefits (e.g. for pesticide residue analysis in cereal products and/or analysis of other chemical contaminants in a range of food products). It can be difficult to identify some of these spillover effects ex ante, and the temptation to over-estimate in order “to be safe” should be avoided. At the minimum, the potential for over-attribution and/or under-estimation of spillover effects should be acknowledged (and noted) and taken into consideration when interpreting the final results.

The selection of decision criteria – as well as weights attached to each – normally takes place during the stakeholder workshop. Other methods may also be used to define the decision criteria (e.g. selection by senior decision-makers based on national priorities). In some cases, the selection of criteria (and the associated weights) might differ across stakeholder groups (e.g. public sector, private sector). In such cases, separate analyses could be run for these distinct groups to understand the extent to which such differences in the drivers of the prioritization influence the eventual results of the analysis.

4: Compile information cards for the SPS capacity-building options

The next step is to prepare an information card for each of the SPS capacity-building options in the choice set. These cards bring together available data and information on the decision criteria for each of the trade-related SPS capacity-building options, which is critical for the transparency, rigour and reliability of the prioritization exercise. This is usually the most challenging and time-consuming part of the P-IMA process.

The information cards indicate the estimated costs and impacts of each capacity-building option in the consistent manner needed for reliable prioritization. They also report how these estimates were derived (including the level of confidence). This ensures that the data and information used is transparent and open to scrutiny by stakeholders.

The information cards should be seen as “living documents”, that may be revised based on feedback from stakeholders and updated when new data and information becomes available. Three key elements should be included on each information card:

1. Quantitative estimate of the impact of the capacity-building option with respect to each decision criterion
2. Description of how this estimate was derived including assumptions made, sources of data, key elements of the calculation, etc.
3. Indicator of confidence in the estimate

The following principles guide preparation of the information cards:

- **The analysis is based on plausible scenarios as to what is likely to happen (or not happen) if each of the capacity-building options is implemented:** This requires the analyst to think through the consequences of making the required investment, recognizing that there may be uncertainty over what might happen and/or alternative scenarios.
- **Imperfect information is better than no information:** The implication of an incomplete information card is that the respective trade-related capacity-building option will need to be excluded from the analysis. Furthermore, the information in any of the information cards can be revisited once the initial prioritization has been estimated, further information becomes available, etc.
- **Use the best information available:** It is important to use the most reliable and comprehensive information available, rather than what is most easily accessible or what has been used in the past. Various information sources exist (see Box 4). In some cases, data may be limited and/or of questionable quality requiring “best estimates” to be made. As new and better data become available, these estimates should be revised, and the information sheets updated.
- **Measure each decision criterion as best as possible:** There are different ways to measure decision criterion (see Box 7), depending on the information and data available. The aim should always be to measure the criterion in the best way possible to achieve the greatest and most reliable level of quantification. Data limitations sometimes mean it is not possible to measure a criterion in the manner that is most desired.

- **Relative not absolute values matter:** Whilst the analysis should aim for the highest level of quantification it is important to recognize that, in deriving the prioritization, the capacity-building options are compared based on the relative value of each of the decision criteria. Thus, it is only necessary to estimate the costs and impacts of each of the capacity-building options in broad quantitative terms.
- **Define a common time horizon for the analysis:** Different capacity-building options may take shorter or longer periods of time to be implemented and/or for impacts to evolve. A period of five years is normally applied in the analysis. Given this relatively short period, discounting is generally not needed.⁶

Box 7. Alternative measures for decision criteria

TYPE	DESCRIPTION	EXAMPLE
Continuous	Absolute value and/or magnitude of change	Monetary value (US\$) of up-front investment Change(%) in value of exports
Discrete	Number	Number of small-scale farmers impacted
Ordinal	Scaling (numerically presents the order/rank of a series of items, used when continuous or discrete data is insufficient)	2 = 'Large impact' 1 = 'Small impact' 0 = 'No impact'
Nominal	Yes/No (arbitrary numbers are assigned to particular categories of impact; used when there is a lack of data to quantify the magnitude of impact)	Access to new markets Increase in value of exports

5: Compare the options according to each of the decision criteria

Before calculating the priorities, the SPS capacity-building options are compared on the basis of each decision criterion in turn. To facilitate these comparisons, the data in the information cards is presented as a series of spider diagrams that provide a visual representation of how the various options perform with respect to each decision criterion.

The spider diagrams aim to:

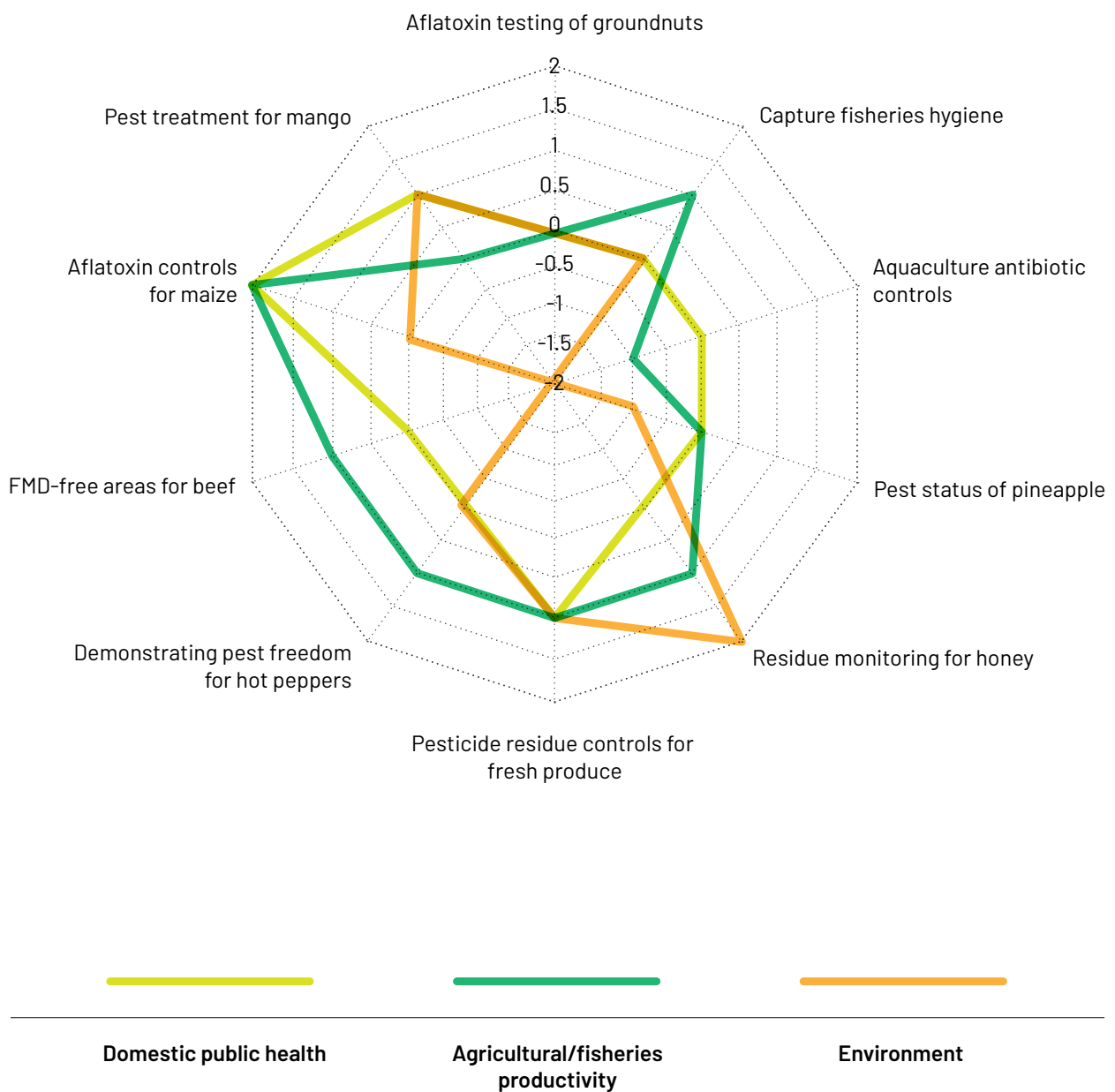
- Identify SPS capacity-building options that are clear outliers (i.e. distant from other options) with respect to particular decision criteria. In such cases, checks should be made of the data in the information card to ascertain that the respective estimate is robust.
- Check the consistency with which each decision criterion is measured across the SPS capacity-building options. In other words, are the same values assigned to SPS capacity-building options with broadly similar impacts according to particular decision criteria? Are SPS capacity-building options with bigger (smaller) impacts assigned larger (smaller) values than options with smaller (bigger) impacts?

Spider diagrams can be constructed as radar charts using the graph function in Excel. Figure 3 provides an example of a spider diagram for SPS capacity-building options compared against three decision criteria. It shows at a glance that out of all the identified investments, an investment in residue monitoring for honey is expected to have the greatest positive impact on the environment, while an investment in aflatoxin controls for maize is expected to have the highest impact on both agricultural productivity and public health.

⁶ The process of discounting is used by economists to take account of the fact that the flow of costs and benefits associated with a particular investment may take place at different points in time. Generally, flows of money in the future are valued less than flows now. This time preference is reflected in an appropriate discount rate.

The spider diagrams help to facilitate a discussion on unfeasible SPS capacity-building options, and their inclusion (or not) in the choice set. For example, it might be that there are absolute limits on the available budget and that any options that exceed this budget are excluded. Likewise, any options that have a negative impact on the poor might be considered politically infeasible and so are removed from the choice set.

Figure 3. Spider diagram comparing SPS capacity-building options against three decision criteria



6: Calculate the priorities and diagnose the results

This stage of the P-IMA framework uses MCDA to calculate the priorities (or rank the SPS investment options) based on all the decision criteria simultaneously.⁷ One of the key benefits is the ability to compare multiple SPS capacity-building options, even when the decision criteria are measured differently.⁸

Computer software is used to facilitate this process (Box 8). The software provides a user-friendly interface to compare the various options according to the portfolio of decision criteria (taking into account the fact that these criteria are weighted differently), analyse the results in different ways and generate charts and graphs ranking the SPS capacity-building options in the choice set, based on the associated decision criteria and weights.

Box 8. D-Sight computer software

[D-Sight](#) is a software that can be used to prioritize the different SPS capacity-building options included in the choice set and to diagnose the results. It uses outranking to prioritize the different options. This means the software calculates positive and negative preference flows for each of the options. The positive flow expresses how much an alternative dominates the other options being considered, and the negative flow how much it is dominated by the other options, given its performance according to the defined decision criteria. The software then ranks the options on the basis of the net preference (the positive flow less the negative flow). The STDF has procured a limited number of copies of the D-Sight software for use in developing countries, which are available on request from the STDF Secretariat.

The software is used to generate a range of scenarios (and charts) to help understand the findings based on different parameters. Three different scenarios, based on alternative weights, are normally explored (see Figure 4, 5 and 6). This is part of the sensitivity analysis, which examines how the prioritization is influenced by changes in the decision weights, criteria and/or measurements in the information cards.

- **Baseline** prioritization: reflects the weights assigned by participants at the stakeholder workshop
- **Equal weights** prioritization: The same value is assigned to each of the weights. This allows the sensitivity of the results to be examined against changes in the decision weights. This helps to consider to what extent the prioritization changes if all the options are weighted equally (and address possible concerns about using the weights assigned by different stakeholder groups).
- **Cost and trade** prioritization: The focus is exclusively on costs and trade impact. This essentially indicates the cheapest way of achieving appreciable gains in trade through SPS capacity-building.

In the examples presented, weighting all the decision criteria equally has an impact on the prioritization. In this case, pest treatment for regional mango exports ranked first (63%) followed by residue monitoring for honey (62%) with aflatoxin controls for regional maize exports moving to third place. It is worth noting that, in many applications to date, changing the weights did not notably change the options ranked most highly. When only costs and trade impacts are considered, the rankings change. Now pest status for regional pineapple exports is ranked first (74%), followed by pest freedom for hot pepper exports (68%).

⁷ The specific form of MCDA used in the P-IMA framework is called outranking. This approach prioritizes options on the basis of pair-wise comparisons, essentially identifying which options "outrank" other options most often.

⁸ One disadvantage is that the options under consideration are ranked according to whether they perform better/worse according to a specific decision criterion. No account is taken of magnitude of difference between the options according to this choice criterion

Figure 4. Example of baseline prioritization

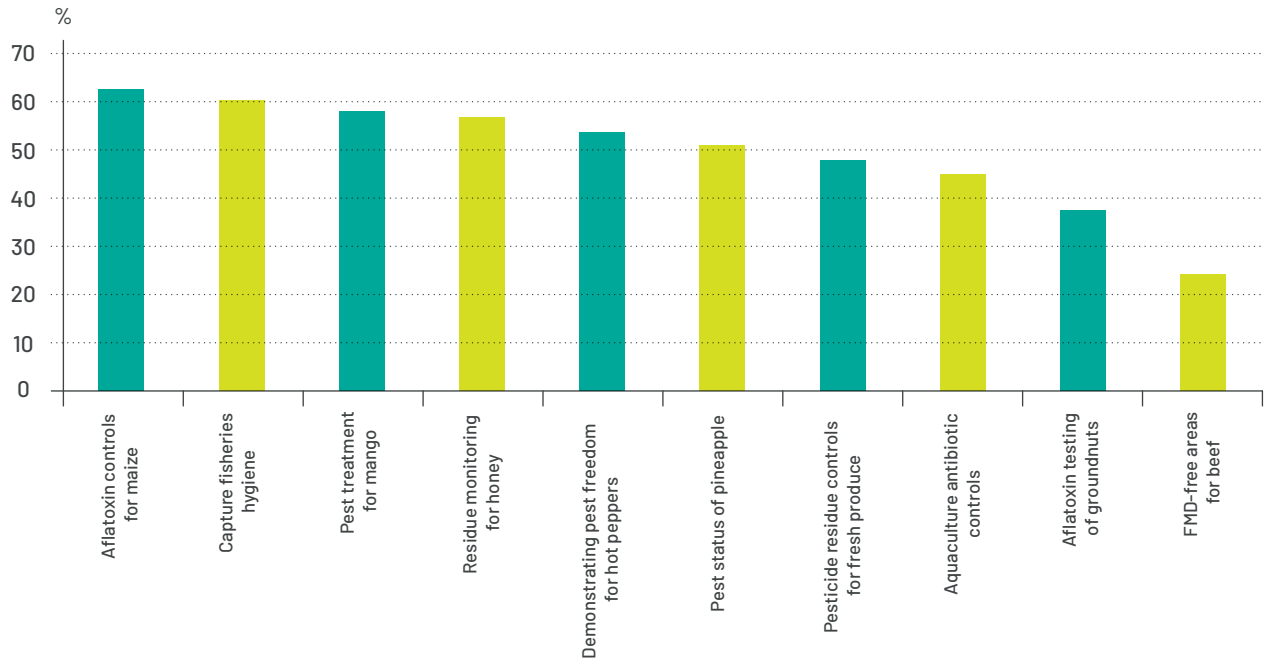


Figure 5. Example of equal weights prioritization

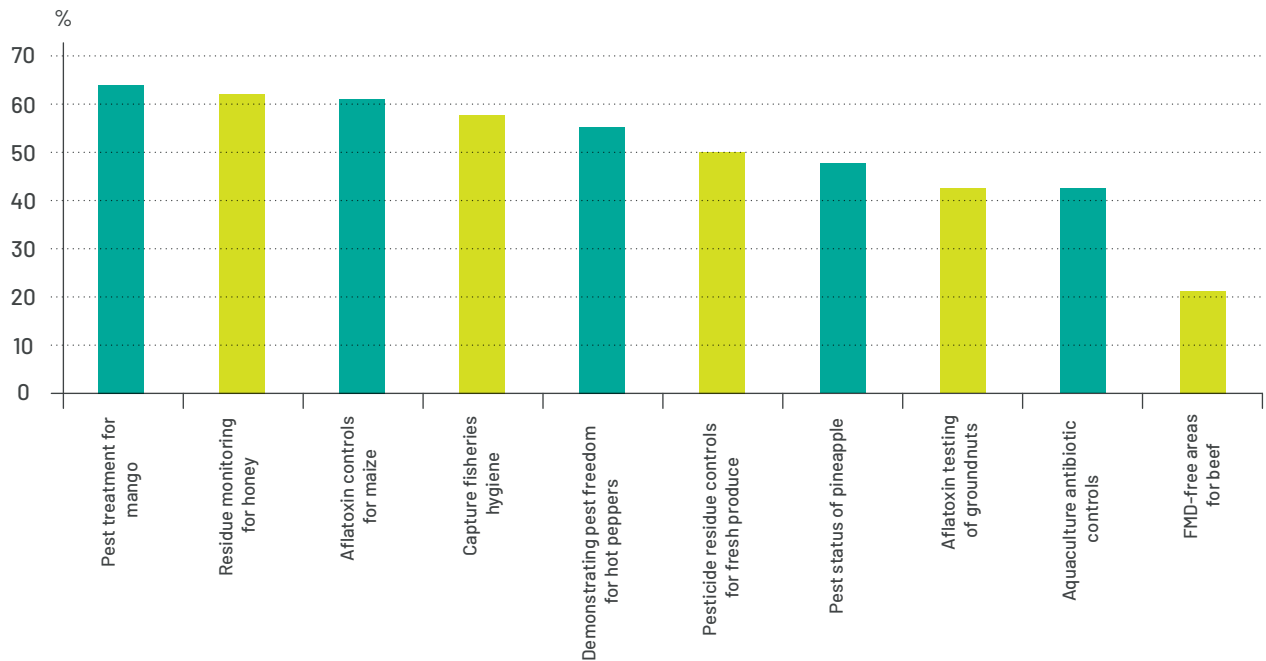




Figure 6. Example of cost and trade impact prioritization

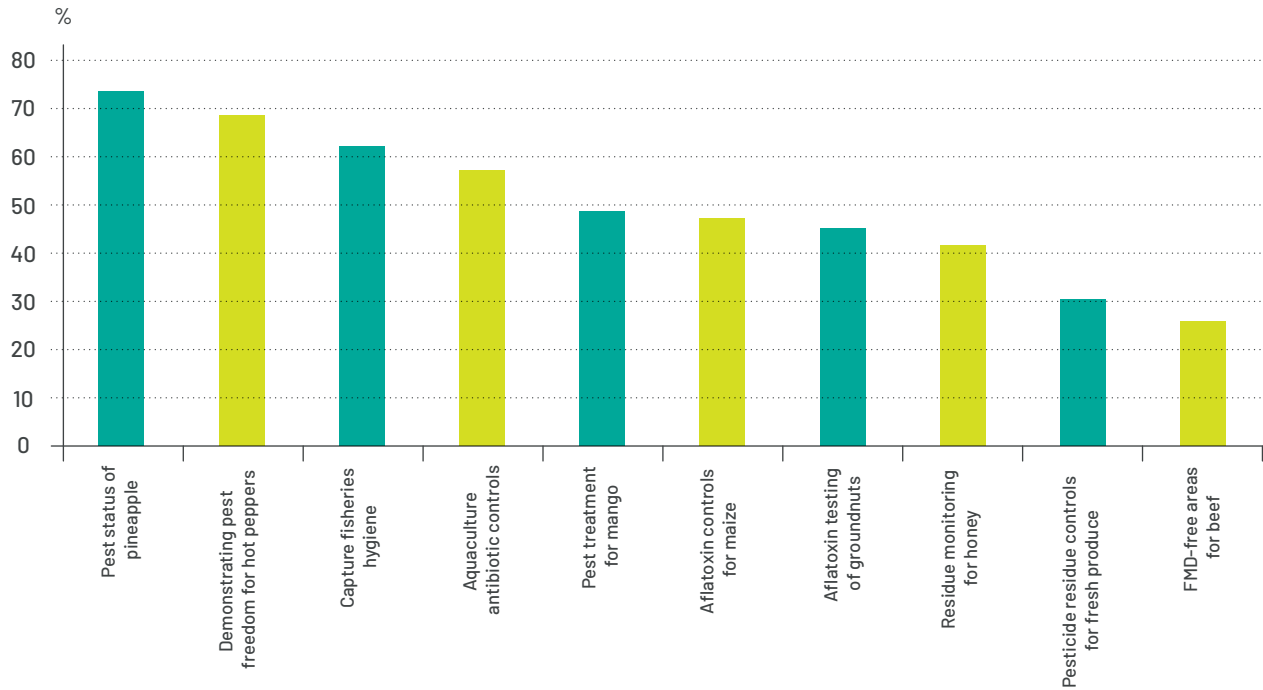
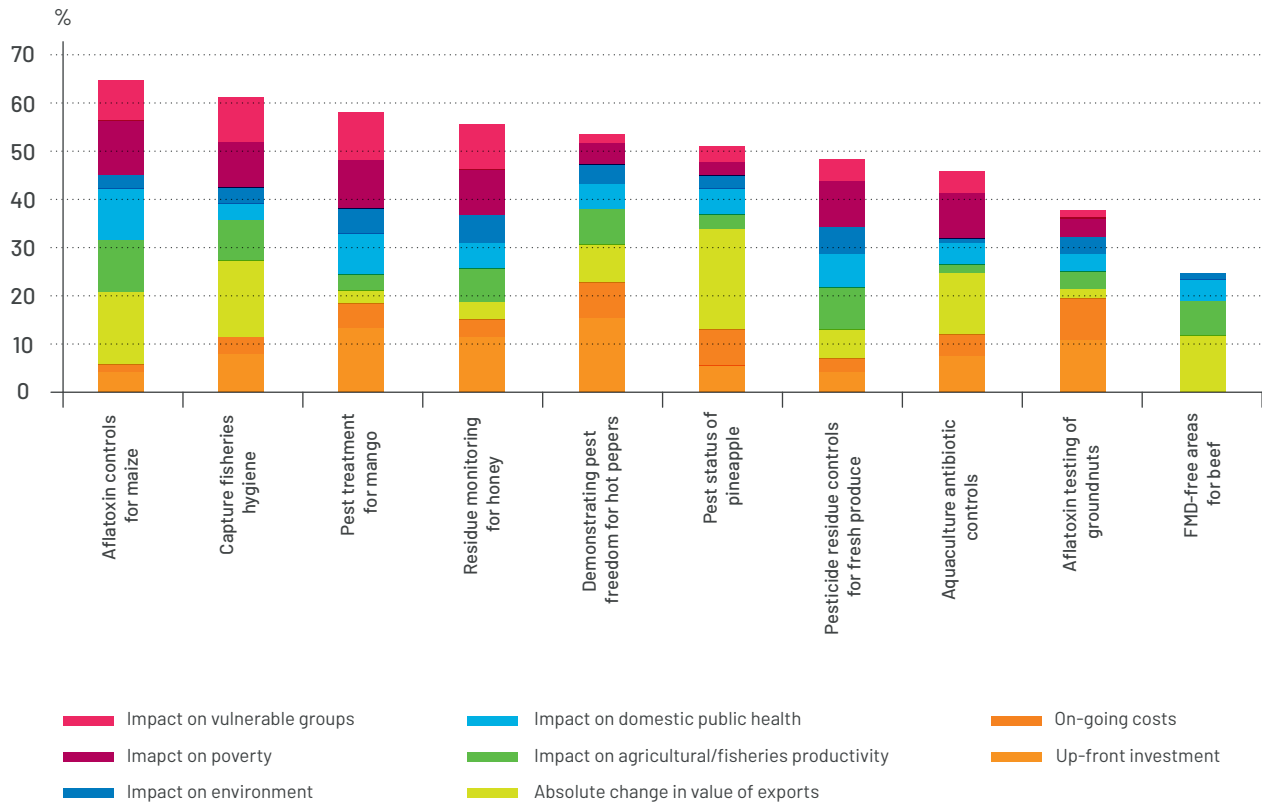
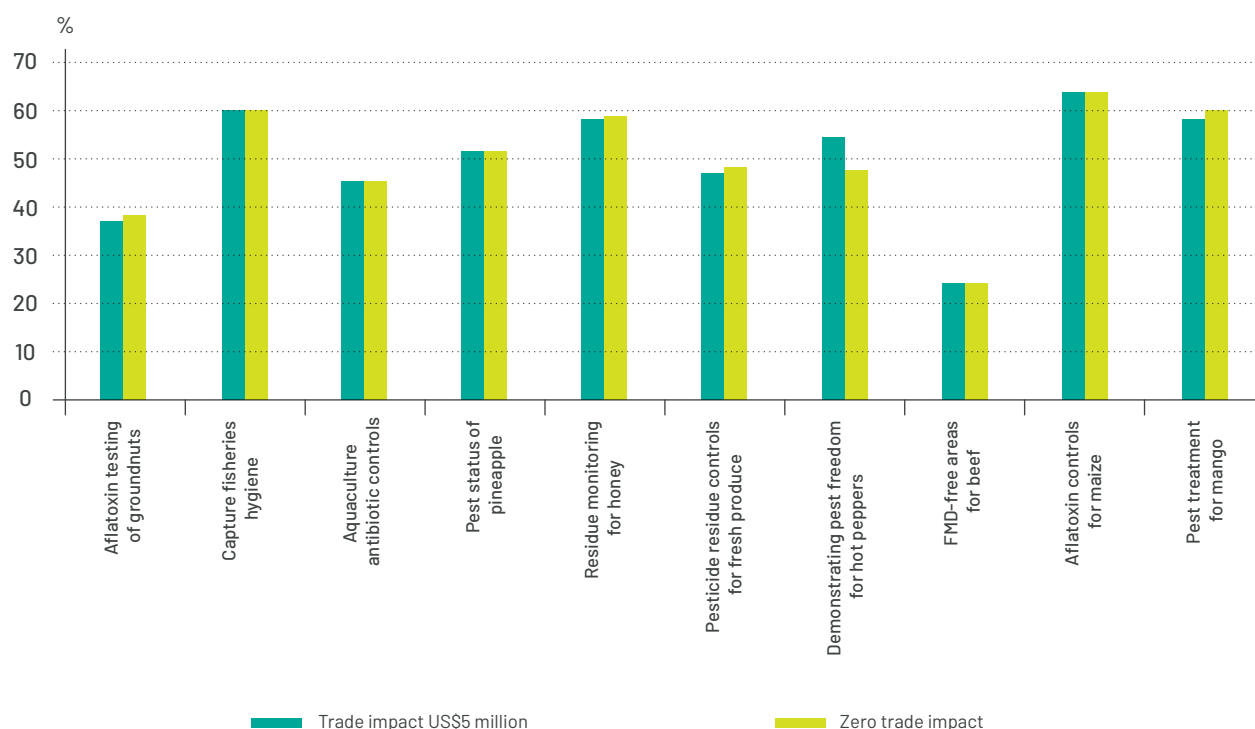


Figure 7. Example of contribution analysis



The software allows “contribution analysis” charts to be generated to help understand why particular options are ranked above or below others. Figure 7 shows that the top ranked option according to the baseline prioritization (aflatoxin controls for regional maize exports) performs relatively well for most of the decision criteria, but less well for up-front investment and for ongoing costs (reflecting the fact that it is costly). Conversely, the lowest-ranked option (FMD-free areas for regional beef exports) performs poorly for most decision criteria but well for absolute changes in the value of exports, reflecting the fact that it is estimated to have a large positive trade impact.

Figure 8. Prioritization with change to estimated trade impacts for one capacity-building option



During this step of the P-IMA process, the scenarios can be explored in different ways, including to assess the sensitivity of the baseline prioritization to changes in the defined parameters and measures in the information sheet over which there is most uncertainty. For instance, when there is low confidence in the trade estimates, do the rankings change when the numbers change, and in what way? Figure 8 illustrates how the rankings change when the estimate of trade impact changes dramatically (from US\$5 million annually to zero) for the hot pepper option.

A report is drafted to present the findings of the analysis and prioritizations for different scenarios, as well as the decision criteria and weights used. The report also explains any issues related to sensitivity or low confidence of the data and describes how the analysis was carried out, including the stakeholders involved, etc. It attaches the information cards for each of the SPS capacity-building options for transparency. This draft report is shared with all the stakeholders involved in the P-IMA work for feedback and comments, prior to finalization.

7: Discuss, review and validate the priorities with stakeholders, and explore follow-up avenues

The final step of the P-IMA framework focuses on discussing, reviewing and validating the findings of the work to prioritize SPS capacity-building options. The aim is to ensure that all stakeholder groups understand the prioritization and how it has been derived, and to encourage follow-up. One of the key outputs is a report, which is discussed and reviewed with relevant stakeholders prior to finalization.

It is recommended that a second half-day stakeholder workshop is organized to present and discuss the findings of the analysis, seek views and comments, and consider options to improve and refine the analysis. Representatives of senior government officials, international organizations, donors and other development partners with an interest in SPS capacity building should be invited to this workshop.

The workshop provides an opportunity to discuss any alternative scenarios, the most plausible scenarios identified and how to address data uncertainties. At this point, stakeholders also have an opportunity to question or challenge the prioritizations, based on the data and information used. Stakeholders may also put forward alternative parameters, and/or new data, that can be incorporated into a new analysis to explore how the new parameters or data changes the rankings. However, it is important to be aware that validating the priorities with stakeholders does not mean that everyone will be satisfied, especially if the SPS capacity-building option(s) they support are not ranked highly.

It is important to ensure understanding on why the various options were ranked in the way they were, given the defined decision criteria and weights. This means that everyone should understand that the prioritization is a product of two key categories of parameters: (i) the selection of SPS capacity-building options considered, decision criteria and decision weights (derived through an inclusive and structured process of stakeholder engagement); and (ii) the estimated measured impact of each of the SPS capacity-building options for each of the defined decision criteria, based on the best available data.

After the workshop, the analysis is re-run taking account of input from stakeholders and efforts to address and incorporate improved data as far as possible. The revised report is distributed for feedback, prior to finalization and further refinements of the prioritization, as required.

The P-IMA analysis, and resulting report, should then be discussed with senior government officials, development partners and donors in order to make the case for increased SPS investments. The analysis may be used to inform the development of funding applications to follow-up on the prioritized needs.

Importantly, the prioritization and report should be seen as living entities. They should be revised as new information becomes available, new SPS capacity-building options arise and/or existing options are addressed, priorities changes, etc.

ANNEX 1: STDF Projects and PPGs including use of the P-IMA Framework

STDF/PG/606	Mainstreaming SPS investments into CAADP and other frameworks in Ethiopia, Kenya, Malawi, Rwanda and Uganda
STDF/PPG/786	Supporting implementation of the National Policy for Aflatoxin Control in Food and Feed in Ghana using the P-IMA framework in Ghana
STDF/PPG/761	Applying the P-IMA framework in Armenia to promote export of agricultural products
STDF/PPG/733	Piloting the use of P-IMA in the CARICOM region (Belize, Dominica, Guyana, Jamaica, Suriname, St Lucia, St Kitts and Nevis)
STDF/PPG/709	Applying the P-IMA tool in Ecuador
STDF/PPG/575	Prioritizing SPS investment in Madagascar
STDF/PPG/561	Shaping market access by building phytosanitary capacity in Tajikistan
STDF/PG/365	Evidence-based approach to prioritize SPS investments in Belize

Annex 2: Key Information Sources

STDF Publication – SPS-Related Capacity Evaluation Tools:

www.standardsfacility.org/sites/default/files/STDF_Capacity_Evaluation_Tools_Eng_1.pdf

IPPC PCE Tool (further registration is required to access reports):

<http://pce.ippc.int/>

WOAH PVS Evaluation reports by country:

www.woah.org/en/what-we-offer/improving-veterinary-services/pvs-pathway/evaluation/pvs-evaluation-reports/

Data and/or reports on the value and volume of agri-food exports over time

FAO Statistical Yearbooks – World food and agriculture:

<http://www.fao.org/economic/ess/ess-publications/ess-yearbook/en/#.VkMB2XEXSIY>

FAO Yearbook – Fishery and Aquaculture Statistics (Most recent report is 2012):

<http://www.fao.org/fishery/publications/yearbooks/en>

IDB INTEGRA comprehensive platform for trade, integration and investment data in Latin America and the Caribbean:

<https://integra.iadb.org/>

Data and/or reports on border rejections in key export markets

EU RAFFS (the Rapid Alert System for Food and Feed) portal – summary information about the most recently transmitted RASFF notifications as well as search for information on any notification issued in the past. Access to a searchable database:

<https://webgate.ec.europa.eu/rasff-window/portal/?event=SearchForm&cleanSearch=1>

UNIDO trade Standards Compliance Report:

<http://www.unido.org/tradestandardscompliance.html>

UNIDO Standards Compliance Analytics:

<https://hub.unido.org/rejection-data/trade-rejection-analysis>

Records of specific trade concerns raised at the WTO

WTO SPS Information Management System (SPS IMS):

<http://spsims.wto.org/>

Other databases and information resources

ITC Standards Map – a roadmap to standards, codes of conducts, assessment protocols to support GVCs:

<http://www.standardsmap.org/>

ITC trade database:

<http://www.intracen.org/itc/market-info-tools/trade-statistics/>

EU – Pesticides database:

<http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=homepage&language=EN>

World Integrated Trade Solution (WITS) – access to international merchandise trade, tariff and non-tariff measures (NTM) data:

<http://wits.worldbank.org/>

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