

## SUMMARY OF P-IMA BANGLADESH ANALYSIS



*Swisscontact Bangladesh* applied the *Standards and Trade Development Facility's (STDF)* framework on *Prioritising Sanitary and Phytosanitary (SPS) Investments for Market Access (P-IMA)* for the Horticulture and Fisheries sectors of Bangladesh. This summary report is based on the findings from the consultations and final prioritisation using a multi-criteria decision analysis (MCDA). This analysis has helped us to develop a focused set of recommendations for improving market access for the selected horticulture and fisheries products. The key objective of the study is to prioritise SPS investments by leveraging existing relationships between Swisscontact and relevant public and private actors in this sphere.

### Overview of Agri-Export and Related SPS Issues

Trade, particularly export, has made a significant contribution in Bangladesh's socio-economic development, including economic growth, poverty reduction, and employment generation. However, given the overreliance on export of readymade garments (85% of the total export value), the Government of Bangladesh (GoB) has prioritized the diversification of Bangladesh's export basket in recent years. Despite being the 3<sup>rd</sup> largest producer of vegetable and inland water capture fisheries, Bangladesh has struggled to capture the mainstream international market for horticulture and fisheries products. Furthermore, over the last one decade, both fisheries and horticulture exports have seen a decline (Figure 1).

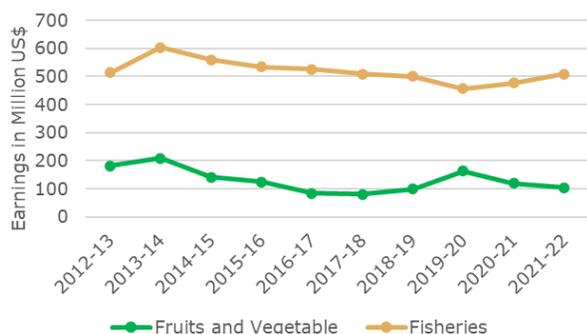


Figure 1: Horticulture and Fisheries export trend in Bangladesh (Source: Export Promotion Bureau)

A major reason behind the sluggish export performance of these two sub-sectors is the inadequate capacity to comply with SPS requirements of the importing countries. Some of the major SPS issues behind the rejection of Bangladeshi shipments of horticulture and

fisheries products include adulteration, bacterial contamination, and lack of hygiene control (Table 1). Hence, development of appropriate SPS capacity can improve the export of horticulture and fisheries products, contributing to the government's priority to diversify exports.

Table 1: Rejection Data Analysis: Considering countries: Australia, China, EU-28, Japan, United States (Year: 2010 to 2020)

Reasons for Rejection	Number of Rejections		
	HS08-Fruit and nuts	HS07-Vegetables	HS03-Fish and crustaceans
Additive	23	7	
Adulteration/ missing document	57	24	8
Bacterial contamination	0	149	391
Heavy metal			1
Labelling	96	40	54
Mycotoxins	1		
Pesticide residues	3	15	6
Veterinary drugs residues			42
Hygienic condition/ controls	51		115
Packaging	2		
Microbiological contaminants			2
Other contaminants		2	2

Source: UNIDO, Trade Rejection Analysis

N.B: Labelling & Packaging are TBT (Technical Barriers to Trade) issues not SPS (Sanitary & Phytosanitary issues)



### Introduction to the P-IMA Framework

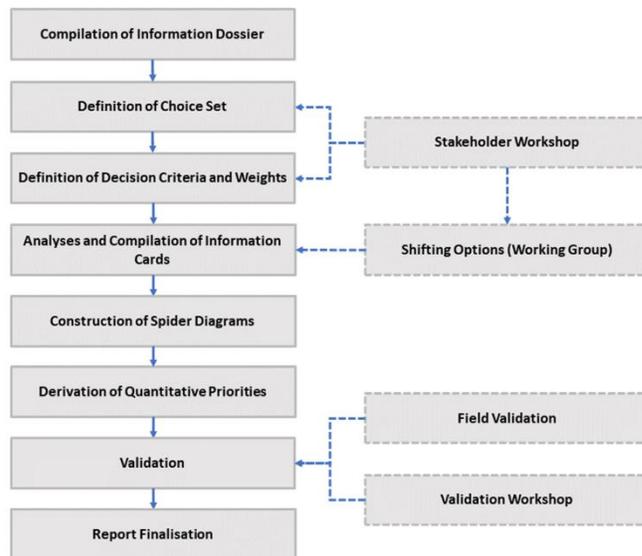
The P-IMA framework offers an evidence-based approach to inform and improve SPS planning and decision-making processes. It helps to link SPS investments to public policy goals including export growth, agricultural productivity, and poverty reduction. In the process, P-IMA encourages public-private dialogue, boosts transparency and accountability, and improves the economic efficiency of investment decisions. The P-IMA framework aims to:

- Identify the current set of SPS-related capacity-building options (CBOs) in the context of existing and/or potential exports of agricultural products.
- Determine the *decision criteria* that should drive the establishment of priorities between SPS-related CBOs and the relative importance (*decision weights*) to be attached to each.
- Prioritize the identified SPS-related CBOs based on the defined decision criteria and weights.
- Examine the sensitivity of established priorities to changes in parameters of the framework.

Swisscontact utilized the P-IMA approach to identify, analyze, and prioritize key SPS barriers in the horticulture and fisheries subsectors, particularly the products specified in Box 1. During the study Swisscontact engaged an International P-IMA Expert and three National Experts. The International P-IMA Expert conducted a comprehensive training program on the P-IMA Approach for a **15-member working group**, consisting of five Swisscontact Bangladesh

staff members, three National Experts, and a total of seven participants from the Ministries of Commerce, Agriculture, and Fisheries and Livestock. **Figure 2** provides a brief outline of the seven stages of the framework, with a particular focus on how this process was planned and implemented in Bangladesh.

Figure 2: Stages in prioritization of SPS capacity building options using the P-IMA approach



### The Capacity-Building Options (CBOs) and Decision Criteria for Analysis

Based on preliminary secondary research, 40 key informant interviews (KII) and a day-long participatory workshop with 35 relevant stakeholders from the horticulture, fisheries and agricultural trade landscape, the study-team identified 13 SPS barriers in affecting the export performance in major export destinations

and the corresponding SPS CBO for the 10 selected horticulture and fisheries products (**Table 2**).

*Table 2: SPS Capacity Building Options for major export destinations of the 10 selected horticulture and fisheries products*

SL	Identified SPS CBOs
1	Plant pest & pesticide residue and hygiene control for <b>fresh vegetable and gourd</b> exports to the EU, UK & Middle East
2	Plant disease & pest controls for <b>potato</b> exports to Russia and Indonesia
3	Pesticide residue controls for <b>potato</b> exports to Malaysia
4	Plant pest and hygiene controls for <b>leafy vegetable exports</b> to the EU, UK, and USA
5	Pesticide residue controls for <b>leafy vegetable exports</b> to the Middle East
6	Salmonella controls for <b>betel leaf</b> exports to the EU
7	Pesticide residue controls for <b>betel leaf</b> exports to the Middle East
8	Plant pest & Pesticide residue controls for <b>mango</b> exports to the EU, USA, Japan & Korea
9	Plant pest controls for <b>lemon/citrus</b> exports to the EU
10	Animal disease, and Hygiene controls for <b>shrimp and prawn</b> exports to Thailand, Korea, Mexico, EU, USA, Japan, and Australia
11	Hygiene and contaminant controls for <b>live and frozen crab</b> exports to China, Australia, EU, USA, Japan, Korea
12	Hygiene & Contaminant controls for <b>live eel</b> exports to China, Korea, USA, Canada, Singapore & Japan
13	Contaminant controls for <b>chilled and frozen fish</b> exports to EU, USA, Gulf & Middle East

Upon identification of the CBOs, the working group selected a set of 10 decision criteria and associated weights on a cumulative scale of 100 to analyse the relative priority of the 13 CBOs. **Table 3** presents the 10 selected decision criteria and associated weights.

*Table 3: Decision Criteria and associated weights for analysis of the CBOs*

SL	Decision Criteria	Weight
1	Up-Front Investments	20
2	On-Going Costs	10
3	Challenges faced in implementation	5
4	Change in value of exports	20
5	Diversification of exports	10
6	Agricultural productivity	10
7	Impact on Environmental protection	5
8	Impact on domestic public health	5
9	Impact on level of income poverty	10
10	Impact on other marginalized groups	5
<b>Total</b>		<b>100</b>

The study team then identified relevant information as per the decision criteria and scored the CBOs for each of the criterion based on the identified or assessed value. These scores were then transferred to the D-Sight software which conducted a multi-criteria decision analysis (MCDA) using the associated weights highlighted in the table above to provide the prioritization of the CBOs.

### Results of the P-IMA Analysis

The analysis reveals that all CBOs are credible investment options for SPS capacity development of Bangladesh’s horticulture and fisheries sub-sectors. However, the associated costs and resulting benefits differ, which enables identification of clear priorities based on the set of decision criteria. A summary of the scoring for selected major decision criteria and the overall results are shared below:

#### A. Upfront Investment and Ongoing Cost

According to our estimates, the lowest upfront investment is required for CBO 4 (USD 143,636), whereas the lowest ongoing cost is required for CBO 5 (USD 76,363 per year). On the other hand, CBO 10 requires both the highest upfront investment (USD 472,727) and ongoing cost (USD 240,909).

#### B. Implementation Challenges

All options were assessed to have similar (medium) level of implementation challenges. However, among them CBO 2, 3, 4, 5, 6, 7, 9 and 11 were assessed to have lower implementation challenges compared to the others.

#### C. Impact on Export Value and Diversification

CBO 10 has the highest estimated impact on both export value (USD 83.5 Mio) and export diversification (with a score of 6 on a scale of 6). CBO 5, on the other hand, has the lowest estimated impact on both export value (USD 0.00174) and diversification (1 on a scale of 6).

#### D. Impact on Agricultural Productivity, Environment, and Domestic Public Health

CBO 2 was assessed to have the highest positive impact on agricultural productivity, environment and domestic public health followed by CBO 3. On the other hand, CBO 4 and 5 have the lowest positive impact on all three criteria along with CBO 6, 11, 12 for impact on environment and CBO 10, 11 and 12 for impact on domestic public health.

### E. Impact on Income Poverty and Marginalized Groups

Impacting more than 2.6 million low-income population, CBO 2 has the best impact on poverty reduction, followed by CBO 1 and CBO 10 (both impacting more than 400 thousand low-income population). All other options have similar impact on poverty, as they impact less than 100 thousand low-income population. In case of impact on marginalized groups, such as women, religious and ethnic minorities, etc., CBO 2 has the highest positive impact as 500 thousand women and other marginalized people are engaged in potato cultivation, followed by CBO 13. CBO 4 and 5 have the lowest impact on marginalized groups as our estimation suggests only 150 women and other marginalized people will benefit from the option.

The D-Sight software allowed the study team to conduct a MCDA using an outranking approach to assess the combined effect of all 10 criteria based on the predestined weights and provided a prioritization list (Figure 3). Based on the prioritization, *Contaminant controls for chilled and frozen fish exports to EU, USA, Gulf & Middle East* emerged as the top priority, followed closely by Hygiene and contaminant controls for *live and frozen crab* exports to China, Australia, EU, USA, Japan, Korea and Plant disease & pest controls for *potato* exports to Russia and Indonesia. Our analysis also revealed that the top four options highlighted in figure 3 were robust even with changes to the key parameters, i.e., associated weights of the decision criteria.

A deeper analysis of Figure 3 sheds light on the factors affecting the prioritization results. The top four options score highly on the change in exports. They also score high on poverty impact and up-front investment, or on-going costs compared to several of the other options. The lowest ranked options either have high upfront-investments and or score relatively low across most of the decision criteria, particularly change in exports, impact on agricultural productivity and impact on poverty.

### Conclusion

This study provides a systematic and evidence-driven approach to prioritize and consequently plan for SPS capacity-building in Bangladesh. The results presented above should only be the starting point in the use of MCDA to prioritize SPS capacity-building options, as the results should be revisited and revised on an on-going basis in the light of improvements in the quality of data, changes in policy priorities that imply shifts in the decision weights or the introduction of new decision criteria. Similarly, new capacity-building needs can be added to the analysis, including for other agricultural subsectors. Following this trial application, we envision the GoB and private stakeholders adopting the MCDA framework for future planning of SPS capacity-building. Bangladesh also needs systems for effective data collection and validation, which will require strong linkages between stakeholders involved in various SPS and trade functions within the government.

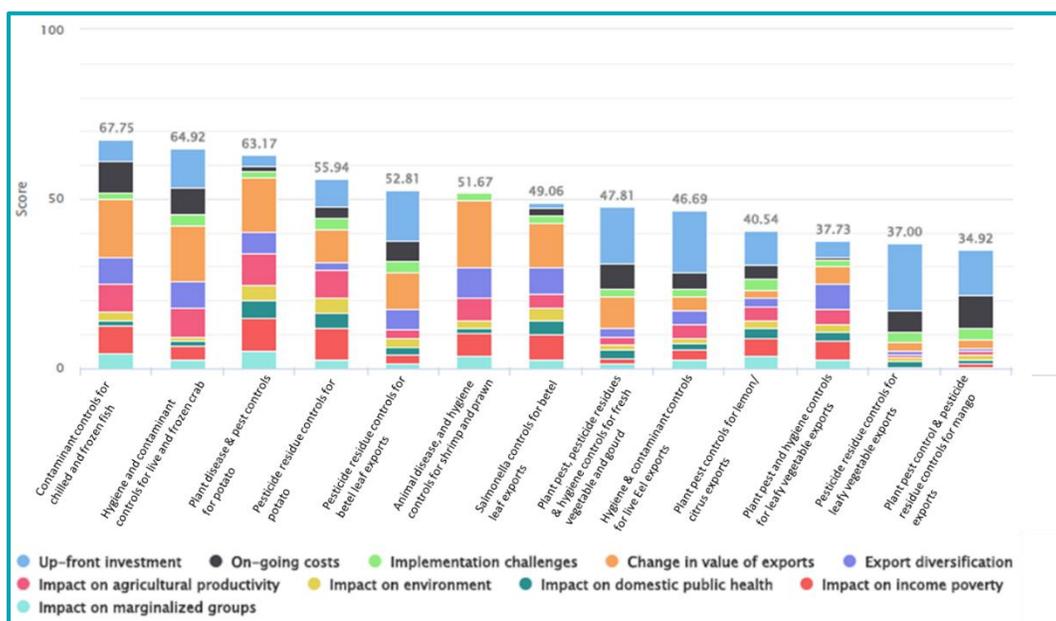


Figure 3: Final Prioritization List with comparison of scores on each decision criteria