STDF | STANDARDS and TRADE DEVELOPMENT FACILITY

Finance and Investment for Safe Trade Facilitation

July 2026

Preface and Acknowledgements

This report was prepared by Jennifer Maurer and Venny Mayaka under a consultancy financed by the Standards and Trade Development Facility (STDF). The authors thank Marlynne Hopper and Peter Donelan for their detailed review and valuable inputs. Documentation, background information, and insights provided by country case study focal points were invaluable in shaping the analysis. Members of the STDF Secretariat also provided feedback that helped refine the key findings. The authors extend sincere appreciation to all those who participated in key informant interviews and provided comments on earlier drafts.

The findings, interpretations, and conclusions expressed in this document are entirely those of the authors. They do not necessarily represent the views of the STDF, its partner organizations, or its donors.

More information on the STDF is available at www.standardsfacility.org.

Contents

List of Tables

List of Figures

Acronyms

Acronym	Definition
ADB	Asian Development Bank
AfDB	African Development Bank
AGFS	Agricultural Guarantee Fund Scheme
AgriFI	Agriculture Financing Initiative (EU)
AGRA	Alliance for a Green Revolution in Africa
BFVAPEA	Bangladesh Fruits Vegetables and Allied Products Exporters Association
CAADP	Comprehensive Africa Agriculture Development Programme
CGIAR	Consultative Group on International Agricultural Research
Codex	Codex Alimentarius Commission
COLEAD	Committee Linking Entrepreneurship-Agriculture-Development
CSR	Corporate Social Responsibility
DAE	Department of Agricultural Extension (Bangladesh)
DFAT	Department of Foreign Affairs and Trade (Australia)
DFC	Development Finance Corporation (United States)
DFI	Development Finance Institution
EDFI	European Development Finance Institutions
EAFF	East Africa Farmers Federation
EHPEA	Ethiopian Horticulture Producer Exporters Association
EIB	European Investment Bank
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FfD4	Fourth International Conference on Financing for Development
FMO	Financierings-Maatschappij voor Ontwikkelingslanden
GAP	Good Agricultural Practices
GCF	Green Climate Fund
GDPRD	Global Donor Platform for Rural Development
GTP	Growth and Transformation Plan (Ethiopia)
HACCP	Hazard Analysis and Critical Control Points
ICA	Instituto Colombiano Agropecuario (Colombian Agricultural Institute)
IDB	Inter-American Development Bank
IFC	International Finance Corporation
IFD	Investment Facilitation for Development
IFIC	International Finance Investment and Commerce (Bank PLC, Bangladesh)
ILRI	International Livestock Research Institute

Acronym	Definition
IPPC	International Plant Protection Convention
KEPHIS	Kenya Plant Health Inspectorate Service
KII	Key Informant Interview
KLIP	Kenya Livestock Insurance Programme
KTDA	Kenya Tea Development Agency
LMP	Livestock Master Plan (Ethiopia)
LPO	Local Purchase Order
MDB	Multilateral Development Bank
MEL	Monitoring, Evaluation, and Learning
MENA	Middle East and North Africa
MOU	Memorandum of Understanding
MRL	Maximum Residue Limit
MSME	Micro, Small, and Medium Enterprise
ODA	Official Development Assistance
OECD	Organization for Economic Co-operation and Development
P-IMA	Prioritizing SPS Investments for Market Access
P4R	Program-for-Results (World Bank instrument)
PCE	Phytosanitary Capacity Evaluation (IPPC tool)
PPG	Project Preparation Grant
PPP	Public-Private Partnership
PVS	Performance of Veterinary Services (WOAH Pathway)
RASFF	Rapid Alert System for Food and Feed (EU)
RBF	Results-Based Financing
SAFE-BD	Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh (STDF project)
SME	Small and Medium Enterprise
SPS	Sanitary and Phytosanitary
SSAFE	Safe Supply of Affordable Food Everywhere
STDF	Standards and Trade Development Facility
TAAT	Technologies for African Agricultural Transformation
TAHA	Tanzania Horticulture Association
TOR	Terms of Reference
TPHPA	Tanzania Plant Health and Pesticides Authority
UNCTAD	United Nations Conference on Trade and Development
USDA-FAS	United States Department of Agriculture, Foreign Agricultural Service
VDFACA	Veterinary Drug and Feed Administration and Control Authority (Ethiopia)

Acronym	Definition
WHO	World Health Organization
WOAH	World Organisation for Animal Health
WTO	World Trade Organization

Executive Summary

Effective sanitary and phytosanitary (SPS) systems are essential for protecting human, animal, and plant health, facilitating safe trade, and supporting agricultural development in low- and middle-income countries. Under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (1995), WTO members have the right to set their own levels of health protection, provided their measures are science-based, applied only to the extent necessary, and do not arbitrarily discriminate between countries where similar conditions prevail. Members are encouraged to use international standards developed by the Codex Alimentarius Commission (Codex), the International Plant Protection Convention (IPPC), and the World Organisation for Animal Health (WOAH). A country's capacity to meet SPS requirements determines whether its producers and exporters can access and retain regional and international markets.

Yet financing for SPS systems in developing countries is often fragmented, heavily dependent on short-term donor support, and poorly aligned with broader development investment frameworks. Investments are insufficient to sustain long-term system performance, effective risk management, and compliance with international standards. Recent data nonetheless point to a positive trend: OECD figures cited by the WTO show that, while total disbursements to support trade policy and regulations represented a modest 3% of Aid for Trade in 2024, this category grew by 17% on 2023, making it the fastest-growing segment of Aid for Trade and one of the most cost-efficient categories of development assistance. While SPS investments have generated important institutional, technical, and regulatory improvements, these gains have not consistently translated into sustained domestic financing or larger-scale investment from development finance institutions (DFIs) and the private sector. The continued perception of SPS as a regulatory cost rather than an economic enabler remains a key constraint.

This study, commissioned by the Standards and Trade Development Facility (STDF), identifies public and private financing sources, examines key barriers, and recommends practical actions to strengthen and diversify SPS financing. The analysis draws on 32 key informant interviews (KIIs) with development finance institutions, private sector actors, foundations, multilateral financial institutions, technical agencies, and government stakeholders, as well as country case studies on Colombia, Bangladesh, and Ethiopia and a review of relevant financing literature.

Key Findings

Three central findings emerge from the study:

Investment readiness is the primary constraint, not the availability of capital. Resources exist in national budgets, donor programmes, development finance institution portfolios, and commercial finance markets. What is most commonly missing is the institutional capacity to translate technical SPS priorities into structured, credible investment proposals that financing actors can assess and act on.

SPS financing performs best when investments are framed as enabling infrastructure for trade competitiveness and agricultural modernization. When governments frame SPS priorities in terms of export revenue, avoided border rejection costs, supply chain reliability, and value chain development, SPS investments compete more successfully for public budgets and attract greater interest from development finance institutions.

Private and development finance can contribute meaningfully, but only in specific segments and under specific conditions. Core regulatory functions will remain principally financed by public expenditure and supplemented by donor support where available. Commercial capital is most accessible in export-oriented processing infrastructure, digital traceability systems, horticulture cold chain and logistics, veterinary service delivery, and quality assurance systems embedded in supply contracts.

Most Promising Financing Sources and Instruments

The study identifies three broad financing categories. First, public budget allocations, supported where possible with donor grants, finance core regulatory functions including surveillance, inspection, and certification. Second, development finance institution lending and blended finance structures support mixed public-commercial SPS investments such as laboratory accreditation, digital traceability, and export certification infrastructure. Third, private sector instruments, including supplier contracts, industry levies, check-off systems, and results-based financing (RBF), support commercially viable SPS services tied directly to market access.

The most promising instruments for expanding SPS financing are: (i) blended finance structures that combine concessional and commercial capital for mixed public-commercial investments; (ii) credit guarantees and first-loss facilities from development finance institutions; (iii) results-based financing linked to verified SPS outcomes; and (iv) industry levies and check-off systems in export-oriented sectors. For example, the EU-funded Agriculture Financing Initiative (AgriFI Global), a EUR 40 million blended finance facility managed by European Development Finance Institutions (EDFI) Management Company on behalf of Financierings-Maatschappij voor Ontwikkelingslanden (FMO), the Dutch entrepreneurial development bank. FMO, illustrates how concessional and commercial capital can be combined to support agri-food value chains and the inclusion of smallholders and agri-MSMEs in developing countries, including where SPS upgrading is part of the commercial proposition. Also, climate finance instruments represent a significant underutilized opportunity, particularly for disease surveillance, pest monitoring, and agri-food system resilience.

The Role of STDF Tools

STDF tools and workstreams already provide a practical foundation for linking SPS diagnostics and prioritization processes with broader investment pathways. The Prioritizing SPS Investments for Market Access (P-IMA) framework[1], project preparation grants (PPGs), public-private partnership (PPP) guidance, good regulatory practice materials, electronic SPS certification guidance, and the STDF Global Platform have collectively contributed to investment pipelines that later informed larger-scale financing from development partners and domestic sources. These tools complement, rather than duplicate, the official SPS capacity-evaluation instruments developed by the WTO's three sister standard-setting bodies: the WOAH PVS Pathway for veterinary services, the IPPC Phytosanitary Capacity Evaluation (PCE), and the FAO/WHO Food Control System Assessment Tool. They are most effective when used in sequence with them. These tools are particularly valuable in translating technical SPS priorities into investment-ready proposals, demonstrating practical financing models through pilot initiatives, and generating evidence that links SPS investment to trade performance and economic outcomes.

Key Recommendations

For governments and SPS authorities: embed SPS investment in national investment plans and medium-term expenditure frameworks; translate diagnostic outputs from P-IMA, PVS (Performance of Veterinary Services), PCE (Phytosanitary Capacity Evaluation), and the FAO/WHO Food Control System Assessment Tool pathway processes into structured investment proposals; introduce graduated cost-recovery mechanisms for commercial SPS services; and strengthen inter-agency coordination through national SPS committees.

For development finance institutions: classify SPS systems as trade-enabling infrastructure within lending frameworks; test blended finance, guarantee, and results-based instruments on SPS investments; embed SPS components within larger agricultural transformation and trade programmes; connect SPS investment to climate finance instruments; and build a broader understanding of how SPS investments support trade, exports, and business revenue within lending teams.

For the private sector and industry associations: co-invest in shared compliance infrastructure through levy systems or cooperative arrangements; participate actively in public-private SPS dialogue that includes the financial sector; and treat SPS compliance investment as a market access asset rather than a regulatory cost.

For STDF: use P-IMA and PPGs more explicitly as investment preparation instruments; design PPGs with explicit follow-on financing pathways; convene structured dialogue between SPS authorities and development finance institutions; build and share economic evidence on SPS investment returns in formats accessible to ministries of finance and development finance institution investment teams; and pilot STDF project grants as concessional de-risking components within larger blended finance structures.

The study also recommends reviewing STDF's existing co-financing framework for project grants. Requiring verifiable financial co-financing, where feasible, rather than allowing requirements to be met primarily through in-kind contributions by partner governments and institutions, would strengthen government ownership, improve the investment case for follow-on financing, and signal more credibly to external partners that national institutions are committed to sustaining results. Any tightening of co-

[1] P-IMA is a structured multi-criteria decision-analysis tool developed under STDF that helps countries identify, prioritize, and translate SPS needs into investment-ready projects that improve market access.

financing requirements should retain flexibility for least-developed-country (LDC) applicants, where in-kind contributions may continue to be appropriate.

These actions are subject to STDF's demand-driven mandate and the open-call architecture of its Working Group, and would proceed through awareness-raising, dissemination, and convening rather than through pre-selection of beneficiary countries.

Conclusion

Strengthening SPS financing is essential for safe trade, health protection, and resilient, competitive agri-food systems. While public expenditure, supplemented by donor support where available, will remain central to core SPS regulatory functions, sustainable SPS capacity requires more diversified financing approaches that align public regulatory objectives with market incentives. STDF is well positioned to support this transition by improving the conditions under which financing can be mobilized: connecting technical SPS expertise with investment preparation processes, facilitating dialogue between SPS authorities and financing institutions, and helping countries move from project-based support towards sustainable, system-level financing.

The study also identifies three areas warranting further engagement. First, linkages between SPS investment and climate finance instruments remain underexplored despite clear thematic overlaps in disease surveillance, pest and vector monitoring, and agri-food system resilience to biological shocks such as pest outbreaks and diseases affecting both crops and livestock. Second, the language gap between SPS authorities and development finance institutions is a structural constraint: SPS authorities do not routinely use the investment framing that development finance institution lending teams require, and lenders do not routinely understand how SPS investments generate economic returns. Third, SPS investment is often embedded in wider agriculture or trade programmes and is therefore hard to track given the cross-cutting nature of SPS; STDF has a clear near-term role in helping to bridge these gaps through targeted analytical work and convening.

Implementation Roadmap

The study proposes a phased implementation roadmap across three time horizons (Table ES-1). Each phase is sequenced to resolve a specific constraint before moving to the next: the Quick-Wins phase concentrates on the absence of investment-ready pipelines and visible economic evidence; the Medium-Term phase builds on these pipelines to test instruments at scale and to anchor SPS within national investment frameworks; and the Long-Term phase consolidates these gains into predictable budget allocations and a permanent place for SPS within DFI agricultural and trade portfolios.

Table ES-1: Implementation Roadmap

Phase	Key Actions	Principal Actors
Quick Wins (0 to 12 months)	Use STDF tools (P-IMA and PPG) to identify priority investments and develop early-stage bankable proposals. Pilot cost-recovery mechanisms for at least one commercial SPS service. Strengthen cross-ministerial coordination for SPS investment finance in three to five target countries. Capture and publish economic-return evidence from the STDF project portfolio in DFI-accessible formats. Convene at least one STDF-facilitated dialogue between SPS authority representatives and development finance institution investment teams.	STDF, governments, SPS authorities
Medium-Term System Shifts (12 to 24 months)	Develop structured investment pipelines linking SPS diagnostics, feasibility analysis, and project preparation in five to ten countries, drawing on STDF's twice-yearly open-call submission windows for Project Grants and PPGs and on closer alignment between successive submissions. Embed SPS system strengthening in national investment frameworks as trade and economic infrastructure (led by ministries of agriculture, trade, and finance, with STDF support through global-platform advocacy and knowledge work). Scale blended finance pilots in priority value chains and test guarantee and results-based instruments with at least two DFI partners, with STDF raising awareness so that such pilots are reflected in future Working Group submissions. Strengthen monitoring and evaluation to track compliance rates, trade volumes, and investment returns. Explore and map linkages between SPS investment programmes and climate finance instruments, ideally as a discrete analytical product within STDF's 2025–2030 strategy.	Governments with bilateral donors, STDF, DFIs
Long-Term Transformation (24 to 36 months)	Secure predictable multi-year public budget allocations for SPS system strengthening. Mainstream blended finance models for SPS systems as a standard feature of DFI agricultural and trade portfolios. Position STDF as a standing convener connecting SPS technical priorities with DFI investment pipelines and financing platforms. Institutionalize performance-based financing frameworks with clear links to trade and economic outcomes.	Governments, DFIs, private sector, STDF

These actions, taken together and sequenced as above, are designed to improve the mobilization, coordination, and long-term sustainability of SPS financing in developing countries.

1 Introduction and Context

This study was undertaken in response to persistent gaps in the financing of SPS systems in developing countries, which continue to constrain long-term system performance and sustainability. Although SPS compliance is essential for protecting food safety, animal, and plant health and for facilitating safe trade, financing for SPS capacity development at country level remains fragmented, insufficient, and often weakly aligned with broader development planning and investment frameworks (van der Meer, 2020; STDF, 2023). Chapter 1 sets out the study's purpose and scope, explains why SPS financing matters, and documents the global SPS financing context that shapes the analysis in subsequent chapters.

1.1 Purpose and Scope of the Study

National SPS systems perform essential public functions while also enabling participation in domestic, regional, and international markets. Because many SPS functions generate public benefits that are not fully captured through commercial returns, sustainable financing typically depends on a combination of public expenditure, targeted donor support, and carefully designed incentives that can mobilize private participation where appropriate (STDF and IDB, 2012).

Guided by the Terms of Reference (TOR), the study identified, assessed, and recommended financing mechanisms that can mobilize and leverage resources for SPS capacity development in developing countries, in line with the STDF Strategy for 2025–2030. The analysis focused on country-level and system-wide financing approaches, including opportunities to integrate SPS investments more effectively into national development plans, trade strategies, and broader public and private investment frameworks. The study is designed as a diagnostic and advisory exercise: it does not seek to mobilize additional resources for the STDF trust fund, but to inform more effective, sustainable, and coordinated financing of SPS capacity development in developing countries.

Specific Objectives

The study was designed to:

- Identify public and private financing sources that can strengthen SPS systems in developing countries, including underutilized traditional mechanisms and innovative financing models such as blended finance, guarantees, impact investing, and public-private partnerships.
- Identify challenges and opportunities in securing and leveraging public and private financing for SPS systems in developing countries.
- Provide recommendations on how to leverage new financing sources to strengthen SPS capacity, including guidance on engagement with potential financing partners.

Research Areas

The study addressed the following six research areas, drawn from the research questions in the Terms of Reference:

1. Identifying public and private financing sources for SPS capacity building — which public and private financing sources, both traditional and innovative, can support SPS capacity building in developing countries and be accessed by developing countries with STDF support?

2. Barriers and innovative approaches — what are the barriers preventing the mobilization of public and private financing for SPS investments; which innovative financing models, such as blended finance, guarantees, and impact investing, have been successfully used in other sectors; and how can they be adapted to SPS systems?

3. STDF partnership capacity and tools — what opportunities exist to improve the capacity of the STDF partnership and of SPS authorities to identify, engage with, and leverage these financing sources; and how can STDF grant mechanisms and knowledge products, including P-IMA, PPPs, and PPGs, be better aligned with broader financing opportunities and integrate new financing approaches strategically?

4. STDF's role in mobilizing and leveraging finance — what actionable steps can strengthen STDF's role in mobilizing and leveraging finance for safe trade and SPS improvements?

5. Linking STDF projects to industry, value chains, and private finance — how can STDF-supported projects better link with industry and value chain actors from the outset and build clear,

scalable business cases; and which interventions would attract private funds, designed to meet the needs of the private sector and other funders?

6. Strategic partnership opportunities with financing institutions — which strategic financing institutions, including DFIs, MDBs, philanthropic funds, climate finance instruments, and private investors, present the most promising partnership opportunities for strengthening SPS systems in developing countries?

1.2 Why SPS Financing Matters for Trade, Food Safety, and Development

Under the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (1995), WTO members have the right to set their own levels of health protection, provided their measures are science-based, applied only to the extent necessary, and do not arbitrarily discriminate between countries where similar conditions prevail. Members are encouraged to use international standards developed by Codex, IPPC, and WOAH. Transparency of SPS regulations is a key provision to prevent unnecessary barriers to trade. In practice, it is a country's capacity to meet SPS requirements that determines whether its producers and exporters can access and retain regional and international markets.

Financing gaps create significant constraints across three levels: at the firm level, the SPS system level, and at the level of incentives and governance, as illustrated in the three sub-sections below.

Firm-Level Barriers

SPS compliance is not a one-time expenditure. Firms must finance process controls, hygiene infrastructure, staff training, recordkeeping, and traceability routines, and then repeatedly fund conformity assessment through audits, certification, and testing. These costs are substantial and partly fixed, which tends to favour larger or established exporters and can exclude smaller suppliers from high-value markets (Jaffee and Henson, 2004; Henson and Loader, 2001). Even where certification generates price gains, ongoing compliance costs can remain prohibitive for small producers without sustained support, and limited access to appropriate finance makes it difficult to amortize investments or bridge payment delays tied to audits, testing, and shipment clearance (Unnevehr and Ronchi, 2014).

In recognition that meeting SPS requirements can require substantial investments, the WTO SPS Agreement explicitly encourages technical assistance, including advice, credits, grants, training, and equipment, to enable developing country members to adjust and comply. This underscores that financing constraints are structurally embedded in the compliance problem rather than incidental to it.

System-Level Barriers

SPS compliance depends on public goods that individual firms cannot efficiently supply on their own: coherent legal foundations, risk-based oversight, inspection capacity, credible laboratory services, surveillance systems, and data infrastructure (FAO and WHO, 2021). Official diagnostics consistently highlight persistent underinvestment and weak operational capability across low- and middle-income settings, including gaps in inspection and facility surveillance, weak laboratory quality assurance, and major deficiencies in traceability systems. These gaps raise the cost of compliance for all firms while disproportionately burdening small and medium enterprises (SMEs) that rely more heavily on public infrastructure and nationally recognized assurances (World Bank, 2019).

Public financing priorities often favour visible capital infrastructure over sustained operating budgets and system management, even though effective food control systems require sufficient resources, continuous improvement, documented procedures, and enforceable corrective-action capacity (FAO and WHO, 2021). Donor interventions can help fill gaps but frequently remain fragmented across projects and mandates. Weak digital and data capacity compounds these constraints: evidence on SPS electronic certification suggests that digital tools can facilitate trade, but uneven adoption creates compliance gaps between firms that can use digitized assurance systems and those that cannot (OECD, 2021).

Incentive and Governance Barriers

Incentive and governance failures often prevent firm-level upgrades and system-level investments from reinforcing one another, even when formal SPS rules are designed to balance sovereign health protection with disciplines against unnecessary barriers to trade (WTO, 1995). Because food safety and many SPS attributes involve high information and verification costs, buyers and regulators rely on standards, certification, and accreditation systems to manage assurance. These mechanisms can

strengthen credibility but also raise transaction costs and concentrate governance power among actors who control verification processes (Unnevehr and Ronchi, 2014).

Recent analyses highlight that domestic incentives for safer food remain weak in many contexts, and that food safety governance functions best as a shared responsibility across public agencies, farms, and food businesses (World Bank, 2019; FAO/WHO, 2020). Underinvestment is therefore often a rational response to misaligned incentives rather than simply a technical gap. Codex principles underscore the importance of clear roles and responsibilities, transparency, coordination across competent authorities, and adequate resources. These features reduce uncertainty and encourage private co-investment when rules are predictable and enforcement is credible (Codex Alimentarius Commission, 2013; FAO/WHO, 2020).

1.3 Global SPS Financing Context

Emerging Trends and Recent Developments

Several recent developments are reshaping the context for SPS financing. At the Fourth International Conference on Financing for Development (FfD4) in Sevilla in July 2025, global stakeholders committed to strengthening financing mechanisms for trade-related capacity building, including a commitment to double Aid for Trade support to least developed countries by 2031, using 2018 as the baseline. The 2024 OECD/WTO Aid for Trade at a Glance report notes that while Aid for Trade disbursements reached a record US$51.1 billion in 2022, traditional development finance is under strain, calling for new models that emphasize blended finance, private sector engagement, and digital and green transitions.

The 2022 World Bank Food Systems Resilience Program dedicated up to US$2.3 billion to support producers in meeting domestic and international standards, including SPS requirements, product traceability, good agricultural practices (GAP), and quality infrastructure (World Bank, 2022). The African Union's Comprehensive Africa Agriculture Development Programme (CAADP) Strategy and Action Plan for 2026–2035 provides a policy anchor for SPS investments by explicitly linking food safety, animal health, plant health, and market access objectives to specific technical and financial implementation targets (African Union Commission, 2024).

In July 2023, 112 WTO members joined the Investment Facilitation for Development Agreement, which is designed to improve the investment climate by promoting transparency, regulatory predictability, and investor confidence. In March 2026, the WTO Secretariat and the European Investment Bank (EIB) Group signed a Memorandum of Understanding (MOU) to strengthen sustainable trade and investment through closer alignment between regulatory reforms and targeted financing instruments. The agreement builds on the Investment Facilitation for Development Agreement, now adopted by 128 WTO members, and aims to support developing countries in identifying investment climate constraints and implementing reforms that improve transparency, regulatory predictability, and investor confidence. Financing instruments under this collaboration include concessional finance, blended finance structures, and risk-sharing mechanisms designed to attract private capital for trade-enabling sectors (WTO, 2026).

At the same time, global SPS financing remains structurally imbalanced. Public expenditure on SPS systems continues to focus primarily on recurrent costs such as staffing, inspections, and operational delivery, leaving limited fiscal space for capital investment in laboratories, digital traceability systems, surveillance infrastructure, and regulatory modernization. Private investment also remains uneven, concentrating on export-oriented value chains where SPS compliance directly affects commercial returns, while broader domestic SPS systems often remain underfunded.

These SPS-specific financing constraints reflect a broader misalignment in the financing of agrifood systems as a whole. The June 2025 Global Donor Platform for Rural Development (GDPRD) White Paper, *Financing Agrifood Systems for People, Planet and Prosperity*, estimates that transforming agrifood systems to deliver healthier diets, climate resilience, and inclusive rural growth will cost in the order of US$1.2 to US$1.4 trillion per year, equivalent to approximately 1.3% of global GDP. By comparison, the hidden costs of the current agrifood system, including health, environmental, and productivity losses, are estimated at around US$12 trillion per year. The paper concludes that the binding constraint on agrifood transformation is not a shortage of capital, since global wealth and financial capital availability are at historic highs, but a misalignment between the way that capital is currently deployed and the systems-level outcomes that agrifood transformation requires. ODA contributions to agriculture, forestry and fisheries have stagnated at around 5% of total ODA

(approximately US$14.1 billion in 2022), while private investments by producers and SMEs, climate finance, impact investing, and repurposed agricultural support represent capital pools several orders of magnitude larger that remain under-mobilized for systemic transformation (GDPRD, 2025).

The implication for SPS financing is direct: the structural imbalance described above is not unique to the SPS sub-sector. It is a specific expression of a wider pattern in which public budgets cover recurrent regulatory and operational costs, private investment concentrates in commercially viable export-oriented segments, and the layered, blended, and risk-sharing instruments needed to bridge the two remain insufficiently scaled. The GDPRD paper proposes five paradigm shifts to address this pattern, including prioritizing agrifood systems within national investment frameworks, integrating agrifood objectives across other sectoral policies, and using public funds more catalytically to de-risk and incentivize private investment. These shifts apply equally to SPS systems, which the present study treats as enabling infrastructure for agrifood trade competitiveness rather than as a stand-alone regulatory cost.

Strategic Entry Points for Commercial Capital

The study identified several SPS-related investment areas where private capital can be mobilized more effectively, particularly where there is a clear revenue model, measurable demand, and a direct link to commercial returns. Private investors are more likely to engage in SPS systems when investments support commercially viable services, reduce operational risk, improve product quality, or provide access to higher-value domestic and export markets.

Animal health products, veterinary services, and horticulture value chains represent an important entry point. Vaccines, diagnostics, veterinary drugs, feed quality services, disease surveillance technologies, and last-mile animal health delivery systems are attractive for private investors because livestock producers are willing to pay for services that reduce mortality, improve productivity, and protect herd value while supporting export market access. Commercial production and aggregation systems represent a further pathway: aggregators, cooperatives, collection centres, and lead firms have strong incentives to invest in SPS-related improvements because compliance failures directly affect volumes, quality, and market access.

Export-oriented investments that reduce perishability, including packhouses, slaughter facilities, milk chilling plants, cold storage, refrigerated transport, residue management systems, and export certification infrastructure, are commercially attractive because they enable exporters, processors, and logistics firms to demonstrate stable market demand and command premium pricing, making them eligible for commercial debt, blended finance, leasing arrangements, and public-private co-investment. Digital and data tools are a growing opportunity, enabling access to platforms that support traceability, inspection readiness, farm records, certification management, and market verification.

Key insight: The most productive entry points for commercial capital in SPS systems are not the core regulatory functions themselves, but the surrounding services, fee-for-service arrangements, infrastructure, and value chain segments that generate measurable commercial returns while strengthening compliance outcomes.

Implications for SPS System Strengthening

These trends collectively suggest that future SPS financing models will increasingly draw on hybrid approaches that combine public finance, development finance, and private capital. Governments will continue to play the primary role in financing core regulatory functions and public goods. At the same time, innovative financing mechanisms can help mobilize investment in commercially viable SPS components, particularly where investment can be linked to value chain development and trade competitiveness. Achieving more sustainable SPS financing will depend on stronger alignment between SPS priorities, trade competitiveness strategies, value chain development programmes, and broader investment facilitation reforms. The following chapters examine the financing models, instruments, and institutional arrangements that can support this alignment.

The STDF Strategy for 2025–2030 and Financing

The STDF Strategy for 2025–2030, 'Facilitating Safe Trade to Meet the Global Goals,' highlights the importance of leveraging increased financing to scale SPS capacity development, including from the private sector and through innovative financing instruments. STDF projects are expected to leverage expertise and resources, including financial contributions, and are designed to consider financial sustainability and scalability from the outset. By the end of 2023, STDF had mobilized US$40 million in public and private sector resources across its portfolio of 250 projects and PPGs.

STDF's knowledge workstream covers cross-cutting SPS themes that strengthen food safety, animal health, and plant health systems in developing countries, with emphasis on regulatory quality, investment prioritization, digital tools, and inclusive governance. STDF support for public-private partnerships, electronic SPS certification, and the P-IMA framework has direct links to broader financing. The 2023 evaluation of P-IMA found that the framework contributed to over US$2.8 million leveraged for SPS capacity building, supported by STDF grants of approximately US$453,000. The STDF Monitoring, Evaluation, and Learning (MEL) Framework supports systematic learning on how STDF's work drives SPS improvements, including through leveraged financing. The Strategy also positions STDF as a facilitator of dialogue on scaling and financing among STDF Working Group members, policymakers, and practitioners, including through increased connections with finance providers.

2 Methodology and Analytical Framework

This chapter describes the analytical design, data collection methods, and theoretical framework applied in the study. Section 2.1 explains the study design and approach. Section 2.2 sets out the analytical framework. Section 2.3 presents the key findings from consultations that inform the analysis in subsequent chapters.

2.1 Study Design and Approach

This study applied a qualitative analytical design combining key informant interviews, thematic analysis, desk review, and selected case studies to examine financing pathways for strengthening SPS systems in developing countries. The methodology was designed to capture both institutional perspectives and practical financing experience across different SPS contexts.

A total of 32 semi-structured KIIs were conducted with representatives of international organizations, development partners, development finance institutions, private sector entities, technical agencies, and sector specialists engaged in SPS system development, trade facilitation, and agricultural investment. Interview questions focused on five core areas: current sources of financing for SPS systems; barriers to mobilizing additional public and private investment; opportunities for innovative and blended financing approaches; the role of SPS investments in supporting trade competitiveness; and the contribution of STDF tools and partnerships to strengthening financing pathways.

Responses were analysed using a thematic framework that enabled systematic comparison across stakeholder groups. This approach supported the identification of recurring patterns, institutional differences, and areas of convergence regarding financing constraints and opportunities, while also allowing new issues to emerge through open-ended discussion. To complement the interview findings, the study reviewed selected country and programme case studies, providing practical evidence of how SPS investments are financed and implemented in different contexts. The research generated both strategic and operational insights into how SPS financing currently functions and where opportunities exist to strengthen financing pathways.

A limitation of the study is that interview perspectives cannot fully capture the diversity of country contexts, particularly where SPS financing is embedded within broader agriculture, health, trade, or infrastructure investments. In addition, private investment in SPS systems remains difficult to assess because such investments are often not reported as SPS expenditure but rather as components of broader agricultural or trade compliance programmes.

The rationale for the three case studies was to illustrate variation in financing pathways across different SPS functions and institutional settings. One case highlights donor-financed technical capacity building, another emphasizes government-led regulatory investment, and the third demonstrates blended financing involving private sector participation. Together, they provide a comparative lens on how different financing logics operate in practice, providing insights into both common challenges and context-specific solutions.

2.2 Analytical Framework

The study applies an analytical framework that examines SPS financing through two complementary lenses: the financing environment lens and the public-private investment continuum.

The financing environment lens focuses on the interaction among governments, international organizations, development finance institutions, private investors, and market actors in financing SPS systems. It highlights how different financing sources interact, where coordination gaps exist, and where opportunities emerge for more diversified and sustainable financing.

The public-private investment continuum examines SPS investments according to the extent to which they generate public or commercial returns. This distinction matters because not all SPS functions are equally suited to the same financing approach. Core regulatory, surveillance, and public health functions often require sustained public financing from government budgets and earmarked revenues from inspection fees and levies, while other SPS-related investments may generate sufficient commercial value to attract private participation. Using these two lenses, the framework identifies five broad financing categories:

- Public financing for core regulatory and surveillance functions;
- Donor grants for technical assistance and capacity development;
- Blended finance for risk-sharing and investment in areas that combine public-good characteristics with commercial returns;
- Results-based financing linked to measurable SPS outcomes; and
- Value chain co-investment in which private actors finance SPS-related infrastructure that supports their commercial operations.

Chapter 7 applies the framework to identify which financing instruments are best suited to different categories of SPS investment.

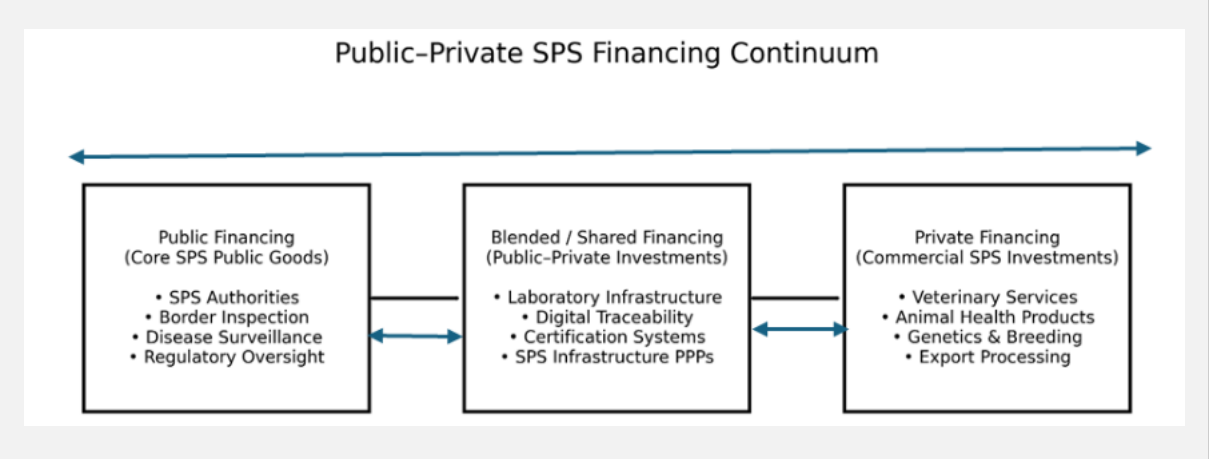


Figure 1: Public-Private SPS Financing Continuum. Source: Authors, 2026.

2.3 Emerging Themes from Consultations

The key informant interviews and case study analysis generated findings across three analytical themes: the enabling conditions that determine whether SPS investments can attract diversified financing; the structural constraints that continue to limit financing at scale; and the reframing of SPS financing from a compliance obligation towards a strategic investment perspective.

Enabling Conditions for SPS Financing

The analysis identified six enabling conditions that determine whether SPS investments can attract and sustain diversified financing:

- A predictable regulatory and policy environment that gives investor confidence in the stability of the operating framework.
- Strong institutional capacity in the agencies responsible for implementing SPS functions.
- Modern technical infrastructure, including laboratories, certification systems, and traceability platforms.
- Effective risk mitigation instruments, including guarantees, insurance, credit rating, and blended finance structures. The OECD's 2025 tracking work shows that guarantees are among the most effective instruments for mobilizing private finance across development investment contexts (OECD, 2025).
- Credible coordination mechanisms, including public-private partnerships, donor coordination platforms, and knowledge-sharing networks.
- Improvement in the technical quality of SPS investment proposals, so that they can be assessed and acted on by financing institutions.

Commercial financial institutions highlighted the need to strengthen their own understanding of SPS issues and how to structure financial products suited to SPS investment needs. A recurring finding is that lending officers and investment analysts in commercial banks and DFIs do not routinely understand

how SPS investments generate economic returns, what compliance risks they are designed to address, or how SPS investments interact with broader value chain finance. Addressing this knowledge gap is as important as improving the technical quality of SPS investment proposals.

Structural Constraints in SPS Financing

SPS financing remains constrained by several structural factors, including the low fiscal and political influence of food safety, animal health, and plant health authorities, weak project preparation capacity, fragmented institutional mandates, limited private sector engagement in financing decisions, and insufficient economic analysis of SPS investment priorities. Trust between public and private actors, particularly the exclusion of the financial sector from public-private dialogue, further weakens the conditions for co-investment. These constraints are examined in detail in Chapter 6.

Reframing SPS Financing

A central finding of the study is the need to reposition SPS financing from a narrow compliance perspective towards a broader investment perspective. Table 1 summarizes the key elements of this reframing.

Table 1. Reframing SPS Financing

Traditional Framing	Investment-Oriented Framing	Strategic Implication
Donor-funded projects	Investment portfolio	Attracts wider financing interest
Penalties for non-compliance	Incentives for compliance	Strengthens behavioural uptake
Public funding only	Co-investment models	Expands the financing base
Regulatory expenditure	Risk management investment	Links SPS to economic protection
Short-term grants	Long-term financing pathways	Improves sustainability
Fragmented institutions	Coordinated investment platforms	Reduces duplication and cost
Compliance cost	Trade enabler	Supports competitiveness

Source: Authors, based on study findings, key informant consultations, 2026.

This reframing matters because investors respond more directly when SPS investments are articulated in terms of measurable economic returns, reduced commercial risk, or clearly identified market access gains.

Finance-Related Barriers Affecting Export Competitiveness

The study identified four recurring barriers that compound the structural constraints described above and directly affect SPS financing effectiveness and export competitiveness.

Limited Market Information

Persistent gaps in market intelligence, including limited access to information on regulatory requirements in destination markets, demand trends, and consumer preferences, reduce the ability of producers and exporters to align production with market requirements and to justify compliance-related investments to lenders.

Logistics and Transportation Constraints

High freight costs, weak road infrastructure, border delays, and inadequate storage and cold chain systems increase transaction costs, reduce supply reliability, and affect product quality and compliance. These constraints are closely related to SPS financing because they reduce the commercial viability of export-oriented investments and increase the financial exposure of firms that have invested in compliance upgrades.

Compliance Capacity Constraints

Compliance challenges are linked to inadequate physical and institutional infrastructure, including a limited number of accredited laboratories; weak cold chain systems from farm through export point; high and sometimes unpredictable testing and certification costs; unreliable energy supply at key processing and storage points; and limited traceability infrastructure for animals, animal products, and plant-based commodities. These constraints raise the cost of compliance for all actors and disproportionately affect SMEs that lack the scale to absorb fixed infrastructure costs.

Institutional Fragmentation

Fragmented institutional mandates across competent authorities generate duplicated inspections, inconsistent certification requirements, and repeated procedures that weaken efficiency and increase costs for exporters. Where multiple agencies hold overlapping authority over food safety, plant health, animal health, and border inspection functions, coordination failures can undermine the reliability and credibility of national SPS systems, reducing investor and buyer confidence.

Key insight: The four barriers documented in this section share a common root: insufficient financing of shared SPS infrastructure at country and sector level. Addressing them requires investment strategies that treat SPS infrastructure as a collective asset rather than a firm-level compliance cost.

3 Sources, Trends, and Constraints in SPS Financing

This chapter maps the current sources of SPS financing, describes emerging instruments and trends, and examines the structural constraints that continue to limit financing at scale. It also identifies the conditions under which private sector investment in SPS systems is most likely to materialize. Together, these elements provide the empirical foundation for the financing model analysis in Chapter 4 and the strategic recommendations in Chapters 8 and 9.

3.1 Current Sources of SPS Financing

Financing for SPS systems currently draws on four broad source categories: public expenditure, donor grants and technical assistance, development finance institution lending, and private sector investment. Each plays a distinct role, and together they reflect the dual nature of SPS systems, which perform core public regulatory functions while also supporting commercially valuable activities linked to trade, food systems, and value chain development.

Public budgets remain the principal source of support for core SPS regulatory functions, including inspection, surveillance, border control, laboratory services, and certification. In practice, however, public allocations are heavily concentrated on recurrent expenditure such as salaries and routine operations, leaving limited fiscal space for capital investment in modernization, digital systems, or infrastructure expansion. Even where agriculture ministries receive adequate overall allocations, SPS functions frequently compete poorly against higher-visibility budget lines within sector envelopes (STDF, 2021; World Bank, 2019; FAO/WHO, 2020).

Donor grants and technical assistance fill important gaps, particularly in lower-income and lower-capacity settings, supporting institutional strengthening, regulatory reform, and pilot investments. Development finance institutions are increasingly relevant where SPS investment intersects with broader agricultural transformation, trade facilitation, or food systems programmes. Private sector investment remains concentrated in commercially viable segments where returns are clearer and more immediate, including veterinary services, export-oriented processing facilities, cold chain systems, and digital traceability platforms.

The financing context therefore remains structurally uneven. Public expenditure, fee-for-service revenues, and donor financing continue to dominate the core regulatory functions that are least amenable to cost recovery or commercial returns, while private and development finance remain concentrated in the segments that already have the strongest commercial incentives. The gap between where financing is most readily available and where SPS investment needs are greatest is a central constraint that this study examines. Section 4.1 examines each of these traditional financing sources in greater analytical depth, including their specific instruments, country-level examples, and the conditions under which each proves effective or insufficient.

3.2 Emerging Financing Sources

SPS financing is gradually expanding beyond traditional grant and public funding models towards a broader range of financing instruments. Development finance institutions are increasingly applying blended finance structures, concessional lending, and guarantee instruments to reduce investment risk and mobilize private participation in SPS and other priority investment sectors like agriculture and climate. These mechanisms are particularly relevant where SPS investments can be linked to wider economic objectives such as export competitiveness, supply chain resilience, climate adaptation, or food systems transformation.

Blended finance, defined here as the strategic use of public or donor funds to mobilize additional private investment for projects that deliver both public-good outcomes and commercial returns, is especially relevant for SPS because many SPS investments contain both public-good and commercial characteristics. In such cases, concessional capital can absorb early-stage risk while improving the viability of commercially oriented investment, attracting private capital that would not otherwise engage. This is distinct from purely public SPS functions such as disease surveillance or official inspection, which are not suited to blended structures and require sustained public financing. Chapter 7 sets out a practical framework for distinguishing these categories.

Private sector participation is also expanding in areas where SPS compliance directly supports market access or supply reliability. Agribusiness firms, exporters, logistics providers, certification services, and digital technology companies are increasingly investing in SPS-related systems where compliance

improves competitiveness or reduces commercial risk. Illustrative examples include horticulture exporters in Senegal that co-finance packhouses and cold chain facilities to meet EU standards; logistics providers and IT firms that have partnered with governments to roll out electronic certification systems such as ePhyto; and agribusiness processors in Burkina Faso that have invested in improved storage and testing to reduce aflatoxin contamination.

Climate finance represents a significant underutilized opportunity for SPS investment. Many SPS functions, including disease surveillance, pest and vector monitoring, and resilience of food systems to biological shocks, have direct relevance to climate adaptation objectives. Green Climate Fund (GCF), Adaptation Fund, and nature-based solutions financing increasingly recognize agri-food system resilience as an eligible investment area. STDF and its partners should systematically explore how SPS investments can be framed within these instruments, particularly for countries with high climate vulnerability profiles and where SPS systems face growing pressure from climate-driven pest and disease risks.

A further emerging trend in agrifood financing, of direct relevance to the SPS sub-sector, is the development of collaborative financing agreements that align public and private actors around shared investment priorities. The June 2025 GDPRD White Paper, *Financing Agrifood Systems for People, Planet and Prosperity*, frames these as voluntary frameworks at national, regional, and global scales through which donors, development finance institutions, governments, agrifood firms, and private finance can clarify their respective roles, identify financing targets, and map how one actor's investment can unlock or de-risk another's. Their purpose is to reduce the fragmentation and duplication that the GDPRD paper identifies as a major barrier to scaled agrifood investment, and to embed financing coordination within existing national and regional mechanisms rather than creating parallel structures (GDPRD, 2025). For SPS systems specifically, such agreements offer a concrete mechanism for connecting the diagnostic and prioritization work that STDF supports to the larger financing flows that DFIs, climate finance instruments, and commercial banks can mobilize. The Chapter 8 discussion of STDF's convening and coordination role can be read as one practical contribution to building this collaborative architecture for SPS.

Key insight: Climate finance instruments represent a largely underutilized entry point for SPS investment. Disease surveillance, pest monitoring, and food system resilience functions align directly with climate adaptation objectives and may be eligible for GCF, Adaptation Fund, and CGIAR climate programme financing. STDF and its partners should identify applicable climate financing windows and map partner countries where this linkage is most actionable.

3.3 Major Constraints Affecting SPS Financing

Despite the gradual diversification of financing sources described above, significant structural constraints continue to limit SPS financing at scale. These constraints operate at two levels: commercial and investment constraints that affect the viability of specific SPS investments, and enabling environment constraints that shape the broader conditions within which financing decisions are made.

Commercial and Investment Constraints

One of the most significant barriers is the limited commercial profile of many SPS investments. Core SPS functions such as surveillance, inspection, and regulatory enforcement rarely generate direct revenue streams. This limits their suitability for conventional loan financing because repayment pathways are often unclear or absent.

In many developing countries, weak consumer demand for food safety in domestic markets reduces commercial incentives for compliance investment. Domestic markets often do not reward compliant producers through price premiums, particularly where consumer awareness of food safety risks remains limited, and enforcement of food safety standards is weak. Agricultural production structures dominated by informal markets and smallholder systems further limit financing viability. Compliance investments are difficult to aggregate across dispersed producers, and returns are uncertain where market linkages are weak. As a result, producers often receive limited price differentiation for compliant products, weakening the commercial incentive; SMEs face high upfront compliance costs relative to their revenue base; and lenders perceive SPS investments as high risk or weakly bankable, particularly where repayment depends on export market access that may be disrupted by SPS border rejections.

Enabling Environment Constraints

Beyond commercial limitations, the broader enabling environment constrains SPS financing. A recurring issue is chronic underinvestment in public SPS infrastructure. Laboratories, surveillance systems, inspection services, and border control functions remain under-resourced in many countries. As a result, many countries face persistent gaps in accredited laboratory capacity, equipment, and qualified staff; digital certification and traceability systems; surveillance infrastructure for pest, disease, and food safety monitoring; inspection logistics and trained inspection personnel; and border coordination systems and inter-agency information sharing.

Institutional fragmentation further increases costs and reduces efficiency. Overlapping mandates across competent authorities frequently result in duplicated inspections, inconsistent certification requirements, and weak regulatory coordination. This fragmentation also complicates investment planning, as potential investors face multiple regulatory counterparts, unclear approval processes, and uncertain timelines that increase perceived risk. Weak traceability remains a major structural constraint: fragmented value chains make it difficult to monitor compliance consistently across production, aggregation, transport, and processing stages, reducing confidence that investments will generate sustained and verifiable results.

3.4 Conditions That Attract Private Sector Investment in SPS Systems

In this study, the term '*private sector*' refers to non-governmental, profit-oriented actors that invest in or operate parts of the food, agriculture, and trade systems. Private sector investment in SPS systems is primarily driven by credible commercial incentives, manageable risk, and regulatory predictability. The study shows that firms invest where SPS improvements directly support revenue generation, market access, or supply chain security. This is particularly evident in export-oriented sectors where compliance is required to access regulated international markets under frameworks linked to the WTO SPS Agreement.

Private investment is most likely where at least one of the following conditions holds: compliance supports access to premium markets; buyers require certification as a supply condition; off-take agreements, which are pre-arranged contracts where a buyer commits to purchase a specified quantity of a producer's output at agreed terms, giving the producer predictable demand and reducing market risk, reduce market uncertainty; or SPS investment directly protects product quality, reputation, and commercial relationships. Table 2 summarizes five conditions and the mechanisms through which each strengthens SPS investment incentives.

Table 2: Conditions Strengthening Private Sector Incentives for SPS Investment.

Investment Incentive Factor	How It Strengthens SPS Investment
Premium pricing and secure market relationships	Higher prices and stable buyer relationships improve the commercial attractiveness of SPS investments by increasing revenue certainty and strengthening confidence in future returns. Export contracts with premium buyers provide the commercial anchor that makes compliance investment financially rational for producers and lenders. For example, horticulture exporters in Long term and Long term have signed long term contracts with European supermarket chains that pay premium prices for certified produce.
Bundled service models	Combining technical assistance, certification support, and access to finance addresses multiple compliance barriers simultaneously. For example, coordinated models in horticulture exports have bundled certification, technical training, financing, and buyer linkages to transform fragmented smallholder production into competitive export sectors. This integrated approach demonstrates how aligning support across multiple dimensions can unlock market access and strengthen SPS compliance.

Investment Incentive Factor	How It Strengthens SPS Investment
Results-based financing	Incentives linked to verified outcomes, such as higher certification rates, stronger disease control performance, or increased compliant export volumes, encourage investment by rewarding measurable results rather than inputs alone. This approach aligns the interests of producers, compliance service providers, and financiers around shared performance objectives.
Stable regulatory systems	Predictable inspection procedures, credible certification processes, and transparent enforcement reduce uncertainty, lower perceived investment risk, and improve investor confidence. Regulatory instability and administrative unpredictability are among the most frequently cited deterrents to private sector co-investment in SPS-related systems.
Well-coordinated value chains	Structured relationships among exporters, processors, and buyers make SPS investments more commercially viable because benefits are clearer, market linkages are stronger, and returns are more predictable. Where value chain coordination is weak, the benefits of SPS investment are difficult to attribute to individual actors, reducing incentives to invest.

Source: Authors, based on key informant interviews and case study evidence, 2026.

These five conditions are not uniformly present across all country contexts or value chains. Where one or more conditions are absent, private investment in SPS systems either does not materialize or remains limited to minimum compliance expenditure rather than strategic, system-level investment. Establishing at least a threshold level of regulatory predictability, market linkage, and risk mitigation is therefore a prerequisite for effective private co-investment, not a by-product of it.

Key insight: Private sector investment in SPS systems is not primarily constrained by financing availability. It is constrained by the absence of commercial conditions that make SPS compliance financially rational. Regulatory predictability, market linkage, and risk mitigation must be established before private capital can be expected to engage at scale. These enabling conditions are where governments, STDF, and development finance institutions can have the greatest near-term impact.

4 Financing Models and Instruments for SPS Systems

This chapter reviews the principal financing models and instruments identified through the study, drawing on KIIs, desk review, and country case evidence. Section 4.1 examines traditional SPS financing models that continue to underpin most SPS systems in developing countries. Section 4.2 examines a range of innovative models that improve risk sharing, mobilize private capital, and link SPS investment more directly to commercial incentives. Chapter 7 applies a structured framework to assess which instruments are best suited to different categories of SPS investment.

To move from diagnosis to application, each model described below should be read against four practical questions: (i) what type of SPS investment does it suit; (ii) what preconditions must exist for it to work; (iii) what will it not finance well; and (iv) what realistic role can STDF play in supporting its use? Where the evidence in the case studies and key informant interviews allows, these four questions are addressed within the relevant sub-section; where the evidence is thinner, they are flagged for the structured framework in Chapter 7.

A consistent finding across interviews was that financial institutions require stronger awareness of SPS issues and more deliberate product structuring to make financing relationships effective. Banks need to understand how SPS investments function within agricultural and trade value chains, including the compliance risks they address, the time horizons over which returns are realized, and the types of expenditure involved, such as certification costs, traceability systems, laboratory testing, cold chain improvements, and other compliance-related upgrades.

IFC guidance on agricultural lending underscores that financial institutions need a sound understanding of the sector, target clients, and their financing needs. To serve agricultural markets effectively, lenders must adapt their risk management systems, build staff capacity, and tailor product offerings (World Bank, 2025). STDF's experience demonstrates that raising awareness of SPS investment needs and fostering structured dialogue between private firms and public institutions, including through the P-IMA framework, PPGs, and PPP guidance, can help clarify constraints, identify investable priorities, and improve the enabling conditions for financing. Building a broader understanding among financial institutions of how SPS investments support trade, market access, and business revenue, complemented by the design of tailored financial products and risk-sharing mechanisms, can reduce information asymmetries, strengthen credit appraisal, and ease financing relationships. Increased awareness will support financial institutions in the review of investment cases.

4.1 Traditional Financing Models for SPS Systems

Traditional SPS financing remains largely anchored in public expenditure, donor support, and cost-recovery arrangements. These mechanisms continue to finance core regulatory functions but frequently prove insufficient to meet long-term investment needs, particularly in developing and emerging markets. More developed economies tend to have diversified financing structures with stronger private sector participation and more predictable budgetary allocations.

Government Budget Allocations

Direct public financing allocated through national budget processes and appropriations remains the most common source of support for SPS systems. National budgets typically cover core public surveillance and monitoring of pests, diseases, and food safety risks; inspection and border control; laboratory services for diagnostics and certification; and regulatory enforcement through statutory agencies. These allocations are typically channelled through ministries responsible for agriculture, livestock, health, trade, and food safety, and support specialized agencies mandated to implement national SPS obligations.

Budget allocations are heavily concentrated on recurrent expenditure, including salaries and routine operations, which limits investment in modernization, infrastructure expansion, and digital systems. The Kenya Plant Health Inspectorate Service (KEPHIS) illustrates how government resources support pest surveillance, laboratory diagnostics, and phytosanitary certification for export horticulture, including flowers, avocados, and vegetables entering the European Union (EU). While public financing remains indispensable, it rarely provides sufficient resources for full system strengthening, leaving gaps in laboratory accreditation, digital traceability, and cold chain infrastructure.

Donor Grants and Technical Assistance Programmes

Grant financing and technical assistance are important sources of SPS capacity development support. These instruments finance laboratory upgrading and equipment procurement, regulatory reform and institutional strengthening, inspector training and professional development, surveillance system enhancement, and improved coordination among SPS institutions.

STDF has supported SPS capacity development through targeted project support that helps countries address specific SPS constraints while generating lessons for wider application. Respondents highlighted STDF support in Uganda that strengthened pesticide residue monitoring for horticultural exports through laboratory improvements, inspector training, and testing capacity linked to international residue standards. In the case of capsicum exports, interceptions dropped by over 90%, from 44 in 2018 to 3 in 2022. The number of registered exporters increased from 67 in 2019 to 250 in 2022. These results supported an additional EUR 8 million in EU investment for further capacity building in the horticulture sector. Where follow-on domestic financing is weak, however, gains risk erosion once external support ends. Respondents proposed cost-sharing mechanisms, matching grants, and blended finance approaches that combine donor support with stronger domestic resource mobilization and private sector engagement as practical responses to this challenge.

Cost-Recovery and User Fees

Many SPS systems rely on cost-recovery mechanisms such as user fees for certification, inspection, and laboratory testing. In developed countries, cost-recovery systems are typically well-structured with transparent fee schedules and reinvestment of revenues into system modernization. In developing markets, fee collection is often fragmented, underpriced, or inconsistently applied, limiting its effectiveness as a sustainable financing source.

The Tanzania Plant Health and Pesticides Authority (TPHPA) case is instructive. The combined fee for inspection and certification rose to approximately US$125 per container in January 2025, an increase of more than 460% from the previous rate. This sharp increase, without corresponding service quality commitments, raised concerns among smallholders and SMEs about the affordability of formal compliance. Effective cost-recovery design requires three conditions: fees that are commercially realistic and graduated for smallholder users; published and enforced service quality standards; and revenue benefit-sharing arrangements that ensure fees are reinvested in the services from which they are collected rather than absorbed into general government revenue.

Multilateral Development Banks

Multilateral development banks (MDBs) play an important role in SPS financing (grants and loans) by embedding SPS investments within broader agricultural transformation, trade facilitation, and food systems resilience programmes. Unlike standalone SPS financing, MDB interventions typically integrate public sector capacity building, including laboratory infrastructure, inspection systems, and regulatory strengthening, with private sector support mechanisms that enhance compliance and market access.

The World Bank has been particularly active, through programmes such as the Food Systems Resilience Program, which dedicated up to US$2.3 billion to support producers in meeting domestic and international standards (World Bank, 2022). The African Development Bank (AfDB) integrates SPS-related interventions within the Technologies for African Agricultural Transformation (TAAT) Program (AfDB, 2020). The Asian Development Bank (ADB) embeds SPS measures within trade corridor development through programmes such as the Greater Mekong Subregion Cross-Border Transport Facilitation Agreement Program (ADB, 2019). The Inter-American Development Bank (IDB) has financed SPS system strengthening through export-oriented programmes such as the Agricultural Health and Food Safety Program in Peru (IDB, 2017).

World Bank concessional financing held by ministries of finance represents an underutilized channel for SPS investment. World Bank sector budget support operations and development policy loans regularly include conditions related to agricultural regulatory quality, food safety systems, and trade facilitation. SPS authorities that engage proactively with ministry of finance teams are better positioned to advocate for SPS components within these instruments. STDF could support this engagement by providing economic framing tools and investment brief templates for use in dialogue with finance ministries and World Bank country teams.

Commodity and Industry Levies

Sector-based levies provide a collective financing mechanism where industries fund shared SPS services. These levies are typically collected through commodity boards, producer associations, or export systems and used to finance surveillance, certification, laboratory services, and emergency response. In Asia, India's Spices Board collects export development fees reinvested in laboratories, certification, and traceability systems to meet EU and US standards (FAO, 2019). Thailand's fruit export associations apply levies to support pest surveillance and GAP certification for Japanese and Chinese markets (World Bank, 2020). Vietnam's coffee and seafood sectors rely on export fees to fund residue testing and disease monitoring (UNCTAD, 2021). In the Pacific, Papua New Guinea's Coffee Industry Corporation uses export fees to finance quality assurance and certification programmes (FAO, 2018). In Latin America, Colombia's National Coffee Federation directs export levies towards disease surveillance, quality control, and certification (ICO, 2020). Chile's fruit export associations fund pest monitoring and certification programmes for grapes and apples, pooling resources across producers to overcome individual resource constraints (FAO, 2019). The Namibia check-off model is discussed in detail in section 4.2 below.

4.2 Innovative Financing Models

Traditional financing (government and levies-backed) remains necessary but insufficient. The study identifies a growing range of innovative financing models that improve risk sharing, mobilize private capital, and link SPS investment more directly to commercial incentives. Each model is described below with reference to documented country examples.

Compliance-Oriented Financing

Compliance-oriented financing supports the investments required for producers, processors, and exporters to meet SPS requirements linked to food safety, plant health, animal health, and traceability. These investments reduce the risk of product rejection and protect access to premium markets. They commonly include Hazard Analysis and Critical Control Points (HACCP) systems, pesticide residue management, traceability systems, biosecurity measures, and antimicrobial resistance testing.

In Chile, from the 1980s to the 1990s, the Ministry of Agriculture established pesticide residue monitoring programmes. Once the regulatory baseline was set, the fruit export sector, producer associations, and exporters collectively began to finance pesticide residue monitoring and certification systems through levies and private capital, ensuring grapes and apples consistently meet EU and US standards. The commercial logic is direct: non-compliance results in immediate rejection at ports of entry, contract losses, and reputational damage. Financing compliance therefore functions as a trade competitiveness measure rather than a regulatory obligation (World Bank, 2020). Thailand has similarly invested in HACCP systems and traceability mechanisms for its seafood industry through a combination of private investment and government-backed programmes, supporting its position as one of the world's leading seafood exporters (UNCTAD, 2021).

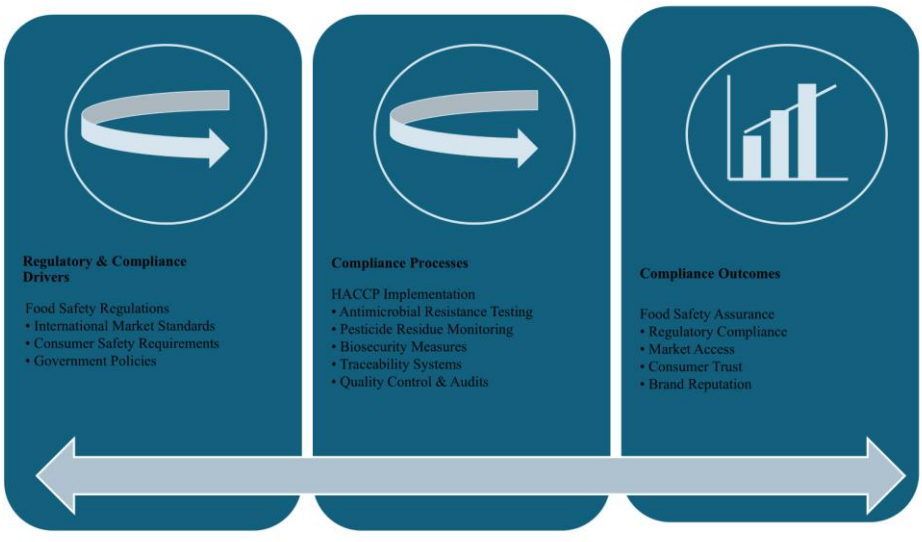


Figure 2: Conceptual Framework: Compliance-Motivated Model.

Supplier Contract Financing

Supplier contract financing uses commercial purchase agreements to reduce risk and facilitate compliance investment. Lead firms provide market certainty through purchase contracts that specify production and quality requirements. In Vietnam, exporters use contractual arrangements with farmers and cooperatives to enforce residue limits, traceability requirements, GAP, and food safety protocols. The mechanism also facilitates input provision, technical assistance, and production credit. In other country contexts, this includes Local Purchase Order (LPO) financing that provides pre-delivery working capital against confirmed buyer orders or contracts. For example, in Brazil, large agribusiness firms use forward purchase contracts with soybean farmers, offering advance payments and technical assistance while securing supply for international buyers. Similar arrangements operate in other major exporting markets.

The contract itself becomes a financing anchor: by guaranteeing purchase of produce meeting agreed standards, contracts reduce market uncertainty and enable smallholders to participate in high-value export markets such as Japan, South Korea, and the EU. Export companies or partner financial institutions may provide farmers with input packages including certified seeds, fertilizers, compliant pesticides, and technical advisory services. Repayment is recovered through product delivery, with input costs and credit obligations deducted from sales proceeds at the point of payment, creating a self-liquidating financing structure anchored in the value chain.

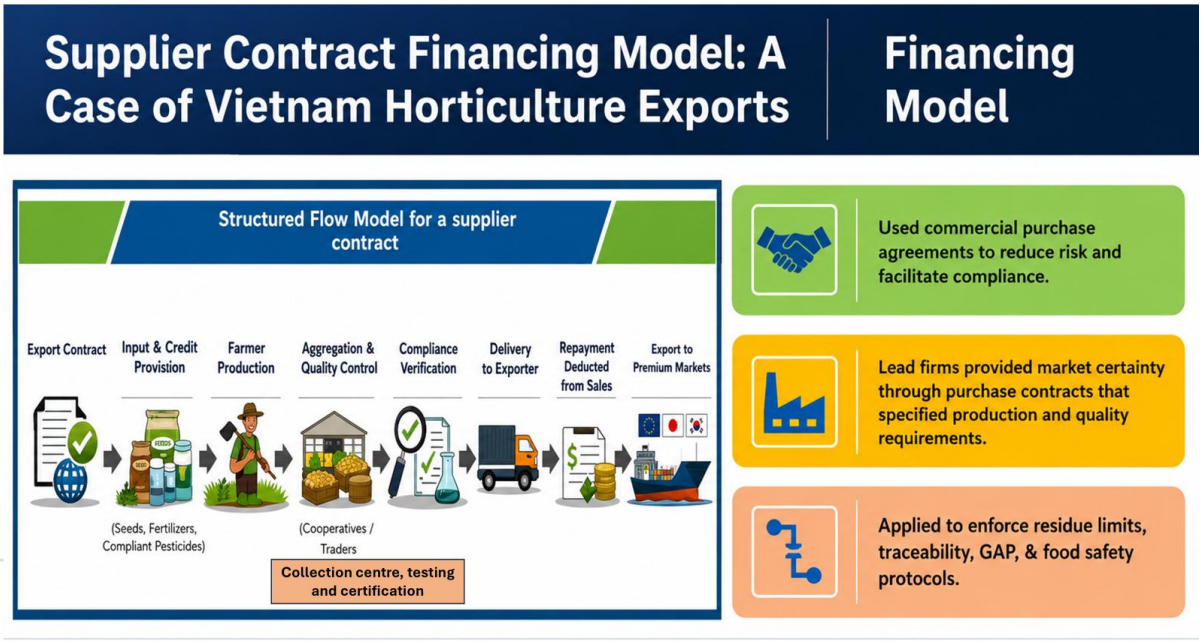


Figure 3: Supplier Contract Financing Model, Vietnam Horticulture Export Sector.

Insurance and Risk-Sharing Models

Insurance and risk-sharing instruments reduce the downside risks that discourage investment in compliance-related upgrades. They do not replace core public SPS functions but stabilize the environment in which producers, processors, and exporters operate. Evidence from WOAH's work on epidemic livestock disease insurance shows that such mechanisms succeed only where strong public disease-prevention systems, veterinary services, compensation arrangements, livestock identification, and access to reinsurance are already in place. In these circumstances, insurance acts as a protective layer built on top of credible SPS institutions rather than as a substitute for them (WOAH, 2007; FAO 2023; FAO, 2024). Illustrative examples include the Kenya Livestock Insurance Programme (described below) and, in India, crop and livestock insurance programmes that have been layered on top of public SPS and veterinary institutions. In India, farmers benefit from risk-sharing instruments that stabilize income when disease outbreaks or compliance costs threaten production, but the insurance is effective only because India has established veterinary networks, disease surveillance, and access to reinsurance markets.

Kenya's Livestock Insurance Programme (KLIP), financed by the World Bank, illustrates a public-private index insurance scheme in which the Government of Kenya pays premiums to domestic insurers to protect vulnerable pastoralist households against drought-related livestock losses. Payouts are triggered by satellite-based forage scarcity indicators and are designed to arrive before catastrophic herd losses occur. The model helps pastoral households smooth their consumption and avoid distress sales of animals, thereby protecting both their livelihoods and the broader livestock economy during drought shocks. The programme has also used mobile money channels and built credit ratings to speed disbursement. By protecting productive assets and stabilizing household cash flows following shocks, KLIP strengthens pastoralists' capacity to continue investing in veterinary care, biosecurity, and animal health management, indirectly reinforcing SPS compliance capacity (World Bank, n.d.).

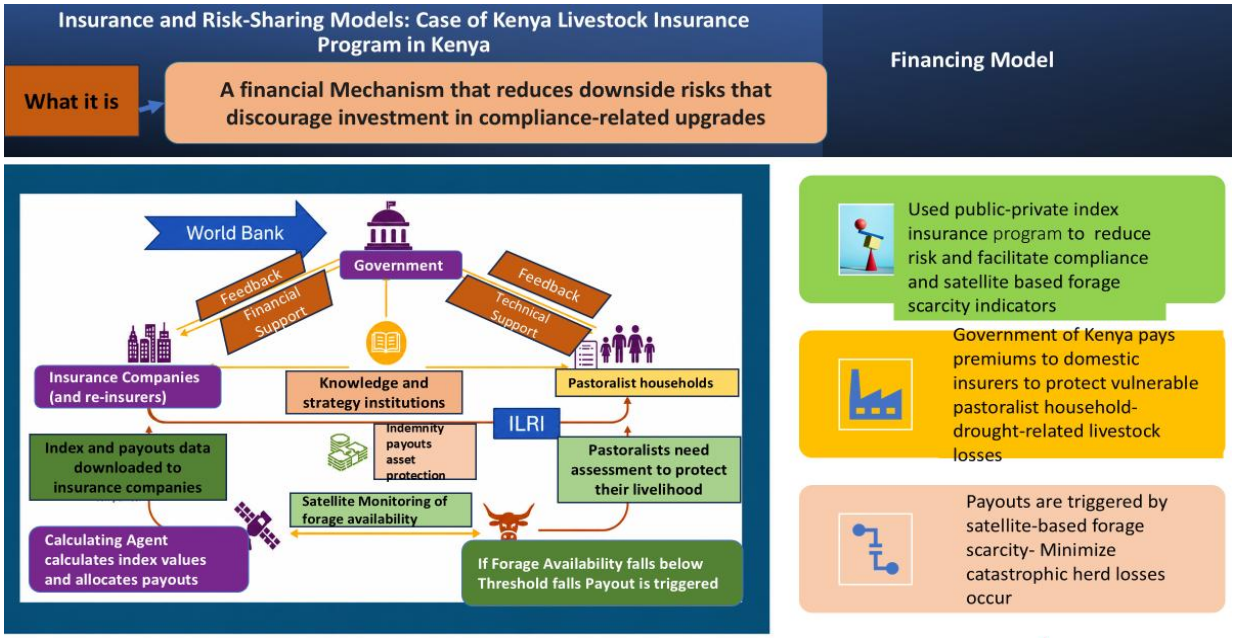


Figure 4: Schematic of KLIP Stakeholders and Working Mechanisms. Source: Courtesy of D.C. Khalai, with authors' modifications.

Blended Finance

Blended finance combines concessional resources from governments, donors, or development finance institutions with commercial capital to mobilize investment in activities that generate strong development benefits but are not yet fully viable on purely market terms. IFC and the wider DFI blended concessional finance framework emphasize that concessional support should be used strategically to attract private investment, address market failures, and avoid displacing commercial finance (IFC, 2020). This approach is particularly relevant for SPS because many SPS investments, including laboratory systems, traceability platforms, certification systems, sanitary controls, and cold chain infrastructure, produce both public-good benefits and commercial returns.

Morocco's Plan Maroc Vert and subsequent programmes illustrate blended finance applied to SPS-related agri-food investment at scale. The World Bank's Strengthening Agri-Food Value Chains Program-for-Results provided financial incentives for private investment in modern equipment, technologies, and aggregation projects, with the broader programme envelope expecting a government contribution of approximately US$400 million and a private sector contribution of approximately US$800 million (World Bank, 2017). The subsequent Green Generation Program-for-Results, co-financed by the World Bank and Agence Française de Développement, applied Mobilising Finance for Development principles to attract private investment (AFD, 2020). SPS-related upgrading included digitization of phytosanitary certificate processing, strengthening of national food safety laboratory functions, improved export traceability, and development of wholesale marketing platforms with improved logistics and quality management (World Bank, 2020).

Figure 5: Blended Finance for SPS Investment in Morocco. Source: Authors, based on World Bank and AFD programme documents, 2026.

Check-Off Systems

Check-off systems are pooled financing mechanisms in which value chain actors contribute statutory or voluntary levies to fund SPS services and regulatory functions. They are particularly effective in export-oriented sectors where maintaining shared health and compliance standards is essential for market access. Funds are typically earmarked for veterinary services, surveillance, compliance systems, and emergency response (STDF, 2020; WTO, 2024).

Namibia's Livestock and Livestock Products Act, 1981, enables the authorities to impose general and special levies on livestock and livestock products. This creates a hybrid governance structure in which industry contributes resources, the Namibia Livestock and Livestock Products Board manages the pooled funds, and the Directorate of Veterinary Services retains sovereign SPS authority and regulatory oversight (Meat Board of Namibia, 2023). Levy rates apply at 0.6% on domestic sales, 0.8% on imports, 1.0% on exports, and 0.7% on slaughtered carcasses. Levy income is allocated with 80% to the General Account, 15% to the Farm Assured Namibian Meat Fund for quality assurance, and 5% to the Emergency Veterinary Service Account (Meat Board of Namibia, 2023; WTO, 2024).

The value of this architecture was demonstrated during the 2015 foot-and-mouth disease outbreak. WOAH reports that Cabinet approved US$9.36 million in response funding while the Meat Board rapidly mobilized US$364,000, supporting equipment procurement, awareness campaigns, veterinary deployment, cordon fence maintenance, and recruitment of 826 temporary staff for vaccination and disinfection operations. The outbreak was swiftly contained, Namibia's disease-free zone was preserved, and access to livestock and meat export markets was maintained (WOAH, 2016).

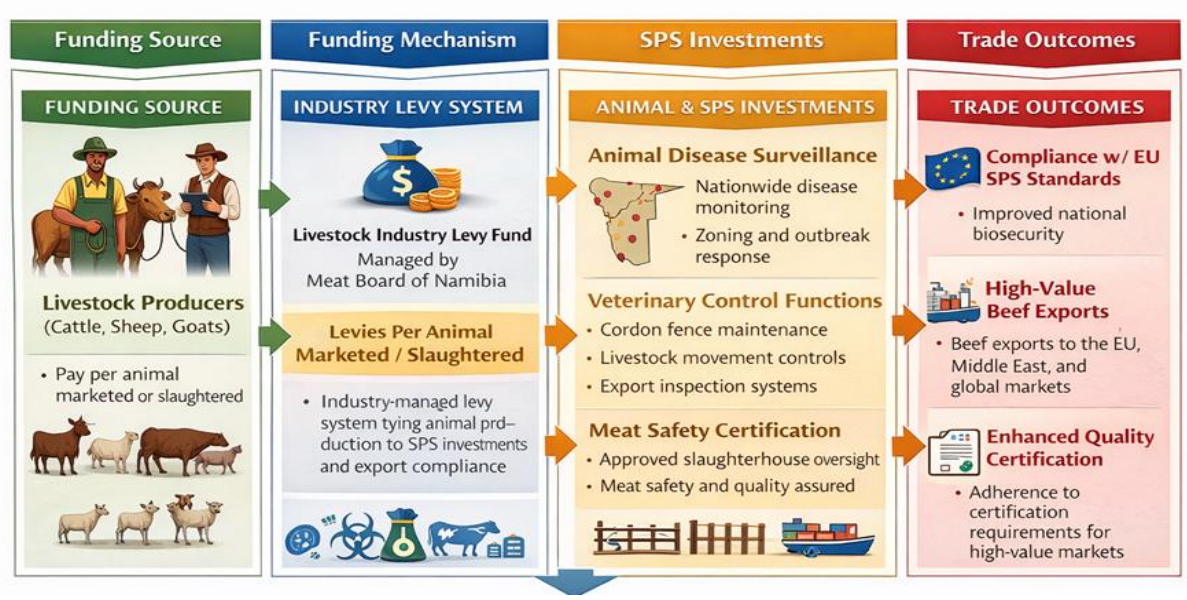


Figure 6: Check-off System: Livestock Levy for SPS in Namibia. Source: Authors, based on Meat Board of Namibia and WTO documentation, 2026.

Pay-for-Service Inspection

Pay-for-service inspection is an SPS financing mechanism in which firms pay directly for specific regulatory services linked to trade or market access, including consignment inspection, laboratory analysis, certification, licensing, and permit processing. The model works best for services that are transactional, recurrent, and attributable to a specific user or shipment. Under the WTO SPS Agreement, such fees must be equitable and no higher than the actual cost of the service (WTO, 2010).

User fees help competent authorities recover part of the operational cost of front-line SPS services and create incentives to improve timeliness, predictability, and service quality. However, this mechanism cannot finance the SPS system as a whole. Core public functions such as surveillance, pest and disease monitoring, emergency response, regulatory oversight, and laboratory maintenance remain public goods that require public budget support. Analysis commissioned by the STDF notes that while the SPS Agreement permits charging for services, many costly SPS functions cannot realistically be financed through user charges alone, particularly in developing countries where laboratories and inspectorates are expensive to maintain (van der Meer, 2019).

KEPHIS illustrates a well-structured pay-for-service model. Fresh produce exporters are charged US$0.0038 per kilogram (minimum US$0.76), plus US$3.80 per phytosanitary certificate, with applications processed through the Integrated Export Import Certification System and paid via the government's eCitizen digital payment portal (KEPHIS, 2024–2026; InfoTrade Kenya, 2025). The model supports financial sustainability and improves service delivery, but its effectiveness depends on transparent fee pricing, reliable service quality standards, and fee structures that remain accessible to smallholder and SME exporters.

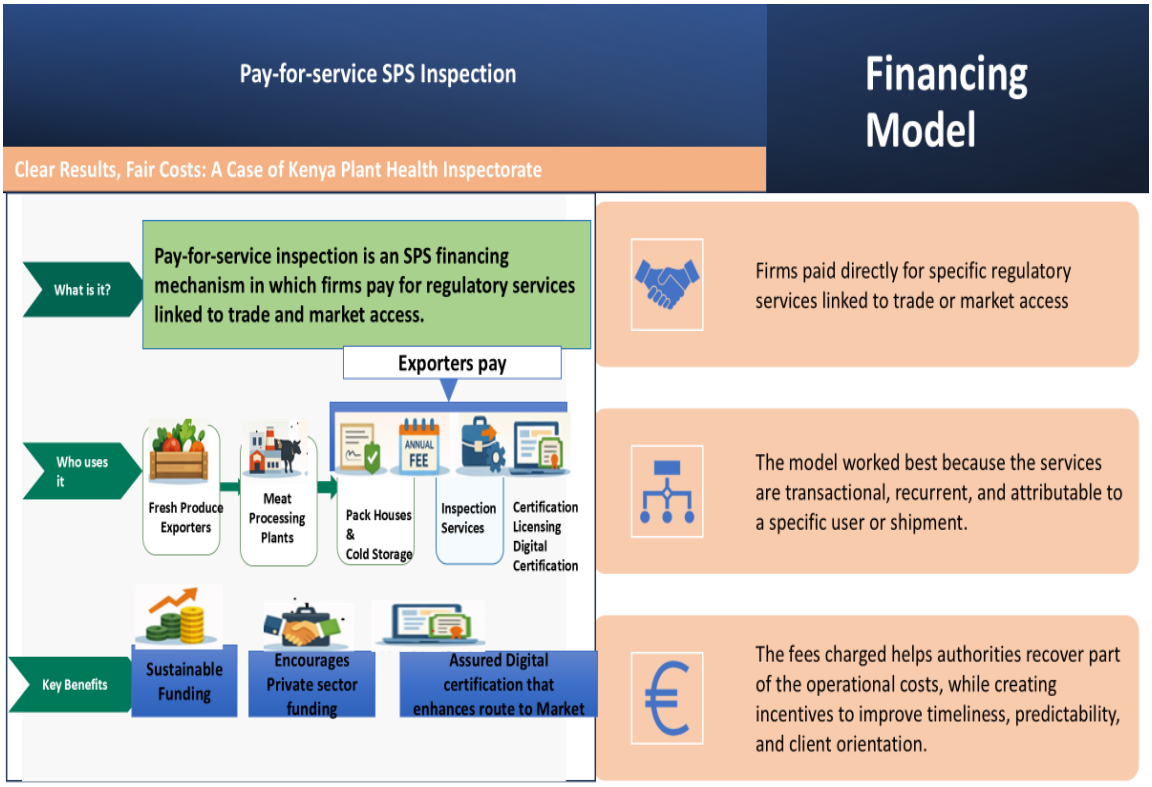


Figure 7: Pay-for-Service SPS Inspection, Kenya Example. Source: Authors, based on KEPHIS and InfoTrade Kenya documentation, 2026.

Results-Based Financing

Results-based financing (RBF) makes payments only after agreed results have been achieved and independently verified, rather than disbursing funds upfront for activities or inputs. Funders define a measurable result, establish a verification method, and release funds only when performance meets the agreed threshold. This model strengthens accountability, improves efficiency, and shifts attention from spending to outcomes (World Bank, 2019). In SPS systems, this approach is particularly relevant because many outcomes can be objectively tested or certified, including compliant food volumes, contamination thresholds, vaccine registration, disease control milestones, and verifiable phytosanitary improvements.

The AgResults Nigeria Aflasafe Challenge Project demonstrates RBF in the SPS domain. Aggregators received up to US$18.75 per metric ton of Aflasafe-treated maize that passed verification, with full payment contingent on testing showing at least 70% reduction in aflatoxin contamination. AgResults reports that the project reached 75,788 smallholder farmers, engaged 41 competitors, and supported production of 315,333 metric tons of Aflasafe-treated maize. The financial incentive was linked directly to a verified food safety outcome rather than to the cost of inputs alone.

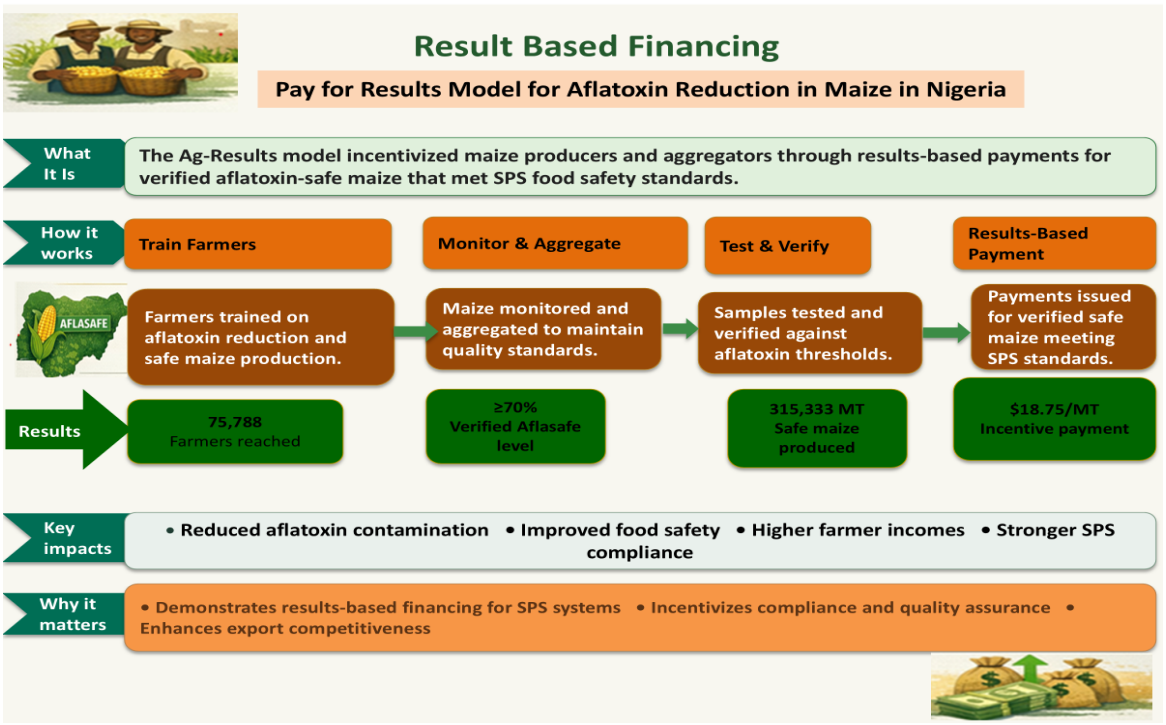


Figure 8: RBF AgResults Aflatoxin Control Pilot in Nigeria. Source: AgResults, project evaluation documentation.

Public-Private Export Platform Models

Public-private export platforms are integrated systems in which the state and private firms jointly build the infrastructure, institutions, and services required for export-oriented production. SPS compliance is embedded within the wider export platform through coordinated investment in production sites, inspection and certification systems, logistics, cold chain, and market-linkage functions, rather than treated as a stand-alone regulatory obligation.

Ethiopia's horticulture and floriculture sector illustrates this approach. Investors received a public support package including a five-year tax holiday, duty-free machinery imports, Development Bank financing for up to 70% of investment costs, and access to leased government land. Public resources lowered the entry costs of export investment, while private capital financed commercially viable productive assets. The Ethiopian Horticulture Producer Exporters Association (EHPEA) established a sector Code of Practice as a voluntary system of professional development, monitoring, and self-regulation. Ethiopia also operationalized an electronic phytosanitary certification system that allows exporters to apply for, receive, and transmit phytosanitary certificates online, reducing clearance times and administrative costs. Ethiopian Airlines invested US$8–15 million in a dedicated perishable cargo cold-storage facility at Addis Ababa, built to international standards with 3,700 square metres of temperature-controlled handling capacity (Cramer, Oya, and Sender, 2018; TradeMark Africa, 2025).

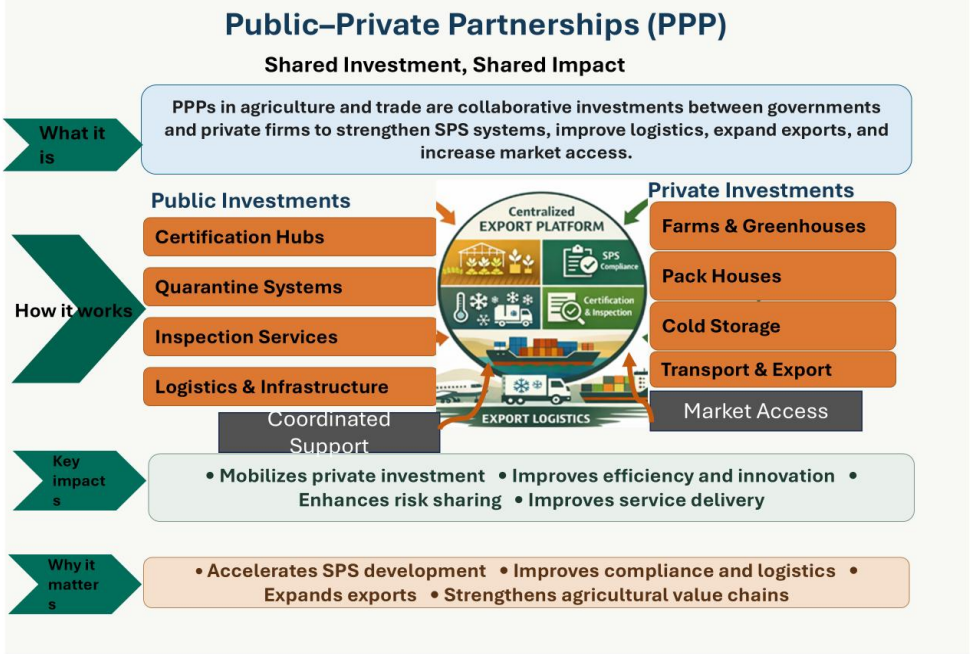


Figure 9: Public-Private Export Platform, Ethiopia Horticulture and Floriculture Sector. Source: Authors, based on Cramer et al. (2018), Macchiavello and Morjaria (2013), and TradeMark Africa (2025).

Supply Chain Financing

Supply chain finance leverages commercial relationships and transaction flows within a value chain to provide working capital to suppliers, distributors, and other market actors at lower risk and lower cost than conventional unsecured lending. In Kenya's tea sector, smallholder farmers supply green leaf to factories managed under the Kenya Tea Development Agency (KTDA) system. This supply relationship creates a predictable commercial linkage between farmers and processors, facilitating access to credit, input financing, and other forms of working capital. Input costs and credit obligations are deducted from the farmer's proceeds at the point of payment, creating a self-liquidating financing structure anchored in the value chain itself.

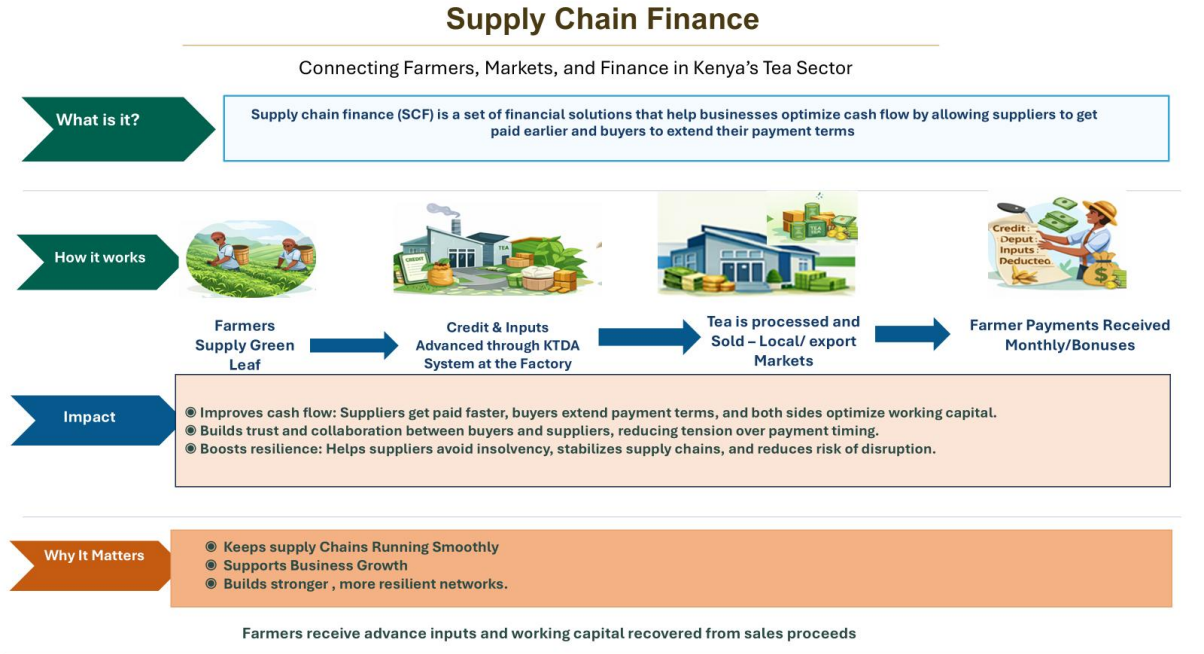


Figure 10: Supply Chain Financing, Kenya Tea Sector. Source: Authors, based on KTDA documentation.

Agricultural Guarantee Fund Schemes

A guarantee fund partially protects lenders against borrower default, encouraging financial institutions to extend credit to priority sectors or underserved borrowers. Under these schemes, development organizations and DFIs absorb a portion of potential losses through first-loss guarantee capital, reducing lenders' risk exposure and making it more viable to extend credit to agricultural enterprises that would otherwise fall outside standard risk parameters.

The Agricultural Guarantee Fund Scheme (AGFS), established through a partnership between Alliance for a Green Revolution in Africa (AGRA), Standard Bank Group, the OPEC Fund for International Development, and other development partners, was launched to expand commercial bank lending to smallholder farmers and agribusiness SMEs in Ghana, Mozambique, Tanzania, and Uganda. Development partners provided first-loss loan guarantees and risk-sharing capital, allowing Standard Bank to extend lending to agricultural enterprises that would otherwise be considered too risky. AGRA contributed approximately 20% of the guaranteed capital in the initial years, declining gradually as the portfolio matured. The facility aimed to mobilize approximately US$25 million in agricultural lending. Pe Yero Millers, a rice milling enterprise in northern Uganda, accessed financing to expand grain sourcing and milling operations, which strengthened product quality, improved food safety in the value chain, and supported SPS compliance and export readiness.

While guarantee schemes are effective instruments for mobilizing private lending, they also present risks, including financial exposure from first-loss obligations, moral hazard and adverse selection in lending practices, limited additionality where guarantees do not generate credit beyond what would have occurred anyway, and portfolio concentration risk from systemic shocks. To maximize returns in SPS contexts, parties must institute strong safeguards, risk-based pricing, and explicit integration with SPS and value chain objectives.

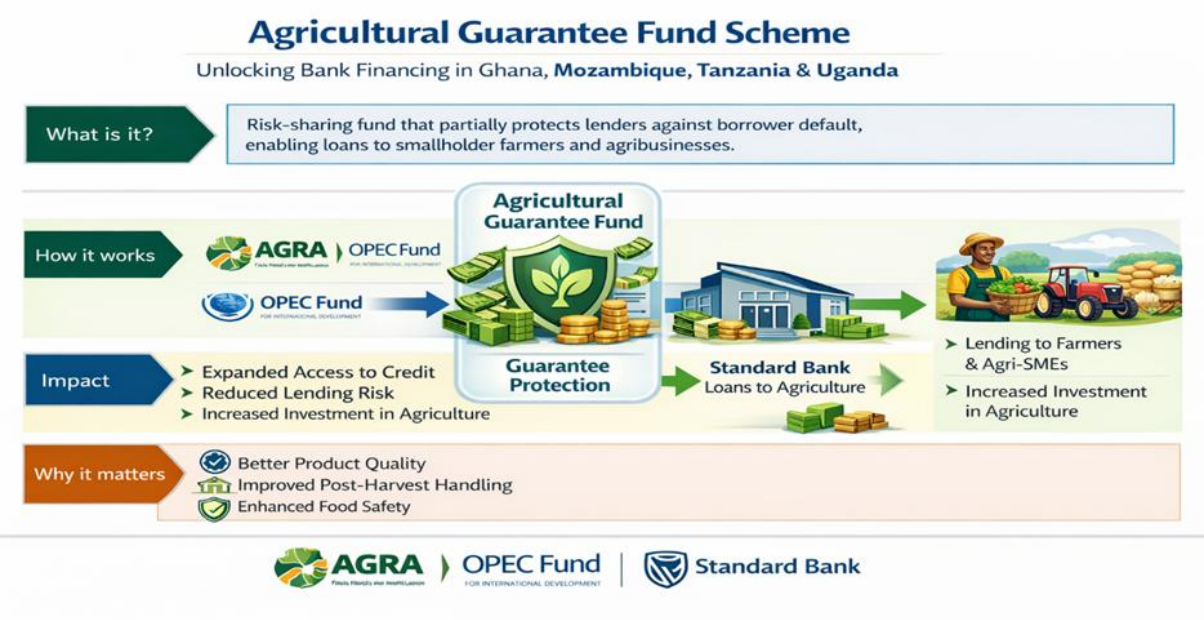


Figure 11: Guarantee and Risk-Sharing Fund Model. Source: Authors, based on AGRA and Standard Bank documentation, 2026.

Key insight: No single financing model is universally applicable to SPS investment. The appropriate instrument depends on the nature of the SPS function, the commercial characteristics of the investment, and the institutional context. Chapter 7 provides a structured framework for matching financing instruments to investment categories.

5 Case Studies: Financing Approaches for SPS Systems

The three case studies in this chapter illustrate how different financing approaches have been applied to SPS-related investment challenges across different country contexts, value chain structures, and institutional settings. While each case reflects a distinct financing structure, all three demonstrate that SPS investment becomes more viable when technical compliance requirements are linked to broader commercial incentives, market organization, and coordinated institutional support. Full case study documents are provided as document links below.

A common lesson across all three cases is that financing succeeds where SPS investment is positioned not as a stand-alone regulatory obligation, but as a necessary component of trade competitiveness, value chain development, and market access. The financing instruments differ; the logic is consistent.

5.1 Case Study 1: Bundled Market-Access Models (Colombia)

Over approximately fifteen years, Colombia transformed Hass avocado production from a fragmented domestic activity into one of its fastest-growing agricultural export sectors. By 2024, approximately 3,615 registered production units covering 33,500 hectares were certified for export. Exports to Europe reached 101,180 tons in 2024, while exports to the United States rose from 12,926 tons in 2023 to 30,207 tons in 2024, reaching 40,807 tons by August 2025 alone. Fresh avocado exports require compliance with strict phytosanitary measures regarding pest surveillance, orchard registration, traceability systems, export certification, and post-harvest phytosanitary controls, led by the Instituto Colombiano Agropecuario (ICA).

The core financing challenge was that SPS compliance required significant upfront investment with delayed and uncertain returns: Hass avocado orchards require several years before reaching full productivity, during which producers must finance orchard establishment, irrigation, pest control, certification preparation, and traceability infrastructure before export revenues materialize. Colombia addressed this through a bundled market-access model in which certification, technical support, financing, and commercial buyer linkage were developed together as a coordinated package rather than as isolated interventions. ICA financed regulatory oversight and export certification infrastructure; producers financed orchard development and compliance upgrades; exporters financed packing infrastructure and cold chain systems; and CorpoHass coordinated technical support, market intelligence, and sector alignment. Risk was distributed across institutions rather than concentrated at farm level, making the overall system credible to buyers and financiers.

Institutional coordination has been central to sector performance. ICA functions as the regulatory anchor for farm registration, phytosanitary inspection, pest surveillance, and export certification. CorpoHass serves as the principal sector coordination platform. Digital traceability through geo-referenced farm registration and monitoring has strengthened phytosanitary integrity and commercial confidence among buyers. Export-ready avocados command a price premium estimated at approximately twice the domestic price, reinforcing the commercial incentive for producers to achieve and maintain certification compliance.

The most transferable lesson from the Colombia case is the bundling of certification, technical support, financing, and buyer linkage into a single progression rather than treating each component separately. Minimum enabling conditions for replication include a credible phytosanitary authority, a sector coordination platform, visible export demand, and capacity to distribute risk across institutions. Three factors explain why financing became viable: SPS compliance generated clear export price incentives; certification investments were linked directly to growing and diversified market demand; and regulatory credibility anchored by ICA's internationally recognized certification reduced export rejection risk, improving lender confidence. The full Colombia Case Study is available in the annexes.

Key insight: The Colombia case demonstrates that SPS compliance becomes financeable when it is commercially anchored in a partnership model. Certification must be linked directly to investable export pathways, not treated as a stand-alone regulatory burden.

5.2 Case Study 2: Blended Financing for Vegetable Exports (Bangladesh)

Bangladesh is a significant producer of fresh vegetables, including gourds and other horticultural products with export potential in Middle Eastern, European, and regional markets. Bangladesh's vegetable exports face significant SPS compliance challenges principally related to pesticide residue violations, biological contamination, and the absence of systematic traceability systems. The Department of Agricultural Extension (DAE) under the Ministry of Agriculture provides regulatory oversight, but government capacity for systematic SPS inspection and certification remains constrained. SPS spending has been primarily donor-funded and project-based, with limited continuity between project cycles and weak integration between technical compliance activities and commercial finance.

The core financing challenge reflects a pattern common to many lower-income country SPS contexts: compliance investments generate returns only when they are linked to functioning regulatory systems, credible export certification, and reliable market access. For commercial banks, the sector had not been structured as a bankable investment opportunity: SPS investments had been framed as regulatory compliance requirements rather than as commercially recoverable investments. The SAFE-BD project (Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh), approved by STDF in 2025 with a grant of US$1 million, supplemented by AUD 75,000 leveraged from Australia's Department of Foreign Affairs and Trade, and implemented by Swisscontact over three years (April 2025 to March 2028), directly addresses this gap. The most consequential aspect of the financing model is the mobilization of US$300,000 in complementary co-financing from IFIC (International Finance Investment and Commerce) Bank PLC through its business development fund rather than its corporate social responsibility (CSR) window, reflecting a fundamental repositioning from philanthropic support towards commercial investment.

Under the blended model, the STDF grant funds technical capacity building for producers (GAP adoption and residue management), for exporters and traders (SPS compliance upgrading), and for government (DAE inspection and oversight capacity). IFIC Bank's co-financing supports SME and agri-processor upgrading, business development services, financial literacy, and access-to-finance activities. The Bangladesh Fruits Vegetables and Allied Products Exporters Association (BFVAPEA) plays a coordination and aggregation role. SAFE-BD is a recently approved project, and quantitative export outcome data are not yet available at time of writing; the case study will be updated as project monitoring and evaluation data become available.

Four factors explain why commercial co-financing became viable in the SAFE-BD model: SPS investments were reframed as trade competitiveness tools rather than regulatory obligations; the project design created a direct commercial opportunity for IFIC Bank by giving it access to a new agricultural lending client base; the separation of grant-funded public-good activities from commercially financed enterprise upgrading meant that the bank was financing activities with identifiable commercial beneficiaries; and IFIC Bank's strong rural footprint gave it a clear strategic incentive to participate.

IFIC Bank serves as both a co-financier and a participant in the project's market systems approach. Its involvement creates a direct financial services relationship with producers, exporters, and SMEs in the vegetable export cluster, with the expectation that those relationships will continue beyond the project period if they prove commercially viable. The bank's engagement reflects the project's market systems development approach: rather than substituting for private sector participation, the project is designed to demonstrate and reduce the risk of the commercial opportunity so that private actors sustain engagement independently. The key replication step is repositioning engagement with financial institutions from corporate social responsibility to business development, which requires structured project design and a credible commercial case. The full Bangladesh Case Study is available in the annexes.

Key insight: The Bangladesh case demonstrates that STDF grants can mobilize private commercial co-financing when the project design includes explicit commercial engagement with financial institutions and positions SPS compliance as a business development opportunity. The key design requirement is separating the grant-funded technical assistance component from the commercially financed enterprise upgrading component.

5.3 Case Study 3: Public Investment and Multi-Donor Coordination (Ethiopia)

Ethiopia has the largest livestock population in Africa. According to the most recent published CSA livestock sample survey (2021), the country's livestock population is estimated at 70.3 million cattle, 42.9 million sheep, 52.5 million goats, and 8.1 million camels. Yet livestock and livestock product exports have remained well below the sector's potential. Total meat exports averaged around US$100 million per year over the project implementation period (July 2018 to October 2023). The principal constraint has been non-compliance with the SPS requirements of importing countries, particularly in the Middle East and North Africa (MENA), where repeated trade bans triggered by transboundary animal disease outbreaks, including foot-and-mouth disease and Rift Valley fever, have disrupted export revenue and undermined commercial confidence. At production level, disease surveillance covers only 35 to 40% of districts. At abattoir and institutional level, quality management systems, cold chain integrity, and laboratory diagnostic capacity have historically been insufficient for international credibility. Ethiopia recognized these constraints in its national policy framework: the Livestock Master Plan (LMP), developed by the International Livestock Research Institute (ILRI) with the Ministry of Agriculture in 2015 and integrated into Growth and Transformation Plan II (GTP II), set explicit export targets and identified SPS compliance as a critical enabling condition for sector growth. The LMP informed a World Bank programme of US$176 million for the livestock sector, the largest such investment programme in the region.

The central financing challenge in Ethiopia's livestock export sector is the public-good nature of most SPS investment. Disease surveillance, laboratory capacity, regulatory frameworks, and official certification systems generate benefits that accrue broadly across the sector and cannot be recovered by any individual private actor; a single compliant abattoir operator cannot independently establish the regulatory credibility that MENA importers require. STDF project PG/477, approved in March 2017 and implemented by FAO from July 2018 to October 2023 with a total grant disbursement of US$569,827, addressed this through a layered public investment model. The STDF grant funded technical capacity building, laboratory systems, and coordination activities that generate sector-wide public goods. The Government of Ethiopia contributed in-kind personnel and budgetary co-financing, particularly in regulatory and institutional activities where national ownership is critical for sustainability. Wider co-investment by the World Bank, the EU, and USAID in complementary livestock sector programmes provided the broader enabling environment, including infrastructure, disease control, and institutional reform, within which STDF-supported activities operated. The project was designed to complement the national LMP investment framework rather than to function as a standalone donor intervention, and that alignment subsequently contributed to the Government of Ethiopia securing and operationalizing the US$176 million World Bank Livestock and Fisheries Sector Development Project (2019), anchored in the LMP.

Institutional coordination was both the central challenge and the primary instrument of the financing model. A Project Steering Committee chaired by the State Minister for Veterinary Services provided strategic oversight, while the National Sanitary and Phytosanitary Standard Committee was revitalized with broadened membership and biannual federal-regional coordination forums established. The project achieved substantial capacity-building results: 15 standard operating procedures revised and validated across the meat export value chain; a national residue monitoring plan developed and made operational by the Veterinary Drug and Feed Administration and Control Authority (VDFACA), with the Kality laboratory now able to detect banned substances in muscle and milk; a Laboratory Information Management System installed in VDFACA and three regional veterinary laboratories; and quality management systems introduced at federal and regional levels. The revised animal health legislation was finalized under the project, submitted to Parliament, and ratified as the Animal Health and Welfare Proclamation No. 1376/2025 in April 2025, and published in the Federal Negarit Gazette on August 2025, providing a modern legal framework for disease control, public health, animal welfare, and trade regulation. The project's market-linkage objectives, by contrast, were not achieved: trade deals with MENA importers were blocked by geopolitical barriers, halal certification requirements beyond Ethiopia's current system, and COVID-19 travel restrictions, despite significant compliance improvements at institutional level. This outcome is analytically significant for STDF's financing study, as it demonstrates that SPS compliance investment can produce substantial regulatory gains while commercial market access remains constrained by non-technical factors outside the compliance architecture.

The most transferable lesson from the Ethiopia case is that STDF grants generate the greatest leverage when designed as components of a government-endorsed national investment strategy rather than as standalone technical projects. Embedding STDF-funded capacity building within the LMP framework transformed a time-limited project into the investment readiness phase of a much larger national programme, creating the institutional and political continuity that attracted the complementary World Bank commitment. The public-good character of foundational SPS investments, including disease surveillance, laboratory quality, regulatory frameworks, and veterinary certification, requires grant financing because these investments are preconditions for, rather than products of, commercial viability; private financing cannot be mobilized before they are in place. Multi-donor coordination was itself a financing instrument: by complementing rather than duplicating existing investments by the EU, USAID, and World Bank, the STDF grant achieved leverage well beyond its nominal value through synergies with the broader donor portfolio. Minimum enabling conditions for replication include a government-endorsed national sector plan framing SPS compliance as an export competitiveness priority, a competent authority with sufficient capacity for bilateral SPS negotiations, a multi-donor environment willing to sequence complementary investments, and a realistic prior assessment of whether non-technical barriers in target export markets are likely to constrain market access. The full Ethiopia Case Study is available in the annexes.

Key Insight: The Ethiopia case demonstrates that STDF grants are most effective when aligned with national sector investment plans and positioned as catalytic instruments within a multi-donor coordination framework. The Terminal Report adds a substantive qualification: SPS compliance investment is necessary but not sufficient for market access. Non-technical barriers, including geopolitical factors, halal certification requirements, and trade policy dynamics, can block commercial returns even when regulatory capacity is substantially improved. Grant-funded SPS capacity building should be paired with explicit follow-on mechanisms for recurrent cost sustainability, and the P-IMA framework and Project Preparation Grants are most valuable when they help governments develop investment-ready programmes aligned with realistic assessments of market access conditions.

5.4 Cross-Case Comparison

Table 3 compares the three case studies across key analytical dimensions to highlight the range of financing models documented and the conditions under which each succeeded.

Table 3: Country Case Study Comparison

Dimension	Colombia: Hass Avocado	Bangladesh: Vegetables	Ethiopia: Livestock
Financing model	Bundled market-access: certification, finance, and buyer linkage	Blended finance: STDF grant and commercial bank co-financing	Public investment and multi-donor coordination: STDF grant aligned with national Livestock Master Plan
Primary instrument	Value chain co-investment and cost distribution across actors	STDF grant as mobilizing capital; commercial bank business development fund	STDF project grant aligned with national investment framework; World Bank US$176 million programme
Key institutional actor	ICA (SPS authority) and CorpoHass (sector coordinator)	Swisscontact (implementer) and IFIC Bank (commercial co-financier)	FAO (implementer), MoA and EAA (government counterpart), and World Bank (complementary programme)
Key enabling condition	Credible phytosanitary authority and organized sector coordination	Business development framing of SPS compliance for commercial bank	National Livestock Master Plan providing investment anchor and multi-donor coordination framework
Primary SPS lesson	Compliance becomes financeable when linked to commercial export pathways	STDF grants can mobilize commercial co-financing when designed as business development	Aligning STDF support with national investment strategies enables follow-on financing at scale; public grant financing is the appropriate instrument for foundational SPS investment

Source: Authors, based on key informant consultations and country case studies, 2026.

6 Key Insights and Enabling Factors

Consultations with DFIs, regulatory authorities, financial institutions, technical agencies, and private sector stakeholders consistently point to a central finding: the ability to mobilize and sustain financing for SPS systems depends less on the availability of individual financing instruments and more on the broader institutional environment within which investments are identified, prepared, prioritized, and implemented. The Colombia, Bangladesh, and Ethiopia cases in Chapter 5 each illustrate different financing instruments, but they share a common logic: the financing mechanism succeeded because institutional conditions were in place to make it credible, investable, and commercially anchored. This central finding, introduced in Chapter 2 and reflected in the Executive Summary, is examined here through the specific enabling conditions and constraints that the case evidence reveals. The five cross-cutting lessons set out in this chapter explain why some SPS financing efforts succeed and others do not, and what this means for STDF and its partners.

6.1 Investment Readiness Is the Primary Constraint

The central finding of the study is that scaling SPS financing requires more than identifying technical gaps. It requires countries to establish investment conditions that allow SPS priorities to be understood by finance actors as structured and investable interventions. Stakeholders across all interview cohorts noted that financing constraints frequently arise not because resources are unavailable, but because SPS priorities are not packaged in ways that are credible to development banks, commercial banks, ministries of finance, or private investors.

Three enabling conditions determine whether SPS investments can move from technical need to finance implementation. First, diagnostic and prioritization processes must be linked to economic analysis. Governments that can demonstrate how SPS improvements contribute to reduced trade disruptions, stronger export performance, and lower production losses are better positioned to make the case for SPS expenditure as productive investment. The P-IMA framework provides a practical entry point, but its outputs need to be connected explicitly to investment proposal preparation. Second, countries need project preparation capacity: the ability to carry out feasibility analysis, institutional design, cost-benefit assessment, and stakeholder engagement. STDF PPGs can support this step when designed with an explicit pathway to larger follow-on financing. Third, SPS investments attract greater financing when embedded within broader agricultural transformation and trade development programmes. The Ethiopia case illustrates this directly: aligning STDF grant support with the national Livestock Master Plan contributed to a subsequent US$176 million World Bank livestock sector programme.

Key insight: In most developing countries' SPS contexts, the primary constraint on financing is not the absence of capital. It is the absence of investment-ready proposals. Countries and STDF partners that invest in translating technical SPS priorities into structured investment propositions, aligned with national strategies and expressed in economic terms, consistently secure more financing than those that present SPS as a regulatory compliance requirement.

6.2 Trust Between Public and Private Actors Is a Prerequisite for Co-Investment

Public-private collaboration emerged as a decisive factor influencing both the scale and sustainability of SPS financing. Private actors are direct beneficiaries of improved SPS systems through enhanced market access, lower compliance risk, reduced rejection rates, and stronger participation in international supply chains. However, private investment materializes only where regulatory institutions are sufficiently credible and where firms perceive regulatory engagement as predictable and commercially rational.

Where trust exists, private actors invest in certification systems, laboratory services, traceability infrastructure, pack houses, cold chains, and compliance systems embedded within value chains. Trust is built through predictable inspection and certification procedures, transparent regulatory decision-making, regular public-private dialogue, clear service standards, and functioning grievance and

feedback mechanisms. The Colombia case demonstrates this clearly: ICA's regulatory credibility and CorpoHass's sector coordination function together created the institutional confidence that made long-term investment viable.

Industry associations, producer organizations, and export councils are important intermediaries that reduce transaction costs between regulators and firms, support collective compliance investment, and improve communication along value chains. A structural gap identified across multiple contexts is that public-private dialogue mechanisms frequently exclude the financial sector. This weakens the ability to build investment-grade SPS business cases and reduces the confidence of potential co-investors.

6.3 Institutional Coordination Is Both a Financing and an Implementation Challenge

SPS responsibilities are distributed across multiple public institutions, including agriculture, trade, health, finance, environment, and border agencies. This fragmentation creates persistent problems for financing as well as for implementation. Fragmented mandates produce duplicated inspections, inconsistent certification requirements, and competing budget claims. Countries that perform better on SPS financing typically have stronger mechanisms for inter-agency coordination, often through national SPS committees or structured inter-ministerial platforms.

Such coordination improves investment prioritization, reduces duplication, strengthens the sequencing of investments, and creates a more coherent basis for engagement with external financiers. Without it, investment proposals remain institutionally fragmented and are less credible to both public and private financing actors. Strengthening or establishing national SPS committees is therefore not only a governance objective: it is a direct enabler of financing. STDF support to national SPS committees in several countries has demonstrated the value of this function in practice.

6.4 Political Economy Factors Constrain SPS Financing

SPS financing is not only a matter of technical requirements but is deeply influenced by political economy dynamics, where institutional incentives, stakeholder interests, and broader governance constraints shape how resources are mobilized and allocated. Governments often prioritize SPS investments in sectors with strong export potential or political visibility, while agencies may design fee structures that balance efficiency with revenue generation. At the same time, exporters and producer associations exert pressure to secure financing that safeguards market access, whereas smallholders may be marginalized in decision-making. International trade rules, donor support, and bilateral agreements further drive investment choices, sometimes aligning more with diplomatic leverage than domestic needs. These political economy factors explain why SPS systems can be well-designed yet unevenly implemented, highlighting the importance of transparent governance, coalition-building, and accountability to ensure sustainable financing and equitable service delivery.

Three such constraints emerged consistently across consultations. First, SPS expenditure is frequently viewed as regulatory overhead rather than productive investment during national budget processes, particularly where fiscal space is constrained and where decision-makers lack economic evidence linking SPS investment to trade outcomes. Second, fragmented institutional mandates complicate coordinated financing, as food safety, plant health, veterinary services, border inspection, and standards functions are frequently financed through separate administrative channels. Third, economic returns from SPS investments often materialize over periods that exceed political cycles. Addressing this last constraint requires sustained investment in economic analysis that makes these returns visible, expressed in terms of trade revenue, avoided losses, and employment in agricultural value chains, and disseminated in formats that reach budget decision-makers.

6.5 Positioning SPS Investment Within National Frameworks Is the Most Reliable Path to Sustainable Financing

A consistent finding of the study is that SPS systems secure stronger and more sustainable financing outcomes when positioned within broader national investment frameworks rather than treated as isolated technical compliance obligations. When SPS is framed only as a regulatory requirement, financing depends on constrained public budgets or short-term donor support. When SPS capacity is framed as enabling infrastructure for agricultural competitiveness, export diversification, food systems modernization, and trade facilitation, financing opportunities expand significantly.

Large-scale agricultural transformation programmes increasingly incorporate SPS functions as foundational components of value chain competitiveness. This is the model that STDF tools, including P-IMA and PPGs, are best placed to support: helping countries integrate SPS priorities into larger public investment and development finance processes. The Bangladesh case illustrates this in a different way: by positioning SAFE-BD as a commercial investment opportunity for IFIC Bank, Swisscontact secured US$300,000 in business development co-financing alongside the US$1 million STDF grant. Table 4 summarizes the five cross-cutting lessons and their implications for STDF and its partners.

Table 4: Summary of Cross-Cutting Lessons

Cross-Cutting Lesson	Implication for STDF and Partners
6.1 Investment readiness, not capital availability, is the primary constraint.	Prioritize tools and PPGs that build investment-ready proposals. Develop economic brief templates based on P-IMA outputs for ministry of finance and DFI audiences.
6.2 Trust between public and private actors, including the financial sector, is a prerequisite for co-investment.	Design projects to include structured public-private dialogue that explicitly includes financial sector actors. Support sector coordination platforms.
6.3 Institutional coordination is both a financing and an implementation challenge.	Support national SPS committees as a financing enabler, not only a governance objective. Assess inter-agency coordination capacity as part of SPS financing readiness diagnostics.
6.4 Political economy constraints require economic evidence, not only technical solutions.	Systematically document and disseminate economic return evidence from the STDF project portfolio in formats accessible to budget decision-makers.
6.5 Positioning SPS within national investment frameworks is the most reliable path to sustainable financing.	Design STDF project grants and PPGs to align explicitly with national agricultural strategies. Pilot STDF grants as the concessional component of larger blended finance structures.

Source: Authors, based on study findings, key informant consultations, and country case studies, 2026.

Overall finding: Sustainable SPS financing is most likely where technical priorities are institutionally coordinated, economically framed, and embedded within broader development investment processes. Financing instruments matter, but institutional readiness determines whether those instruments can be effectively mobilized. This is the central implication for STDF's strategic role in SPS financing.

7 Towards Sustainable SPS Financing

The financing models and case evidence reviewed in this study point to a consistent conclusion: SPS financing will not become sustainable by identifying a single superior instrument and applying it universally. Different SPS investments require different financing approaches, and the starting point for any country-level financing strategy is a clear understanding of which investments must remain principally publicly financed, which can attract development finance and blended structures, and which can generate sufficient commercial returns to draw private capital. The four sections below set out the practical implications of this conclusion.

These implications are also sequenced over time. Section 7.1 distinguishes which investments can attract which financing approach now; Section 7.2 identifies what investment preparation is required to make a financing decision possible in the next planning cycle; Section 7.3 sets out the risk-sharing instruments that can extend the reach of capital once early preparation is in place; and Sections 7.4 and 7.5 describe the domestic-financing transitions that belong to the medium term. Read in sequence, the chapter is intended to help governments and STDF project teams judge what is realistic now, what requires preparation, and what belongs to a later stage.

7.1 Matching Financing Instruments to the Nature of SPS Investments

A central lesson from the study's consultations and analysis is that not all SPS investments are equally amenable to the same financing approach. IFC guidance on blended finance is instructive: blended structures are appropriate where investments have genuine commercial characteristics but face market failures that prevent private capital from engaging without concessional support. Where investments are pure public goods with no commercial return, blended finance is not the right instrument; sustained public budgets or grant financing are more appropriate. Using blended structures indiscriminately in public-good SPS investments does not improve their financial sustainability; it only complicates their governance (IFC, 2020). Table 5 sets out three broad categories of SPS investment, each with a different financing logic.

Table 5: Categories of SPS Investment and Their Financing Logic

Investment Category	Characteristics and Examples	Appropriate Financing Approach
Core public regulatory functions	Provide public goods with no direct commercial return. Examples: disease surveillance systems, official inspection and enforcement, national pest and disease monitoring, border biosecurity, and the legislative and regulatory framework governing SPS measures.	Public budget allocations and predictable multi-year government financing, supported by donor grants and technical assistance where domestic fiscal capacity is insufficient. Blended finance is generally not appropriate for this category.
Mixed public-commercial SPS services	Generate both regulatory assurance and measurable commercial value. Examples: laboratory accreditation and testing services, digital traceability systems, export certification procedures, quality inspection hubs, and cold chain infrastructure serving export sectors.	Blended finance structures combining public grant or concessional capital with commercial co-investment; cost-recovery through user fees; PPPs; development bank concessional lending. This is where blended finance adds the most value.
Commercial SPS compliance investments	Generate direct commercial returns to private investors. Examples: pack houses, processing and slaughter facilities, veterinary service delivery, residue management systems, private certification services, and SPS compliance infrastructure serving value chains with strong export contracts.	Commercial lending, supply chain finance, value chain co-investment, industry levies and check-off systems, impact investment, and agricultural guarantee facilities. Public de-risking instruments such as partial guarantees may be needed in lower-income contexts.

Source: Authors, based on study findings, key informant consultations, and IFC guidance on blended finance (IFC, 2020), 2026.

Applying this framework matters for two practical reasons. First, it prevents the misallocation of scarce concessional and grant resources towards investments that could attract commercial financing, and vice versa. Second, it gives governments and SPS authorities a clearer basis for engaging financing institutions: DFIs and commercial lenders respond more confidently when investment proposals specify what return is expected, who bears which risk, and why the financing structure fits the investment's characteristics.

7.2 Building Investment Pipelines That Financing Institutions Can Act On

P-IMA and rapid SPS assessments, together with the official SPS Capacity Evaluation Tools developed by the three sister standard-setting bodies (the WOAH PVS Pathway for veterinary services, the IPPC Phytosanitary Capacity Evaluation (PCE), and the FAO/WHO Food Control System Assessment Tool), identify where investment is most needed. The study confirms that this diagnostic step, while necessary, is not sufficient to attract financing. Development banks, ministries of finance, and private investors require proposals that have moved past the needs assessment stage to feasibility analysis, cost-benefit framing, institutional design, and implementation planning. Three elements are required to make SPS investment pipelines actionable.

Economic Framing That Speaks to Financing Audiences

An SPS proposal that articulates its case in terms of reduced border rejection rates, avoided trade disruption costs, export revenue growth, and productivity gains in targeted value chains is more likely to attract DFI interest than one framed solely in terms of technical compliance requirements. This means

building the economic analysis into the investment preparation process from the outset, not treating it as a reporting obligation at the end.

Feasibility and Structuring Work

A pipeline that moves from diagnostic outputs to a financing decision requires feasibility studies, cost estimation, institutional assignment, and a financing structure that layers different capital sources appropriately. Where this preparation work is absent, SPS needs remain unfunded not because resources are unavailable but because proposals are not investment ready. STDF PPGs can support this step when designed with an explicit pathway to larger follow-on financing.

Alignment with National and Regional Investment Plans

Investment proposals that sit within existing national agricultural strategies, trade development plans, or regional programmes such as CAADP are better positioned to access development bank sovereign lending, bilateral programme financing, and budget support instruments. Stand-alone SPS projects compete less effectively for limited DFI resources than SPS components embedded within multi-sector agricultural or trade programmes.

Where appropriate, STDF project grants should be designed to serve as the concessional or de-risking component of a larger blended structure, rather than as standalone grants. A STDF project grant at or below the current ceiling could function as the public-good or first-loss component of a co-financed investment, with DFI lending or private capital providing complementary components. The study recommends that STDF pilot this model in one or two cases during the current strategy period.

7.3 Using Risk-Sharing Instruments to Extend the Reach of Available Capital

A consistent finding from KIIs with DFIs is that perceived risk, not the absence of capital, is the primary barrier to SPS investment in developing country contexts. Reducing this perceived risk is therefore as important as reducing actual risk. The study identifies four risk-sharing instruments applicable to SPS investments.

Credit Guarantees and First-Loss Facilities

Partial credit guarantees from DFIs, foundations, or government programmes reduce the exposure of commercial lenders, allowing them to extend financing to SPS-related investments that would otherwise fall outside their risk appetite. The AGFS, documented in Chapter 4, demonstrates that well-structured guarantee facilities can mobilize commercial bank lending to agricultural SMEs that include SPS compliance in their investment requirements. OECD tracking data confirms that guarantees are consistently the most effective instrument for attracting private capital across development investment contexts (OECD, 2025).

Results-Based Financing Linked to SPS Outcomes

Linking payment to independently verified SPS performance, including certification rates, border rejection rates, disease control outcomes, or compliant export volumes, provides confidence to risk-averse financiers by demonstrating that incentives are aligned with results. The AgResults aflatoxin pilot in Nigeria, documented in Chapter 4, illustrates this approach in the SPS domain.

Blended Concessional and Commercial Capital

Where SPS investments fall in the mixed public-commercial category identified in Table 5, concessional capital from development banks or donor programmes can absorb early-stage risk and improve the commercial viability of the investment. Morocco's agricultural transformation programme, documented in Chapter 4, illustrates how blended support for food safety infrastructure, export certification, and cold chain systems strengthened export competitiveness and attracted follow-on private investment. Newer instruments, such as the EU's AgriFI Global blended-finance facility for agri-food value chains and the March 2026 WTO Secretariat–EIB Memorandum of Understanding on sustainable trade and investment, also point to wider opportunities for SPS investments to be packaged within blended structures; the practical value of either for SPS will depend on how the financing windows are operationalized.

Public-Private Co-Investment in Shared Compliance Infrastructure

Where multiple private actors in a value chain depend on the same SPS services, including laboratory testing, inspection, certification, and traceability, collective investment through industry associations, levy systems, or check-off schemes reduces the per-unit cost and distributes risk. The Colombia National Coffee Federation levy system, Kenya's horticultural export processing zones, Namibia's livestock levy for veterinary services, and US commodity associations all demonstrate this logic at sector scale.

7.4 Building Pathways to Sustainable Domestic Financing

The study's most consistent finding on sustainability is that SPS capacity built through donor grants and short-cycle project financing tends to erode when external support ends unless domestic financing mechanisms are in place to cover recurrent costs. This is not a new observation: the STDF P-IMA evaluation (STDF, 2023) and van der Meer (2020) both document it. What the present study adds is a more specific account of which domestic financing pathways are practical and which conditions are required for each.

Government Budget Allocations and Medium-Term Expenditure Frameworks

The most direct pathway to sustainable domestic financing is securing a predictable line in the national budget. Governments that can demonstrate the return on SPS investment in terms of export revenue protected, border rejection rates reduced, pest outbreaks avoided, and value chain employment sustained are better positioned to make the case to ministries of finance for ring-fenced, multi-year SPS budget lines. World Bank concessional financing held by ministries of finance represents an underutilized channel: sector budget support operations and development policy loans regularly include conditions related to agricultural regulatory quality, food safety systems, and trade facilitation. STDF could support SPS authorities' engagement with finance ministries and World Bank country teams by providing economic framing tools and investment brief templates.

Cost-Recovery Through User Fees for Commercial SPS Services

User fees for certification, inspection, and laboratory testing are a practical and widely used mechanism for generating recurrent revenue to cover SPS service costs. However, the Tanzania case documented in Chapter 4 illustrates the risk of poorly sequenced fee reform: the more than 460% increase in phytosanitary inspection and certification fees introduced in January 2025 was not accompanied by corresponding service quality commitments, resulting in concerns from smallholders and SMEs about the affordability of formal compliance. Effective cost-recovery design requires three conditions: fees that reflect realistic costs without pricing out smallholder and SME users; service quality standards that are published and enforced; and revenue benefit-sharing arrangements that ensure fees are reinvested in the services from which they are collected rather than absorbed into general government revenue.

Industry Levies and Check-Off Systems in Export-Oriented Sectors

Where export sectors are sufficiently organized through commodity boards, producer associations, or exporters' councils, levy systems provide a mechanism for sector-level collective investment in shared SPS functions. This model is well established in Colombia (coffee), India (spices), Namibia (livestock), and several Pacific Island economies. The conditions for effective levy systems are a credible sector organization with legal authority to collect and administer funds; transparent governance of levy proceeds; and a clear link between the SPS services financed through levies and the commercial interests of contributing firms. Without this last condition, levies function as a tax rather than a co-investment, and enforcement becomes difficult.

Integration with National Agricultural and Trade Strategies

The most durable form of domestic financing sustainability is achieved when SPS investment is embedded within a government-endorsed national agricultural strategy or trade development plan. The Ethiopia case study, in which STDF's project grant was aligned with the national Livestock Master Plan, demonstrates how this alignment contributed to a subsequent US$176 million World Bank livestock sector programme. The strategy alignment was a deliberate design choice that should inform how STDF structures future project support.

7.5 A Practical Framework for Sequencing SPS Financing Transitions

Table 6 sets out a practical framework for understanding how SPS financing transitions from reliance on short-cycle external support towards sustainable domestic and blended structures. It draws on the instruments and country examples documented in Chapters 4 and 5, and on the investment categorization established in Table 5 above. It is offered as a reference tool for governments and STDF project teams working on investment preparation, not as a prescriptive sequence.

Table 6: Practical Framework for Sequencing SPS Financing Transitions

Financing Stage	Typical Characteristics	Key Transition Actions	Instruments and Examples
Project-based external financing	SPS investment funded through discrete donor grants or technical assistance projects. Limited domestic budget contribution. No recurrent cost mechanism. Gains dependent on continued external support.	1. Use P-IMA and rapid assessments to identify highest-priority investments. 2. Begin economic framing of SPS investment returns for ministry of finance audiences. 3. Use PPGs to develop investment-ready proposals with explicit follow-on financing pathways.	STDF project grants, PPGs, donor technical assistance, and P-IMA framework.
Transition to blended and co-financed structures	SPS investment supported through a combination of grant, concessional lending, and partial private co-investment. Some cost-recovery for commercial services. Engagement with DFIs and bilateral programmes beginning.	4. Embed SPS components in DFI agricultural or trade programme designs. 5. Introduce user fee structures for at least one commercial SPS service with a service quality commitment. 6. Test risk-sharing instruments (guarantees, results-based payments) in one priority value chain. 7. Engage ministry of finance in SPS budget discussions, supported by economic evidence.	World Bank and AfDB agricultural programme components, EIB and WTO blended structures, AgResults RBF models, IFC guarantee facilities, STDF project grants as de-risking components.
Sustainable domestic financing with external complementarity	Core regulatory functions financed from a predictable domestic budget. Cost-recovery covering recurrent costs of commercial SPS services. Sector levy or check-off system operational. External support used for innovation and system upgrading, not recurrent costs.	8. Secure multi-year budget line for SPS system strengthening through national investment framework. 9. Scale cost-recovery to cover full recurrent costs of commercial services, with graduated fee structure. 10. Establish or strengthen sector levy or check-off system in primary export	CAADP agricultural investment commitments, Colombia coffee levy, Namibia livestock levy, Kenya KEPHIS user fee model, national SPS committee framework.

Financing Stage	Typical Characteristics	Key Transition Actions	Instruments and Examples
		commodities. 11. Institutionalize national SPS committee with financial sector representation.	

Source: Authors, based on country examples documented in Chapters 4 and 5, 2026.

The transition from stage one to stage three is rarely linear, and countries may operate in different stages for different SPS functions simultaneously. Core disease surveillance may still be in stage one while export certification has moved to stage two. The framework is most useful as a diagnostic: helping governments and STDF project teams identify where specific investments currently sit and what the next financing transition requires.

Key insight: Sustainable SPS financing is built incrementally. No country moves directly from donor-dependent project financing to fully sustainable domestic financing. The sequencing framework above identifies the practical steps that make each transition possible: investment-ready proposals, blended structures, risk-sharing instruments, and ultimately, domestic budget commitments and sector levy systems that outlast individual projects.

8 How STDF Can Support Stronger SPS Financing

Chapters 4 through 7 identified the financing models, instruments, cross-cutting conditions, and transition pathways that determine whether SPS financing succeeds at scale. This chapter turns to STDF's specific role in supporting those processes. STDF's comparative advantage lies in its combination of technical expertise, neutral convening function, diagnostic tools, and established partnerships across governments, international organizations, and development partners. These attributes give STDF a catalytic and influencing role that goes well beyond the value of its own grant resources: it can shape how other actors design, prepare, and finance SPS investments, and can create the conditions under which much larger financing flows from public and private sources are unlocked.

A central finding of the study is that STDF's strongest contribution to SPS financing does not lie in mobilizing finance directly. It lies in improving the conditions under which financing can be mobilized by others: generating investment-ready proposals from diagnostic outputs, bridging the communication gap between SPS technical authorities and DFI lending teams, and building strategic partnerships with financing institutions that have the mandate and resources to invest at scale.

8.1 Leveraging STDF Tools for Investment Preparation

The P-IMA framework provides a practical basis for identifying which SPS investments offer the strongest returns relative to trade and market access objectives. The 2023 evaluation of P-IMA demonstrated that the framework contributed to over US$2.8 million leveraged for SPS capacity building, supported by approximately US$454,000 in STDF grants (STDF, 2023). P-IMA's diagnostic outputs need to be connected more explicitly to structured investment proposals that articulate objectives, economic returns, institutional responsibilities, and financing requirements in terms accessible to DFIs, ministries of finance, and bilateral partners. Developing standard investment brief templates based on P-IMA outputs would significantly improve uptake and relevance to financing audiences.

PPGs are among STDF's most effective instruments precisely because they support the project preparation step that is most commonly absent in developing country SPS contexts: feasibility analysis, economic justification, institutional design, and early stakeholder engagement. Where possible, PPGs should be designed with an explicit pathway to larger financing, meaning that the PPG proposal should identify the specific follow-on financing source it is intended to prepare the ground for (a DFI agricultural lending facility, a multi-donor sector programme, a national investment line, or a blended commercial arrangement) and that the design should include early engagement with that prospective financier. STDF should monitor whether PPG-supported projects subsequently secure follow-on financing as a key performance indicator under the MEL framework.

In support of this stronger investment-preparation function, the STDF Secretariat and Working Group may wish to review two operational features of the current PPG instrument during the 2025–2030 strategy period: whether the current PPG budget envelope, of approximately US$50,000, is sufficient to take a proposal through feasibility analysis, institutional design, and early engagement with a prospective financier; and whether the current PPG technical scope adequately covers the economic framing and financing-structuring work that this study has identified as the principal gap between SPS diagnostic outputs and financing-ready proposals. These are operational questions for the STDF partnership rather than analytical conclusions of this study, but they bear directly on whether PPGs can deliver the investment-preparation role described above.

8.2 STDF as a Convener Between SPS Authorities and Financing Institutions

One of the most consistent findings from consultations is that SPS authorities and financing institutions do not communicate effectively. SPS authorities do not use the investment language that DFI lending teams require, and lending officers do not understand how SPS investments generate economic returns, what compliance risks they address, or how they interact with value chain finance. This language gap is a structural constraint that limits SPS financing independently of instrument availability.

STDF is well placed to facilitate structured dialogue between these two communities. Practical actions include hosting investment briefs that translate SPS priorities into DFI terms; supporting study visits between SPS authorities and DFI project preparation teams; contributing SPS expertise to DFI agricultural and trade programme designs; and developing accessible training materials on Codex,

IPPC, and WOAH standards to increase awareness for financial institution lending teams. The Bangladesh SAFE-BD case illustrates what this bridging function can achieve: Swisscontact's structured engagement with IFIC Bank secured US$300,000 in commercial co-financing, structured as equity-like support drawn from IFIC Bank's business development fund rather than a conventional loan or a corporate social responsibility contribution, alongside the US$1 million STDF grant.

8.3 Strategic Partnership Opportunities

The study identifies five categories of institutions that represent the most promising strategic partnership opportunities for STDF in the SPS financing context. Table 7 summarizes the principal institutions in each category and the specific partnership actions most likely to generate impact.

Table 7: Principal Institutions and Partnership Actions

Institution / Category	Principal Institutions and Recommended Partnership Actions
Multilateral Development Banks and International Finance Institutions	IFC, World Bank, AfDB, ADB, IDB, and EIB. Recommended actions: (i) recognize SPS systems explicitly as trade-enabling infrastructure within lending frameworks; (ii) embed SPS components systematically within agricultural transformation and trade programme designs; (iii) test blended finance, guarantee, and results-based instruments on SPS investments; (iv) build SPS awareness within DFI lending teams through targeted knowledge sharing. Newer instruments such as the WTO Secretariat–EIB Memorandum of Understanding (March 2026) and the EU AgriFI Global blended-finance facility may provide additional entry points, subject to how their financing windows are operationalized.
Regional Development Banks and National Development Banks	East African Development Bank, Development Bank of Southern Africa, CAF (Development Bank of Latin America and the Caribbean), and national development banks in larger developing countries. Recommended actions: (i) identify specific programmes within regional and national development bank portfolios where SPS investment aligns with existing mandates; (ii) develop targeted engagement proposals that present SPS components as enabling conditions for the trade and agricultural programmes these banks already finance; (iii) use STDF Working Group relationships to open dialogue with development bank country teams.
Climate Finance Institutions	Green Climate Fund (GCF), Adaptation Fund, and CGIAR climate programmes. Many SPS functions align directly with climate adaptation objectives. STDF and its partners should: (i) map applicable GCF, Adaptation Fund, and CGIAR financing windows; (ii) raise awareness, through dissemination of this study and convening events on the STDF Global Platform, among partner countries with high climate vulnerability profiles where SPS-climate finance linkages are most actionable; and (iii) support the development of SPS investment proposals that explicitly frame surveillance, monitoring, and resilience functions as climate adaptation activities.
Philanthropic Foundations and Impact Investors	Gates Foundation, Mastercard Foundation, and impact investors active in agri-food system transformation. Recommended actions: (i) identify specific programmes where SPS investment aligns with their mandate; (ii) develop targeted engagement proposals that present SPS compliance as a food systems

Institution / Category	Principal Institutions and Recommended Partnership Actions
	transformation enabler; and (iii) explore co-financing structures in which foundation grant capital performs a similar de-risking function to the STDF grant in the Bangladesh model.
Agribusiness, Export Associations, and Value Chain Actors	Private agribusiness firms, exporter associations, processor groups, and commodity boards. Recommended actions: (i) build structured commercial engagement into STDF project designs from the outset, consistent with the Bangladesh SAFE-BD model; (ii) support sector coordination platforms that can aggregate private co-investment in shared SPS infrastructure; (iii) ensure that STDF-supported national SPS committees include the financial sector and export industry representatives, not only regulatory agencies.

Source: Authors, based on study findings, key informant consultations, and country case studies, 2026.

Multilateral Development Banks and International Finance Institutions

Table 7 identifies multilateral development banks as the partners with the greatest potential to scale SPS investment through existing agricultural, trade, and food systems programmes. The practical implication for STDF is not to seek standalone SPS financing from these institutions but to position SPS components within programme designs that are already under development. STDF's technical credibility and neutral convening function give it standing to engage at the programme preparation stage, before financing structures are finalized, which is where SPS components are most easily incorporated. Newer instruments such as the EU AgriFI Global facility and the March 2026 WTO Secretariat–EIB Memorandum of Understanding offer specific near-term entry points where SPS components may be packaged within larger blended structures; the practical value of either for SPS will depend on how the respective financing windows are operationalized. The key lesson from past engagement with MDBs is that waiting for SPS financing to be offered is less effective than proactively contributing to programme designs in countries where STDF already has established relationships. The Bangladesh SAFE-BD model offers a transferable lesson here: although the partner financial institution in that case was a national commercial bank rather than an MDB, the design principle, positioning SPS compliance as a structured business development opportunity rather than as a regulatory cost, applies equally to MDB engagement.

Regional Development Banks and National Development Banks

Table 7 identifies regional and national development banks as underutilized SPS financing channels whose country-level presence makes them more accessible than MDBs for many STDF partner countries. Unlike multilateral institutions, regional and national development banks typically have direct relationships with the line ministries responsible for agricultural and trade programmes, which reduces the institutional distance between SPS technical priorities and financing decisions. The most productive engagement model is not general advocacy for SPS financing, but identification of a specific programme in a specific country where SPS investment strengthens the trade or agricultural outcomes the bank is already trying to achieve. A practical first step is a structured mapping of regional and national development bank programme pipelines, used to inform STDF's dissemination and convening work so that partner countries can apply through the regular STDF open-call submission windows for project grants and PPGs. The East African Development Bank and the Development Bank of Southern Africa are particularly relevant given the concentration of partner countries in those regions.

Climate Finance Institutions

Table 7 identifies climate finance institutions as a largely underutilized entry point for SPS investment, a finding consistent with Section 3.2 of this report. The practical gap is not the absence of thematic alignment, but the absence of investment proposals that make the SPS–climate connection explicit in the terms that GCF and Adaptation Fund national designated authorities require. Many SPS functions, including disease surveillance, pest and vector monitoring, and biosecurity systems, directly strengthen resilience to climate-driven biological risks, but they are rarely framed that way in SPS investment

documents. The actionable step for STDF is to raise awareness of these linkages, through dissemination of this study and convening events on the STDF Global Platform, among partner countries that already have active GCF or Adaptation Fund accredited entities, so that those countries can themselves bring forward supplementary SPS components framed as climate adaptation activities, including through the regular STDF open-call submission windows. This requires engagement at the national designated authority level, not only with SPS competent authorities. STDF should also develop a brief guidance note that translates SPS investment categories into climate adaptation language.

Philanthropic Foundations and Impact Investors

Table 7 identifies philanthropic foundations and impact investors as partners whose grant capital can perform the same de-risking function as STDF project grants within a larger co-financed structure. The Bangladesh SAFE-BD model illustrates this logic: a grant-funded public-good component covering technical capacity building enabled a commercial bank to finance the enterprise upgrading component because the public subsidy absorbed the activities that could not generate a commercial return on their own. Foundations such as the Gates Foundation and Mastercard Foundation operate similar structures in food systems programmes, and their interest in food safety and standards as food systems transformation enablers creates a direct alignment with STDF's mandate. The practical entry point is dissemination, outreach, and Global Platform convening events that raise awareness among active foundation programmes whose food systems or market access objectives depend on SPS compliance, so that countries and implementing partners can bring forward co-financing proposals through the regular STDF submission cycles, including structures in which foundation grant capital covers the public-good layer and STDF or country resources cover technical delivery. This model scales more readily than seeking foundation financing for standalone SPS projects.

Agribusiness, Export Associations, and Value Chain Actors

Table 7 identifies private agribusiness firms, exporter associations, and commodity boards as direct co-financiers of shared compliance infrastructure, not merely beneficiaries of SPS improvements. The Colombia Hass avocado case documents what this co-investment looks like in practice: ICA financed regulatory oversight and export certification infrastructure, producers financed orchard development and compliance upgrades, exporters financed cold chain and packing systems, and CorpoHass coordinated the sector alignment that made the whole structure coherent. The total private co-investment was substantially larger than the public regulatory contribution, and it materialized because SPS compliance was commercially anchored in a growing export market with premium pricing. The lesson for STDF project design is that private co-investment does not emerge automatically from improved SPS systems; it requires identifying the commercial actors who will benefit financially from SPS improvements before project design is finalized, structuring a role for them that reflects a genuine business development opportunity, and designing the public-good and commercial components so that each finances what it is best suited to finance. STDF should treat the identification of private sector co-investors as a project design requirement, not a fundraising activity that follows technical design.

Key insight: STDF's strongest contribution to SPS financing is not direct resource mobilization. It is improving the conditions under which others can mobilize financing: translating technical SPS priorities into investment-ready proposals; bridging the communication gap between SPS authorities and development finance institutions; and connecting the right SPS investment opportunities to the right financing partners.

9 Recommendations for Strengthening SPS Financing

The findings of this study point to a set of practical actions that, taken together, can improve the mobilization, coordination, and sustainability of financing for SPS systems in developing countries. These recommendations are addressed to four principal actor groups: governments and SPS authorities; development finance institutions; the private sector and industry associations; and STDF. Section 9.5 presents a phased implementation framework that sequences the most urgent actions across three time horizons.

To help readers navigate the eighteen recommendations that follow, three signals are used. Recommendations marked **(P)** are the highest-priority actions identified by the study. Recommendations marked **(WG)** require formal endorsement or buy-in from the STDF Working Group before they can be implemented. Recommendations marked **(CR)** depend principally on country readiness rather than on STDF initiative, and STDF's role in these is dissemination, awareness-raising, and convening rather than direct delivery.

9.1 For Governments and SPS Authorities in Developing Countries

Governments bear primary responsibility for core SPS regulatory functions and for creating the enabling conditions within which private and development finance can be mobilized. The following four actions are most important.

Table 8: Recommendations for Governments and SPS Authorities

Recommendation	Rationale and Key Actions
1. Embed SPS investment in national investment planning (P, CR).	Integrate SPS priorities into national agricultural strategies, trade development plans, and medium-term expenditure frameworks. Countries with stronger SPS financing track records have typically secured multi-year budget commitments by demonstrating the economic returns of compliance investment through export performance data, avoided trade disruption costs, and value chain multiplier effects.
2. Translate diagnostics into investment proposals (P, CR).	Use P-IMA, rapid SPS assessments, and the outputs of the official SPS capacity-evaluation tools (the WOAH PVS Pathway, the IPPC Phytosanitary Capacity Evaluation (PCE), and the FAO/WHO Food Control System Assessment Tool) to build credible investment proposals. Governments should invest in the project preparation step, including feasibility analysis, cost-benefit framing, and institutional design that turns technical needs into financeable proposals. Without this step, SPS priorities remain unfunded not because resources are unavailable, but because proposals are not structured for financing decisions.
3. Establish sustainable cost-recovery arrangements (CR).	Introduce or strengthen cost-recovery mechanisms for commercial SPS services. Well-designed fee structures improve operational sustainability and create incentives for service quality. Fees should be set at levels that are commercially realistic for smallholders and SMEs, graduated where necessary, and backed by service standards that make the cost-return calculation credible to paying users.
4. Reduce institutional fragmentation (P, CR).	Strengthen inter-agency coordination through national SPS committees or inter-ministerial coordination platforms. Fragmented mandates frequently produce duplicated inspections, inconsistent certification requirements, and competing budget claims. STDF support to national SPS committees has demonstrated the value of this coordination function in practice.

9.2 For Development Finance Institutions

Development finance institutions, including MDBs, regional development banks, bilateral development finance corporations, and the IFC, are central to bridging the gap between donor-funded project support and sustainable system-level investment.

Table 9: Recommendations for Development Finance Institutions

Recommendation	Rationale and Key Actions
5. Classify SPS as trade-enabling infrastructure (P).	Recognize SPS systems explicitly as trade and economic infrastructure within lending frameworks. SPS surveillance, laboratory capacity, regulatory systems, and certification infrastructure perform the same enabling function for agri-food trade that transport and logistics infrastructure performs for physical trade.
6. Test innovative financing instruments in SPS contexts.	Apply blended finance, guarantee, and results-based instruments to SPS investments within agricultural and trade programmes. OECD tracking data confirms that guarantees are among the most effective instruments for attracting private investment across development investment contexts (OECD, 2025).
7. Integrate SPS within larger investment programmes (P).	Embed SPS components systematically within broader agricultural transformation and trade programmes. Stand-alone SPS projects compete less effectively for DFI resources than SPS components embedded within horticulture development, livestock modernization, or export promotion programmes.
8. Connect SPS investment to climate finance instruments.	Explore linkages between SPS investments and climate finance instruments. Many SPS functions have direct relevance to climate adaptation objectives. DFIs and STDF should jointly identify applicable GCF, Adaptation Fund, and CGIAR windows, particularly for countries with high climate vulnerability profiles.
9. Build a broader understanding of SPS investments within lending institutions.	Build awareness among financial institution lending teams of how SPS investments support trade, exports, and business revenue. Emphasis should be on demystifying SPS functions for banks and connecting them to commercial outcomes that lending officers already understand, supplemented where useful by the development of tailored SPS financial product frameworks. Highly technical training on Codex, IPPC, and WOAH standards is not the primary need.

9.3 For the Private Sector and Industry Associations

Private actors are both direct beneficiaries of improved SPS systems and important co-financiers of compliance infrastructure. Their engagement is most effective where regulatory systems are credible, commercial incentives are clear, and financing structures reduce individual risk.

Table 10: Recommendations for the Private Sector and Industry Associations

Recommendation	Rationale and Key Actions
10. Invest collectively in shared compliance infrastructure.	Co-invest in shared SPS compliance infrastructure where collective benefits are clear. Exporters, processors, and producer associations that share costs through levy systems, cooperative arrangements, or industry-led compliance programmes benefit from lower per-unit compliance costs while strengthening the collective regulatory credibility on which market access depends.
11. Participate actively in public-private SPS dialogue.	Engage actively in public-private dialogue on SPS investment priorities. Dialogue mechanisms should include the financial sector, not only industry and regulatory counterparts.
12. Frame compliance investment as a commercial asset.	Treat SPS compliance investment as a market access asset, not a cost. The Colombia Hass avocado case, where export-ready produce commands approximately twice the domestic price, illustrates the scale of this commercial incentive.

9.4 For STDF

STDF's comparative advantage lies in its combination of technical expertise, neutral convening function, diagnostic tools, and established relationships across governments, international organizations, and development partners.

Table 11: Recommendations for STDF

Recommendation	Rationale and Key Actions
13. Strengthen the investment preparation function of STDF diagnostic tools (P).	Use P-IMA and rapid assessment tools more explicitly as investment preparation instruments. STDF should support governments to move beyond the diagnostic outputs of P-IMA towards the next step: structured investment proposals that articulate objectives, economic returns, institutional responsibilities, and financing requirements in terms accessible to DFIs, ministries of finance, and bilateral partners.
14. Design PPGs with explicit follow-on financing pathways (P).	Design PPGs to build financing-ready investment pipelines with explicit pathways to larger financing, whether through development bank lending, bilateral programmes, or blended finance structures. STDF should monitor whether PPG-supported projects subsequently secure follow-on financing as a key MEL performance indicator.
15. Consider requiring verifiable financial co-financing for project grants, with protections for least developed countries (WG).	Review whether requiring verifiable financial co-financing for larger project grants would improve project ownership and the investment case for follow-on financing. This reform should be applied carefully to avoid disadvantaging the least developed countries and fragile states where in-kind co-financing is a genuine and appropriate contribution.
16. Bridge the language gap between SPS authorities and development finance institutions (P).	Convene targeted dialogue between SPS authorities and DFI lending teams through hosting investment briefs, supporting study visits, and contributing SPS expertise to DFI project preparation teams.

Recommendation	Rationale and Key Actions
17. Build and share economic evidence on SPS investment returns (P).	Systematically document and disseminate return-on-investment evidence from the STDF project portfolio in formats useful for ministry of finance audiences and DFI investment teams. The MEL framework should continue to be used to capture financing leverage data systematically.
18. Test STDF project grants as concessional components within blended finance structures (WG).	Explore how STDF project grants can function as de-risking components within larger blended finance structures. An STDF grant at or below the project grant ceiling could serve as the public-good or first-loss component of a co-financed investment. The study recommends piloting this model in one or two cases during the current strategy period.

9.5 Phased Implementation Framework

Table 12 sets out a phased implementation framework organized around practical actions rather than institutional mandates, sequencing the recommendations above across three time horizons.

Table 12: Phased Implementation Framework

Phase	Key Actions	Principal Actors
Quick Wins (0 to 12 months)	1. Use P-IMA and rapid assessments to identify priority investments and develop early-stage investment proposals (led by governments and SPS authorities with STDF tools support). 2. Pilot cost-recovery mechanisms for at least one commercial SPS service in a willing country to test feasibility and user acceptance (led by governments). 3. Strengthen cross-ministerial coordination in three to five target countries to consolidate fragmented funding streams (led by governments through national SPS committees, with STDF technical support). 4. Capture and publish economic return evidence from the STDF project portfolio in formats accessible to DFIs and ministries of finance (STDF Secretariat). 5. Convene at least one STDF-facilitated dialogue between SPS authority representatives and DFI investment teams (STDF Secretariat through the STDF Global Platform).	STDF, governments, SPS authorities
Medium-Term System Shifts (12 to 24 months)	6. Develop structured investment pipelines linking SPS diagnostics, feasibility analysis, and project preparation in five to ten countries (governments and implementing partners, drawing on STDF's twice-yearly open-call submission windows). 7. Embed SPS system strengthening in national investment frameworks as trade and economic infrastructure (ministries of agriculture, trade, and finance, with STDF advocacy through the Global Platform). 8. Scale blended finance pilots in priority value chains and test guarantee and results-based instruments with at least two DFI partners (DFIs and governments, with STDF awareness-raising). 9. Strengthen monitoring and evaluation frameworks to track compliance rates, trade volumes, and investment	STDF, DFIs, governments, bilateral donors

Phase	Key Actions	Principal Actors
	returns (governments, DFIs, and STDF MEL framework). 10. Explore and map linkages between SPS investment programmes and climate finance instruments, identifying applicable windows in two to three partner countries (STDF Secretariat as a discrete analytical product within the 2025–2030 strategy).	
Long-Term Transformation (24 to 36 months)	11. Secure predictable multi-year public budget allocations for SPS system strengthening in target countries. 12. Mainstream blended finance models for SPS systems as a standard feature of DFI agricultural and trade portfolios. 13. Position STDF as a standing convener connecting SPS technical priorities with DFI investment pipelines and financing platforms. 14. Institutionalize performance-based financing frameworks with clear links to trade and economic outcomes.	Governments, DFIs, private sector, STDF

Source: Authors, based on study findings, key informant consultations, and country case studies, 2026.

The eighteen recommendations and the phased implementation framework above share a single organizing logic: SPS financing improves when technical priorities are made investable, institutional conditions support credible co-investment, and STDF's convening and diagnostic tools are connected explicitly to financing processes rather than running in parallel to them.

10 Conclusion

This study set out to identify financing mechanisms that can improve the sustainability and scale of SPS investment in developing countries, and to assess how STDF tools and partnerships can be better positioned to support the transition from project-based support towards system-level investment. The analysis drew on 32 KIIs with DFIs, private sector actors, foundations, multilateral financial institutions, technical agencies, and government stakeholders, as well as country case studies from Colombia, Bangladesh, and Ethiopia, and a review of financing instruments applied across agricultural, climate, health, trade, and infrastructure sectors.

Effective SPS systems are a prerequisite for safe trade, public health protection, and competitive agri-food development. Yet in most low- and middle-income countries, financing for SPS systems remains fragmented, insufficiently aligned with broader development investment, and structurally dependent on short-term donor support.

Three central findings documented in Chapter 6 and reflected in the Chapter 9 recommendations point to a consistent conclusion. For STDF, the implications are clear. STDF's strongest contribution to SPS financing does not lie in mobilizing finance directly. It lies in improving the conditions under which financing can be mobilized by others: using diagnostic and prioritization tools to generate investment-ready proposals; using PPGs to build financing pipelines that later attract DFI lending or private co-investment; convening dialogue between SPS authorities and financing institutions that do not currently engage effectively; and strengthening the economic evidence base that allows SPS expenditure to be justified within public investment debates.

The study also identified two areas that warrant further attention. First, the co-financing arrangements that govern STDF project grants warrant review. Greater emphasis on verifiable financial co-financing, where feasible without disadvantaging the least developed countries and fragile states, would strengthen government ownership and improve the investment case for follow-on financing. Second, the study found limited evidence of systematic linkage between SPS investment and climate finance instruments, despite clear thematic overlaps. This is an area where further engagement by STDF and its partners is warranted.

The country cases reviewed in this study, from Colombia, Bangladesh, and Ethiopia, illustrate that there is no single model for financing SPS compliance at scale. What they share is a common logic: that SPS investments become sustainable and commercially relevant when they are technically sound, institutionally coordinated, linked to identifiable market incentives, and embedded within broader national or sectoral investment frameworks. These conditions are achievable, but they require deliberate effort from governments, development partners, financing institutions, and the private sector working in coordination.

SPS financing is not a technical footnote to agricultural and trade development. It is a structural condition for the competitiveness, safety, and resilience of agri-food systems. The financing instruments, institutional conditions, and partnership strategies identified in this study provide a practical basis for building more effective and sustainable approaches. Acting on them requires coordination, economic evidence, and sustained commitment from all actors who have a stake in a more effective SPS financing architecture.

References

The following references are cited in this study. Authors' names are presented in the form used in the original publication.

African Development Bank (AfDB) (2020). Technologies for African Agricultural Transformation (TAAT) Programme. Abidjan: African Development Bank Group.

African Union Commission (2024). CAADP Strategy and Action Plan: 2026–2035. Addis Ababa: African Union Commission.

Agence Française de Développement (AFD) (2020). Morocco Green Generation Programme-for-Results. Paris: AFD.

Asian Development Bank (ADB) (2019). Greater Mekong Subregion Cross-Border Transport Facilitation Agreement Programme. Manila: ADB.

Codex Alimentarius Commission (2013). Principles and Guidelines for National Food Control Systems (CAC/GL 82-2013). Rome: FAO/WHO.

Cramer, C., Oya, C. and Sender, J. (2018). African economic development and the politics of production. Oxford: Oxford University Press.

Ethiopian Airlines (2013). Perishable Cargo Cold Storage Facility, Addis Ababa Bole International Airport. Addis Ababa: Ethiopian Airlines.

Ethiopian Horticulture Producer Exporters Association (EHPEA) (n.d.). Code of Practice for Ethiopian Horticulture. Addis Ababa: EHPEA.

European Investment Bank (EIB) (2021). Support to Morocco Green Plan. Luxembourg: EIB Group.

Food and Agriculture Organization of the United Nations (FAO) (2018). Coffee Sector Development in Papua New Guinea. Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO) (2019). Spice Industry and Export Development in India. Rome: FAO.

Food and Agriculture Organization of the United Nations (FAO) and World Health Organization (WHO) (2021). Food Control System Assessment Tool: Introductory Booklet. Rome/Geneva: FAO/WHO.

Henson, S. and Humphrey, J. (2010). Understanding the Complexities of Private Standards in Global Agri-Food Chains as They Impact Developing Countries. Journal of Development Studies, 46(9), pp. 1628–1646.

Henson, S. and Loader, R. (2001). Barriers to Agricultural Exports from Developing Countries: The Role of Sanitary and Phytosanitary Requirements. World Development, 29(1), pp. 85–102.

IFIC Bank PLC (2025). Business Development Fund: Co-financing commitment to SAFE-BD project. Dhaka: IFIC Bank PLC.

Inter-American Development Bank (IDB) (2017). Agricultural Health and Food Safety Programme in Peru. Washington, DC: IDB.

International Coffee Organization (ICO) (2020). Colombian Coffee Sector Report. London: ICO.

International Finance Corporation (IFC) (2020). How Blended Finance Works. Washington, DC: IFC.

Jaffee, S. and Henson, S. (2004). Standards and Agro-Food Exports from Developing Countries: Rebalancing the Debate. Policy Research Working Paper No. 3348. Washington, DC: World Bank.

Jaffee, S., Henson, S., Unnevehr, L., Grace, D. and Cassou, E. (2019). The Safe Food Imperative: Accelerating Progress in Low- and Middle-Income Countries. Washington, DC: World Bank.

Macchiavello, R. and Morjaria, A. (2013). Competition and Relational Contracts: Evidence from Rwanda's Coffee Mills. London: London School of Economics and Political Science.

Meat Board of Namibia (2023). Annual Report 2022–2023. Windhoek: Meat Board of Namibia.

OECD (2021). Digital Opportunities for Sanitary and Phytosanitary (SPS) Systems and the Trade Facilitation Effects of SPS Electronic Certification. OECD Food, Agriculture and Fisheries Papers No. 152. Paris: OECD Publishing.

OECD (2024). Aid for Trade at a Glance 2024. Paris: OECD/WTO.

OECD (2025). Tracking Private Finance Mobilisation. Paris: OECD Publishing.

Secretariat of the Pacific Community (SPC) (2019). Quarantine and Pest Surveillance in Samoa. Noumea: SPC.

Standards and Trade Development Facility (STDF) (2023). External Assessment: Use of STDF's Evidence-Based Approach to Prioritise SPS Investments for Market Access (P-IMA). Geneva: STDF.

Standards and Trade Development Facility (STDF) and Inter-American Development Bank (IDB) (2012). Innovative Approaches to Financing SPS Capacity Development. Geneva: STDF.

Swisscontact (2025). SAFE-BD: Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh. Project Documentation and Implementation Framework. Dhaka: Swisscontact Bangladesh.

Swisscontact (2026). Key Informant Consultation with Swisscontact, conducted by Jennifer Maurer, STDF Financing Study Consultant, 26 February 2026. Dhaka: Swisscontact Bangladesh.

TradeMark Africa (2025). Ethiopia Electronic Phytosanitary Certification. Nairobi: TradeMark Africa.

United Nations Conference on Trade and Development (UNCTAD) (2021). World Investment Report 2021: Investing in Sustainable Recovery. Geneva: UNCTAD.

Unnevehr, L.J. and Ronchi, L. (2014). Food Safety and Developing Markets: Research Findings and Research Gaps. IFPRI Discussion Paper No. 01376. Washington, DC: IFPRI.

van der Meer, K. (2019). Cost Recovery in SPS Services: Analysis and Implications for Developing Countries. Geneva: STDF.

World Bank (2017). Morocco: Strengthening Agri-Food Value Chains Programme-for-Results (P158346). Washington, DC: World Bank.

World Bank (2018). Bangladesh Agricultural Sector Development Support Project. Washington, DC: World Bank Group.

World Bank (2019). The Safe Food Imperative: Accelerating Progress in Low- and Middle-Income Countries. Washington, DC: World Bank.

World Bank (2020). Morocco: Green Generation Programme-for-Results. Washington, DC: World Bank.

World Bank (2022). Food Systems Resilience Programme. Washington, DC: World Bank.

World Bank (2025). Agricultural Finance Diagnostic and Risk Management in Agricultural Lending. Washington, DC: IFC/World Bank.

World Bank (n.d.). Kenya Livestock Insurance Programme (KLIP). Washington, DC: World Bank.

World Organisation for Animal Health (WOAH) (2007). Livestock Insurance for Epidemic Disease: Principles and Practice. Paris: WOAH.

World Organisation for Animal Health (WOAH) (2016). Report on Foot-and-Mouth Disease Response in Namibia. Paris: WOAH.

World Trade Organization (WTO) (1995). Agreement on the Application of Sanitary and Phytosanitary Measures. Geneva: WTO.

World Trade Organization (WTO) (2010). Overview of Members' Notifications under the SPS Agreement. Geneva: WTO.

World Trade Organization (WTO) (2023). Investment Facilitation for Development Agreement. Geneva: WTO.

World Trade Organization (WTO) (2024). Review of Namibia Trade Policy: Livestock and Livestock Products Levy Systems. Geneva: WTO.

World Trade Organization (WTO) (2026). The WTO Secretariat and the European Investment Bank Group Sign a Memorandum of Understanding to Enhance Sustainable Trade and Investment. WTO News, 4 March 2026. Geneva: WTO.

Annexes

Annex 1. Terms of Reference Summary

The Terms of Reference for this study were issued by STDF in September 2025. The full Terms of Reference are available from the STDF Secretariat. The study's purpose, expected outputs, audiences, and research questions are drawn directly from the Terms of Reference and are summarized in Chapter 1 of this report. The research questions addressed by this study correspond directly to those listed in the Terms of Reference.

The deliverables produced under this consultancy are: (i) an Inception Report (January 2026) setting out the detailed methodology, work plan, and stakeholder engagement strategy; (ii) Financing Study Report, including country case examples of successful financing models, and strategic recommendations for STDF; and (iii) a Virtual Presentation of findings and recommendations to the STDF Working Group.

The main audiences for the financing study are SPS authorities in developing countries, the STDF Working Group, and the STDF Secretariat. The final publication will be published on the STDF website.

Annex 2. Key Informant Interviews

A total of 32 semi-structured KIIs were conducted between January 2026 and April 2026. Interviewees represented international organizations, development finance institutions, technical agencies, private sector entities, and government stakeholders with direct relevance to SPS financing. Institutional affiliations are listed as reported at the time of interview. Individual names are not published where confidentiality was requested.

Table A2: Key Informant List

#	Institution	Sector and Category	Region / Base
1	Centre for Agriculture and Biosciences International (CABI)	Technical agency	Global
2	Committee Linking Entrepreneurship-Agriculture-Development (COLEAD)	Technical agency / Development	Global
3	Safe Supply of Affordable Food Everywhere (SSAFE)	Private sector / Food safety	Global
4	Standards and Trade Development Facility (STDF)	International organization	Global
5	World Bank	Multilateral DFI	Global
6	World Trade Organization (WTO)	International organization	Global
7	Asian Development Bank (ADB) / CGIAR	Multilateral DFI / Research	Asia
8	International Finance Corporation (IFC)	Multilateral DFI	Global
9	Women's Investment Club (WIC), Senegal	Private sector / Impact investor	Africa
10	International Seed Federation (ISF)	Private sector / Industry association	Global
11	CropLife International	Private sector / Industry association	Global

#	Institution	Sector and Category	Region / Base
12	Former STDF Developing Country Expert	Government / Technical expert	Africa
13	World Organisation for Animal Health (WOAH)	International organization	Global
14	Alliance for a Green Revolution in Africa (AGRA)	Philanthropic / Agricultural development	Africa
15	TradeMark Africa	Trade facilitation organization	Africa
16	European Union (EU)	Bilateral donor / Regulator	Europe
17	KMSO Consulting	Technical SPS market access firm	Latin America
18	SENASA Honduras	Government / SPS authority	Latin America
19	Instiglio	Results-based financing specialist	Global
20	Tanzania Horticulture Association (TAHA)	Industry association	Africa
21	USDA, Foreign Agricultural Service (USDA-FAS)	Government / Bilateral	North America
22	East Africa Farmers Federation (EAFF)	Producer organization	Africa
23	Nelson Mandela African Institution of Science and Technology	Research / Academia	Africa
24	Asia-Pacific Association of Agricultural Research Institutions (APAARI)	International Organization	Asia-Pacific
25	Swisscontact	Development organization	Global
26	Instituto Colombiano Agropecuario (ICA)	Government / SPS authority	Latin America
27	CorpoHass: Colombia Hass Avocado Producers and Exporters	Private sector / Industry association	Latin America
28	Ecosense Labs (India) Pvt. Ltd	Private sector	Asia
29	BASF Agricultural Solutions	Private sector	Europe / Global
30	Government of Ethiopia	Government / Technical expert	Africa
31	African Development Bank (AfDB)	Multilateral DFI	Africa
32	US Development Finance Corporation (DFC)	Bilateral DFI	North America

Annex Table A2: Key Informant Interviews by Institution and Sector. Source: Authors, 2026.

Annex 3. Key Informant Interview Protocol

This annex reproduces the semi-structured interview guide used for key informant consultations. The guide covered five thematic areas:

- Current sources and patterns of SPS financing, including the role of public budgets, donor grants, DFI programmes, and private sector contributions.
- Barriers to mobilizing additional public and private investment for SPS systems, including structural, institutional, and commercial constraints.
- Promising innovative and blended financing approaches, including guarantees, results-based financing, check-off systems, and public-private co-investment models.
- The role of SPS investment in supporting trade competitiveness, export market access, and agricultural modernization.
- The contribution of STDF tools and partnerships to strengthening financing pathways, including P-IMA, PPGs, and PPP guidance.

The guide allowed for open follow-up questions on issues raised by respondents. All interviews were conducted as semi-structured conversations. The full interview guide is available on request from the STDF Secretariat.

Annex 4. Online Survey

In addition to KIIs, an online survey was administered to a broader group of stakeholders to generate supplementary evidence on SPS financing constraints and opportunities. The survey was designed to capture perspectives from actors who could not be reached through individual interviews and to provide a wider quantitative basis for the qualitative findings from the KII process. The full survey instrument and aggregated response data are available on request from the STDF Secretariat.

Annex 5. Financing Instrument Typology for SPS Systems

This annex provides a structured typology of financing instruments referenced in this study, cross-referenced against the SPS functions they are best suited to finance. It is intended as a practical reference for governments, development partners, and financing institutions assessing financing options for specific SPS investment needs. The typology is organized by instrument type and draws on the financing model analysis in Chapter 4 and the investment categorization framework in Chapter 7 (Table 5).

Table A5: Summary of Financing Instrument Typology for SPS Systems

Instrument	Description	Best Suited To	Enabling Conditions	Examples
Government budget allocation	Direct public expenditure through national budgets and line ministry allocations.	Core regulatory functions: surveillance, inspection, enforcement, and certification. Not appropriate for commercially recoverable investments.	Regulatory predictability, institutional capacity, and political commitment to SPS investment.	KEPHIS (Kenya); Veterinary Services (Ethiopia)
Donor grants and technical assistance	Grant funding and in-kind technical support from bilateral and multilateral development partners.	Institutional capacity building, regulatory reform, and pilot investments where commercial returns are insufficient to	Strong SPS authority counterpart; clear sustainability plan.	STDF project grants; EU technical assistance programmes

Instrument	Description	Best Suited To	Enabling Conditions	Examples
		attract other financing.		
MDB lending	Concessional and standard loans through MDB agricultural and trade portfolios.	SPS infrastructure components embedded in larger agricultural transformation and trade facilitation programmes.	MDB country engagement; SPS investment proposal integrated into programme design.	World Bank Food Systems Resilience Program; AfDB TAAT Program
Blended finance	Combination of concessional capital and commercial investment to improve viability of investments with both public-good and commercial characteristics.	Mixed public-commercial SPS services: laboratory accreditation, cold chain infrastructure, digital traceability, and export certification systems.	Clear commercial return component; market failure requiring concessional support; strong governance.	EIB Morocco Green Plan support; IFC agri-food facilities; SAFE-BD (Bangladesh)
Guarantees and risk-sharing facilities	Instruments that partially protect lenders against borrower default, reducing perceived risk and enabling credit extension to underserved sectors.	Agricultural lending to SMEs; SPS compliance upgrades by exporters and processors where commercial returns are viable, but perceived risk is high.	Creditworthy borrowers; strong guarantee management; explicit integration with SPS objectives.	AGRA/Standard Bank AGFS; IFC guarantee facilities
Results-based financing	Payments linked to independently verified SPS outcomes rather than inputs; rewarding demonstrated results.	Compliance-oriented programmes with objectively measurable outputs: certification rates, border rejection rates, disease control milestones, or compliant export volumes.	Strong verification systems; measurable SPS outcome indicators; risk of moral hazard managed.	AgResults Aflasafe aflatoxin pilot (Nigeria)
Supplier contract and value chain finance	Commercial purchase agreements used to reduce market uncertainty and facilitate compliance investment, with repayment recovered through product delivery.	Export-oriented producers linked to lead firms; smallholder integration into SPS-compliant value chains where off-take arrangements are predictable.	Credible lead firm; predictable demand; functioning regulatory system.	Vietnam horticulture export sector; Kenya tea sector (KTDA)
Commodity and industry levies	Pooled contributions from sector actors collected through	Shared compliance infrastructure in organized export	Credible sector organization; legal authority to	Colombia National Coffee Federation;

Instrument	Description	Best Suited To	Enabling Conditions	Examples
	commodity boards or export systems, earmarked for shared SPS services.	sectors: pest surveillance, certification, laboratory services, and emergency response.	collect and administer funds; transparent governance.	Namibia livestock levy; India Spices Board
Cost-recovery and pay-for-service fees	User fees charged to private actors for inspection, certification, and laboratory services, generating recurrent revenue for SPS service providers.	Commercial SPS services where demand is predictable, users have capacity to pay, and fee levels are commercially realistic for smallholders and SMEs.	Transparent fee pricing; published and enforced service standards; benefit-sharing arrangements.	KEPHIS (Kenya); TPHPA (Tanzania); various phytosanitary authorities
Insurance and risk-sharing instruments	Financial instruments that protect producers or exporters against biological, climate, or market risks that affect SPS compliance capacity.	Livestock producers (epidemic disease risk); pastoral households (climate shocks). Requires strong underlying public SPS systems to function effectively.	Functioning public SPS surveillance system; actuarial data; access to reinsurance.	Kenya KLIP; WOAH epidemic disease insurance frameworks
Public-private export platforms	Coordinated public infrastructure and private investment in export-oriented production and compliance systems, where SPS compliance is embedded within a broader export model.	Export horticulture and floriculture sectors with high compliance costs and strong commercial returns, where both public regulatory investment and private production investment are required.	Government commitment to sector development; private sector investment readiness; credible SPS authority.	Ethiopia floriculture export platform; Kenya horticultural export processing zones

Annex Table A5: Summary Typology of SPS Financing Instruments. Source: Authors, based on study findings and reviewed literature, 2026.

Annex 5. Case Study 1: Bundling SPS Compliance, Finance, and Market Access in the Hass Avocado Export Sector in Colombia

Acknowledgements

This case study was developed with the technical contributions of Carlos Edilquer Guerrero Hoyos, Instituto Colombiano Agropecuario (ICA), Betsy Bermudez (CorpoHass), and Daniel Orellana (KMSO Consulting). The findings, interpretations, and conclusions expressed in this document are those of the authors and do not necessarily represent the views of the STDF, its partner organizations, or its donors.

Executive Summary

Over the past fifteen years, Colombia transformed Hass avocado production from a fragmented domestic activity into one of the country's fastest-growing agricultural export sectors. By 2024, approximately 3,615 registered production units covering 33,500 hectares were certified for export, serving markets in Europe, North America, Asia, and Canada.

Export growth accelerated significantly. Shipments to the United States rose from 12,926 tons in 2023 to 30,207 tons in 2024, reaching 40,807 tons by August 2025 (CorpoHass, 2025). Europe remained the dominant destination, with shipments rising from 97,456 tons in 2023 to 101,180 tons in 2024 (CorpoHass, 2025; ICA, 2024). The acceleration of European exports reflected sustained buyer relationships with retail chains in the Netherlands, Spain, and the United Kingdom, combined with rising EU demand for counter-seasonal Hass avocado supply (Perez and Gomez, 2022).

The sector's success rests on a bundled market-access model that integrates phytosanitary certification, technical support, producer and exporter financing, and commercial buyer linkage into a coherent system. SPS compliance became financeable precisely because it was anchored in identifiable commercial pathways rather than treated as a stand-alone regulatory expenditure. Public institutions, principally the Instituto Colombiano Agropecuario (ICA), provided regulatory credibility. CorpoHass coordinated the sector. Private actors financed commercially recoverable investments. Risk was distributed across the value chain rather than concentrated at farm level. Table A1-1 below presents the avocado export growth to Europe over the past four years.

Table A1-1. Colombia Hass Avocado Exports, Year-on-Year, 2022–2025

Year	Total Exports (tons)	Value (US$ million)	Key Destinations
2022	97,936	178	Europe (Netherlands, Spain, UK)
2023	114,535	200	Europe and United States
2024	138,316	309	Europe (101,180 tons), United States (12,926 to 30,207 tons)
2025	201,479	375	Europe dominant, United States imports up 93.9%

Source: CorpoHass, based on DIAN/SICEX export records, 2025.

For STDF, this case demonstrates that SPS compliance becomes financeable when it is commercially anchored: linking certification directly to export pathways, structured buyer agreements, and shared risk allocation produces higher returns on investment than treating SPS compliance as an isolated regulatory burden.

1. Sector Context and SPS Challenge

Colombia's Hass avocado export sector developed against a particular SPS challenge: meeting the strict phytosanitary requirements of the European Union and the United States while building the

institutional capacity to certify thousands of geographically dispersed orchards. ICA had to build a credible national system able to meet importing-country requirements with their own pest lists and verification protocols; in parallel, producers and exporters had to invest in farm-level practices, traceability, and post-harvest infrastructure capable of withstanding importer audits. Reaching national export-eligibility scale required more than a decade of institutional development. According to CorpoHass export statistics compiled from DIAN/SICEX records, [1] the sector grew steadily across 2022–2025 (see Table A1-1 and Table A1-3 below).

Fresh avocado exports require compliance with strict phytosanitary measures imposed by importing countries, particularly regarding pest surveillance; orchard registration; traceability systems; export certification; and post-harvest phytosanitary control. In Colombia, these functions are led by the Instituto Colombiano Agropecuario (ICA), which oversees export registration, phytosanitary surveillance, pest monitoring, and the certification of export consignments. [2]

By 2024, ICA had registered approximately 3,615 production units covering 33,500 hectares under official export eligibility. [2] At early stages of sector growth, producers faced three principal barriers: high certification costs; limited access to medium-term finance; and weak structured linkage to export buyers. These constraints meant that compliance investments alone could not reliably generate export participation. The financing problem was not that capital was unavailable, but that the risks attached to SPS-related investments were not yet allocated across the actors best placed to bear them.

2. Financing Problem Addressed

For many producers, SPS compliance represented a significant upfront investment with delayed and uncertain returns. The principal financing challenge arose from the multi-year investment cycle inherent to avocado cultivation. Hass avocado orchards require several years before reaching full productivity. During this period, producers must finance orchard establishment, irrigation systems, pest control, certification preparation, and traceability infrastructure before export revenues materialize.

This timeline created elevated financing risk because repayment depended on the simultaneous achievement of successful SPS certification; stable market access; reliable buyer continuity; and export price stability. For many producers, particularly smallholders, meeting all four conditions was commercially uncertain without structured external support. The result was that conventional banks were reluctant to lend, and producers were reluctant to invest in compliance upgrades whose returns depended on market access they could not yet guarantee.

3. Financing Mechanism and Delivery Model

Colombia progressively addressed this challenge through a bundled market-access model in which certification, technical support, financing, and commercial buyer linkage were developed together as a coordinated package rather than as isolated interventions. This model emerged over more than a decade and reflects sector-specific institutional capacity that took considerable time to develop.

Under this model:

- ICA financed regulatory oversight and export certification infrastructure from public budget allocations;
- producers financed orchard development and compliance upgrades, often supported by cooperative pooling of capital and by commercial bank loans backed by forward sales contracts;
- exporters financed packing infrastructure and cold chain systems from retained earnings, equipment finance, and supply chain finance facilities; and
- CorpoHass coordinated technical support, market intelligence, and sector alignment, including connecting producer groups with exporters and international buyers.

The commercial significance of this arrangement was that compliance investments became directly linked to identifiable export channels rather than remaining isolated technical expenditures. Forward commercial relationships reduced uncertainty because certified production had clearer market destinations, which in turn improved the investment case for financing parties. The way finance flowed in practice reflected this bundling. Smallholders did not generally access export-related credit directly; most accessed finance through exporters or producer associations that aggregated supply under forward purchase agreements. Exporters used those purchase agreements as collateral or comfort for working capital lines from commercial banks, and they passed inputs, technical assistance, and partial pre-financing down to producers. Cooperatives provided a vehicle for collective action in financing

certification and shared compliance infrastructure. Buyer agreements with European importers underpinned the credit risk profile of exporters; rising export volumes and falling rejection rates in turn allowed banks to extend longer tenors and larger facilities. SPS compliance was central to this credit logic because rejection events directly damaged the cashflows on which the lending was based.

Table A1-2. Financing Structure of Colombia's Hass Avocado SPS Export Model

Investment Area	Main Financing Source	Lead Institution	Financing Logic	SPS Relevance
Phytosanitary surveillance and export certification	Public budget	ICA	Core public regulatory financing	Enables export eligibility
Farm registration and traceability systems	Public and producer co-investment	ICA and producers	Shared compliance investment	Supports traceability
Orchard establishment	Producer investment and commercial credit	Producers	Medium-term productive investment	Required for GAP compliance
Certification	Producer and exporter investment	Producers and exporters	Private compliance expenditure	Enables regulated market access
Packing houses and cold chain	Exporter capital investment	Export firms	Logistics investment	Protects phytosanitary integrity
Technical assistance	Sector coordination resources	CorpoHass	Shared support cost	Improves compliance uptake

Source: Adapted from institutional roles of the Instituto Colombiano Agropecuario and CorpoHass.

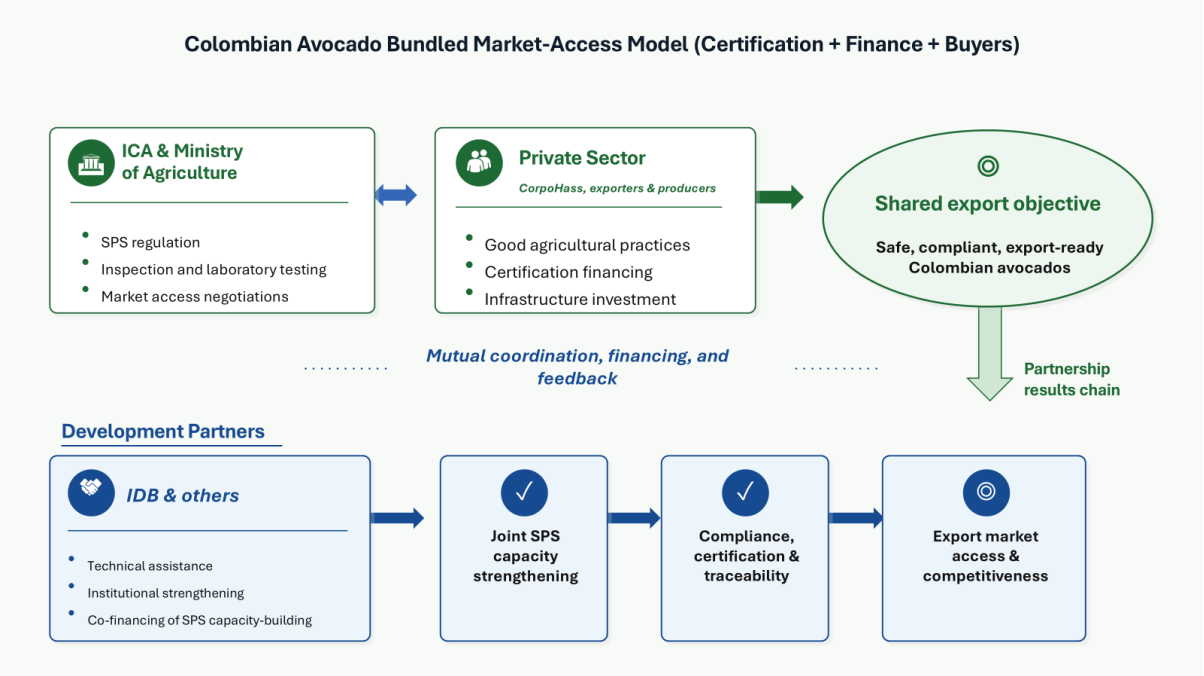
4. Institutional Coordination and Traceability

Institutional coordination has been central to sector performance. ICA functions as the regulatory anchor for farm registration, phytosanitary inspection, pest surveillance, and export certification.[3] CorpoHass serves as the principal sector coordination platform, linking producers, exporters, technical service providers, and international buyers.

A major enabling factor has been digital traceability. Export farms are geo-referenced and monitored through digital systems that support pest surveillance, rapid response, and export verification. This strengthens both phytosanitary integrity and commercial confidence among buyers. The integration of digital traceability has reduced administrative delays and improved sector responsiveness to SPS alerts.

The Ministry of Agriculture and Rural Development provides overarching policy direction and has supported sector development through targeted rural programmes. The Inter-American Development Bank and other development partners have contributed technical assistance and capacity building at institutional level.

Figure A1-1. Bundled Market-Access Model: Illustration of Value Chain Linkages



Source: Adapted from CorpoHass and ICA institutional frameworks.

5. Export Outcomes

The sector's export performance illustrates the commercial impact of coordinated SPS investments. Table A1-3 presents export volumes by destination from 2023 to August 2025.[1]

Table A1-3. Colombia Hass Avocado Exports by Destination, 2023–2025 (Tons)

Destination	2023 (Tons)	2024 (Tons)	2025 (Jan.–Aug., Tons)
Europe	97,456	101,180	89,038
United States	12,926	30,207	40,807
Asia	2,933	5,601	4,192
Latin America	1,231	830	1,552
Canada	197	498	494

Source: CorpoHass, using DIAN/SICEX export records.

By August 2025, exports to the United States had already reached 40,807 tons, indicating continued strong growth in that market. Europe remained the dominant destination in volume terms, while the rapid expansion of United States shipments is increasingly significant for market diversification. The Asian market also shows consistent growth, rising from 2,933 tons in 2023 to 5,601 tons in 2024.

Export-ready avocados command a significant price premium over domestic-market produce, estimated at approximately twice the domestic price, reinforcing the commercial incentive for producers to achieve and maintain certification compliance.

6. Risk Allocation Model

A central reason the model became financeable is that risk was distributed across institutions rather than concentrated at farm level. Each actor in the value chain carried the risks most within its capacity to manage and mitigate.

Table A1-4. Risk Allocation in Colombia's Hass Avocado SPS Export Financing System

Risk Category	Primary Risk Bearer	Nature of Risk	Mitigation Mechanism
Certification risk	Producers	Failure to meet export standards	Technical support and certification guidance
Phytosanitary risk	ICA and producers	Pest outbreak or non-compliance event	Surveillance, inspection, and rapid response protocols
Production risk	Producers	Delayed orchard productivity	GAP adoption and technical extension services
Market risk	Exporters and producers	Buyer volatility and demand fluctuation	Diversified destination markets and forward agreements
Logistics risk	Exporters	Cold chain failure	Packing infrastructure and refrigerated transport
Repayment risk	Producers and lenders	Delayed investment returns	Buyer-linked financing and offtake agreements
Traceability risk	Producers and regulators	Weak data integrity	Geo-referenced registration and digital monitoring systems

Source: Authors, based on institutional roles of ICA, CorpoHass, and sector stakeholders.

7. Replicability Assessment

The Colombia model is not automatically transferable. Its success reflects a specific combination of sector characteristics, institutional capacity, and market conditions that took over a decade to develop. However, it offers a replicable framework rather than a fixed blueprint.

Box A1-1. Applying Colombia's Model in Other Contexts

What makes the model transferable: The most transferable feature of Colombia's model is the bundling of certification, technical support, financing, and buyer linkage into a single coordinated progression rather than treating each component separately.

Minimum enabling conditions: Replication requires a credible phytosanitary authority; a sector coordination platform; visible export demand; and capacity to distribute risk across institutions.

Likely replication constraints: Replication may be slower where producer organizations remain weak; cold chain systems are limited; export logistics remain fragmented; or public SPS systems lack operational capacity.

Implication for STDF: Catalytic support is likely to be most effective where partial institutional foundations already exist and can be accelerated through targeted financing support.

8. Strategic Lesson for SPS Financing

The success of the Hass avocado sector in Colombia was the result of layered investment across the value chain. Each set of actors invested at a different stage and on different terms.

- Producers and producer associations invested first, financing Good Agricultural Practices (GAP) adoption, orchard management, and initial certification costs. Smallholders generally pooled capital through cooperatives and producer associations, supplemented by limited commercial bank credit secured against group offtake agreements.
- Public sector institutions, principally ICA, invested in regulatory credibility by developing internationally recognized certification, inspection, and traceability systems funded from public

budget allocations. This investment preceded most private finance flows and was a precondition for them.

- Exporters and post-harvest firms invested in sorting, cold storage, and packaging infrastructure required to meet SPS requirements in EU and United States markets. They financed these investments from retained earnings, equipment finance, and supply chain finance facilities provided by Colombian commercial banks.
- Financial institutions, including commercial banks operating in agricultural finance, entered the sector once SPS credibility reduced their risk exposure. They offered working capital loans to exporters and SME upgrading finance to processing firms, supported by lower rejection rates and stable export demand. Lending was generally short to medium term at market interest rates, secured by export receivables and offtake contracts.
- International buyers in Europe, North America, and Asia reinforced compliance by offering price premiums for certified Hass avocados, creating direct commercial incentives for sustained SPS investment.

The existence of a functioning phytosanitary control system increased buyer confidence and reduced uncertainty for producers and exporters making long-term investments. The central lesson is that bundling certification, finance, traceability, and buyer access reduces transaction costs and improves investment viability across the value chain.

Key Insight

The Colombia case demonstrates that SPS compliance becomes financeable when it is commercially anchored in a partnership model. For example, cooperatives pooled capital through collective action, buyer agreements supported bank financing, credit flowed through exporters to producers, and premium pricing reinforced compliance and stabilized repayment capacity. Certification must be linked directly to investable export pathways, not treated as a stand-alone regulatory burden. This reinforces the importance of STDF-supported financing models that connect SPS upgrading to structured commercial relationships, buyer agreements, and shared risk instruments.

9. Conclusion

Colombia's Hass avocado sector demonstrates that SPS compliance can function as an investment platform rather than solely a regulatory requirement. Public institutions carried the regulatory credibility that underpins market access. Private actors financed commercially recoverable investments. Sector coordination through CorpoHass reduced market-entry barriers and aligned incentives across producers, exporters, and buyers.

For STDF, this case reinforces that catalytic SPS support is most effective when technical compliance is linked directly to investable export pathways. When phytosanitary standards, commercial linkages, and financing instruments are structured together, compliance transitions from a barrier into a value-chain asset and investment becomes viable.

"Colombia's investment in SPS systems was not only about trade. It was about creating viable market driven livelihoods for smallholder farmers and building a sustainable rural economy. The turning point came when the private sector organized first and then partnered with the government to open export markets. That alignment made long-term SPS system investment possible."

Carlos Edilquer Guerrero Hoyos, Instituto Colombiano Agropecuario (ICA)

Notes

[1] CorpoHass export statistics based on DIAN/SICEX records, 2025.

[2] ICA Hass avocado registration data, 2024.

[3] ICA export registration and phytosanitary certification framework, official sector reporting.

References

CorpoHass (2025). Export destination statistics based on DIAN/SICEX records. Bogota: CorpoHass.

Instituto Colombiano Agropecuario (ICA) (2024). Exportaciones de aguacate Hass y registros fitosanitarios. Bogota: ICA.

Perez, A. and Gomez, R. (2022). Avocado value chain competitiveness and SPS compliance in Colombia. Bogota: Working paper.

Annex 6. Case Study 2: Blended Finance for SPS Compliance in Export-Oriented Vegetable Value Chains in Bangladesh

Acknowledgements

This case study was developed with the technical contributions of Abdul Awal, Team Leader, Safe BD project, Sakib Khaled, Head of Portfolio, Mir Rafiat Salman, Senior Manager, Safe BD project Ahmed Rifat Srishty, Coordinator, Safe BD project with Swisscontact Bangladesh and Md. Rafiqul Islam, Deputy Managing Director Helal Ahmed, Head of Branch Business with IFIC Bank PLC. The findings, interpretations, and conclusions expressed in this document are those of the authors and do not necessarily represent the views of the STDF, its partner organizations, or its donors.

Executive Summary

Bangladesh's SAFE-BD project (April 2025 to March 2028), implemented by Swisscontact with a USD 1 million STDF grant supplemented by AUD 75,000 leveraged from Australia's Department of Foreign Affairs and Trade, is strengthening vegetable export competitiveness by improving compliance with international SPS standards for gourds and other fresh vegetables. The project operates in a context of limited government regulatory capacity and fragmented private sector investment.

The most significant financing innovation in this model is the mobilization of USD 300,000 in co-financing from International Finance Investment and Commerce (IFIC) Bank PLC, a national commercial bank, through its business development fund rather than its corporate social responsibility window. This reflects a deliberate repositioning of the SPS investment narrative: compliance was framed not as a regulatory obligation but as a pathway to export market access and long-term commercial returns.

The STDF grant finances technical compliance capacity, including Good Agricultural Practices (GAP) adoption, residue management, regulatory oversight, and exporter upgrading. IFIC Bank's co-financing extends the intervention to SME and agri-processor upgrading, financial literacy, and access-to-finance activities that fall outside the core STDF scope. Together, the two funding streams create a blended model linking technical compliance, enterprise upgrading, and financial inclusion.

For STDF stakeholders, the case demonstrates that grant-funded SPS projects can catalyse private commercial co-financing when the investment case is structured credibly and presented in terms of long-term commercial returns rather than development obligations.

1. Sector Context and SPS Challenge

Bangladesh is a significant producer of fresh vegetables, including gourds and other horticultural products with export potential in Middle Eastern, European, and regional markets. The vegetable export sector comprises a large number of smallholder producers supplying exporters and agri-processors, many of which are micro, small, and medium enterprises (MSMEs).

Fresh vegetable exports have been volatile in recent years. According to Bangladesh Export Promotion Bureau (EPB) data, fresh vegetable export earnings stood at USD 61.14 million in fiscal year 2022-23 before rising to USD 112.47 million in fiscal year 2023-24. In the first half of fiscal year 2024-25, exports declined sharply to USD 29.60 million, a 57.9% year-on-year contraction that exporters attribute to rising domestic vegetable prices, higher airfreight costs, and a reduction in government cash incentives from 15% to 10%. The volatility above reflects cost and policy variables rather than SPS-related border rejections, which are recorded separately in EU notification data. This volatility illustrates the broader competitiveness challenge facing the sector.

Bangladesh's vegetable exports face challenges in complying with SPS requirements, particularly Maximum Residue Limits (MRLs), biological contamination controls, and systematic traceability standards. Importing countries, including European Union member states, enforce food safety rules under Regulation (EU) 2019/1793, requiring verifiable compliance across production, processing, and export stages. Fruits and vegetables remain among the most frequently notified categories in the EU Rapid Alert System for Food and Feed (RASFF), with pesticide residues ranking as the third most common hazard overall. The institutional SPS landscape is characterized by the central role of the Department of Agricultural Extension (DAE) under the Ministry of Agriculture, which provides regulatory

oversight, pest management, and agricultural extension services. Government capacity for systematic SPS inspection and certification remains constrained, and coordination across regulatory agencies and the private sector has historically been limited.

Vegetable exporters and producers have had limited access to structured SPS compliance support or financing instruments suited to compliance investment. SPS spending has been primarily donor-funded and project-based, with limited continuity between project cycles and weak integration between technical compliance activities and commercial finance.

2. Financing Problem Addressed

The core financing challenge in Bangladesh's vegetable export sector reflects a broader pattern common to many lower-income country SPS contexts: compliance investments generate returns only when they are linked to functioning regulatory systems, credible export certification, and reliable market access. These conditions are interdependent; none can be addressed in isolation.

At farm level, smallholder producers face significant upfront costs for GAP adoption, training, and residue management, with uncertain returns dependent on whether exporters are able to place compliant produce in international markets. At exporter and processor level, SPS upgrading requires investment in certification, packaging, traceability systems, and cold chain infrastructure. Commercial lenders have been reluctant to finance these costs given the perceived risk of the sector and the absence of structured offtake or buyer commitments.

The fragmented regulatory environment compounds these financing barriers. Private sector actors, including producers and financial institutions, are reluctant to invest in SPS compliance when regulatory systems and inspection services remain unreliable. As Swisscontact noted during the STDF Financing Study consultation, strengthening a single firm’s SPS capacity is insufficient unless regulatory systems and support services improve in parallel.

For commercial banks, the sector had not historically been structured as a bankable investment opportunity. SPS investments had been framed as regulatory compliance requirements or development activities rather than as commercially recoverable investments linked to verifiable export growth.

3. Financing Mechanism and Delivery Model

The SAFE-BD project (Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh) was approved by STDF in 2025 with a grant of USD 1 million, supplemented by AUD 75,000 leveraged from Australia’s Department of Foreign Affairs and Trade, and is implemented by Swisscontact over three years, from April 2025 to March 2028. The project targets the gourd and fresh vegetable export value chain, with interventions at producer, exporter, and regulatory levels.

The most consequential aspect of the SAFE-BD financing model is the mobilization of USD 300,000 in complementary co-financing from IFIC Bank PLC, a national commercial bank, in the first year of implementation. Unlike traditional CSR contributions, this financing was secured through IFIC's business development fund, underscoring a shift from philanthropic support to commercial investment. Founded in 1976, IFIC Bank is one of Bangladesh’s longer-established commercial banks and has built a particular footprint in agricultural and SME lending. What is innovative in this engagement is not the underwriting itself but the bank’s willingness to treat an SPS-anchored project as an entry point for portfolio expansion rather than as a corporate social responsibility activity. SAFE-BD helped de-risk the agricultural lending opportunity by giving IFIC Bank a structured pipeline of vetted exporters, agri-processors, and producer groups.

The transition from corporate social responsibility to business development framing was achieved through a structured engagement process in which Swisscontact presented IFIC Bank with a formal business case demonstrating that SAFE-BD offered direct access to farmers, exporters, agri-SMEs, and processors in high-potential vegetable clusters, creating long-term opportunities to expand IFIC Bank's agricultural lending portfolio and financial services client base.

Under the blended model, the STDF grant funds technical capacity building for producers (GAP adoption and residue management), for exporters and traders (SPS compliance upgrading), and for government (DAE inspection and oversight capacity). IFIC Bank's co-financing supports SME and agri-processor upgrading, business development services, financial literacy, and access-to-finance activities that extend beyond the core STDF scope. Swisscontact coordinates implementation across both funding streams, ensuring technical compliance and commercial finance components are integrated rather than parallel. The Bangladesh Fruits, Vegetables, and Allied Products Exporters Association

(BFVAPEA) plays a coordination and aggregation role, linking farmers, exporters, and market actors, supporting information flow, and facilitating collective compliance and market access efforts. DAE provides regulatory oversight, participates in capacity building, and is being trained to apply STDF P-IMA tools for ongoing SPS investment prioritization.

In practice, this structure separates the public-good component of SPS investment (regulatory capacity and GAP training for smallholders) from the commercially recoverable component (enterprise upgrading for exporters and SMEs), financing each through the most appropriate instrument. The STDF grant absorbs the initial risk; IFIC Bank's equity like financial support follows once the commercial opportunity is demonstrated.

Table A2-1. Financing Structure of Bangladesh's SAFE-BD SPS Blended Finance Model

Investment Area	Main Financing Source	Lead Institution	Financing Logic	SPS Relevance
SPS regulatory oversight and inspection capacity	Public budget and STDF grant	Department of Agricultural Extension (DAE)	Core public regulatory financing, supplemented by donor grant	Enables export eligibility through official inspection and certification
GAP adoption and residue management at farm level	STDF grant (technical assistance)	Swisscontact, DAE, and BFVAPEA	Grant-funded capacity building for primary producers	Reduces pesticide residue violations; supports compliance with importing country MRLs
Exporter and trader SPS compliance upgrading	STDF grant and IFIC Bank co-financing	Swisscontact, IFIC Bank, and BFVAPEA	Blended: grant funds training; commercial finance funds infrastructure upgrades	Strengthens supply chain compliance and export certification readiness
SME and agri-processor upgrading (certification, packaging, traceability)	IFIC Bank business development fund	IFIC Bank PLC	Commercial co-financing beyond original grant scope	Improves traceability integrity and post-harvest compliance
Financial literacy and access-to-finance component	IFIC Bank business development fund	IFIC Bank PLC and Swisscontact	Private finance for enterprise integration	Enables sustained investment in SPS-compliant production systems
Market systems and export linkage development	STDF grant and sector coordination	Swisscontact and exporters	Shared facilitation cost	Connects compliant production to verifiable international buyers

Source: Swisscontact SAFE-BD project documentation and STDF Financing Study key informant consultation, February 2026.

"Working with farmers and exporters in Bangladesh has shown us that SPS compliance is not a regulatory checklist. It is a long-term competitiveness investment. The breakthrough in this project was not the grant itself but the conversation we had with IFIC Bank. When SPS upgrading was presented as a business development opportunity rather than a development obligation, the financing logic changed. That shift is replicable in many other contexts."

Abdul Awal, Team Leader, Safe BD Project, Swisscontact Bangladesh

4. Institutional Coordination and Traceability

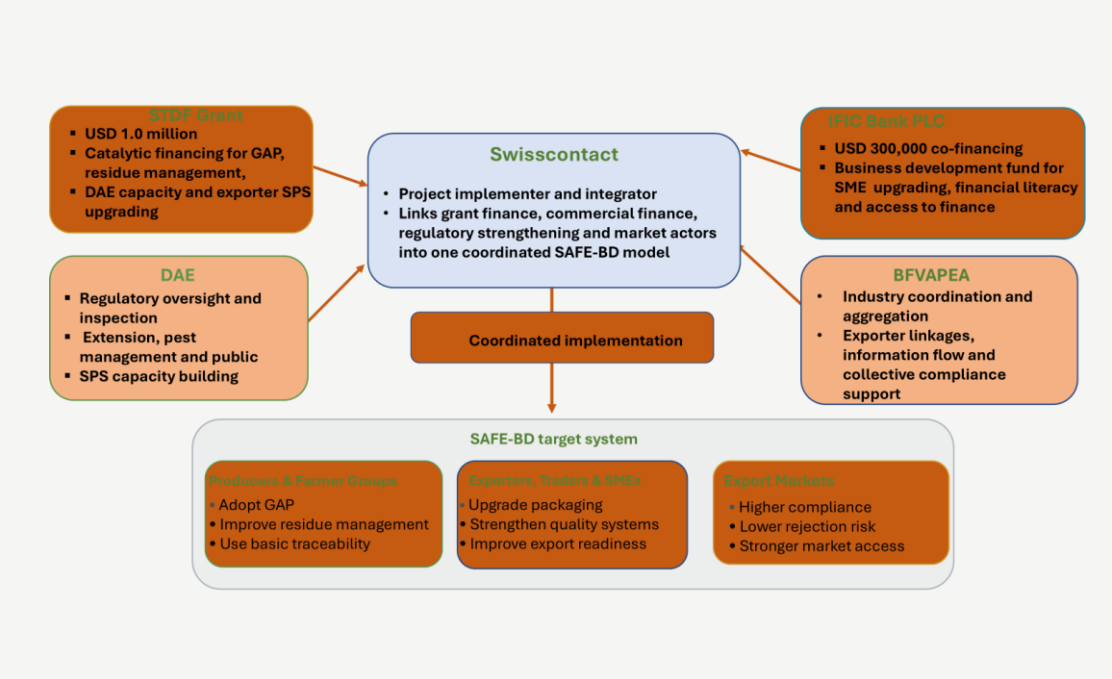
SAFE-BD's institutional architecture is built around Swisscontact's role as project implementer, connecting the regulatory, development, and commercial finance dimensions of the intervention. Swisscontact coordinates directly with DAE on regulatory capacity building, with exporters and traders on compliance upgrading, and with IFIC Bank on the commercial co-financing component.

DAE serves as the principal regulatory counterpart, providing the institutional framework for farm-level pest management, inspection, and official oversight. A core component of the project is strengthening DAE's own capacity, with the objective that improvements in the regulatory environment will in turn increase private sector confidence in SPS-linked investments.

IFIC Bank serves as both a co-financier and a participant in the project's market systems approach. Its involvement creates a direct financial services relationship with producers, exporters, and SMEs in the vegetable export cluster, with the expectation that those relationships will continue beyond the project period if they prove commercially viable. The bank's engagement reflects the project's market systems development approach: rather than substituting for private sector participation, the project is designed to demonstrate and reduce the risk of the commercial opportunity so that private actors sustain engagement independently.

Traceability and monitoring systems are a component of the project's SPS upgrading activities, with exporters and processors supported to implement basic traceability documentation and quality management protocols. The traceability infrastructure in Bangladesh's vegetable export sector is at an earlier stage of development than in the Colombia Hass avocado model, and digital integration across the value chain remains limited at project inception.

Figure A2-1. SAFE-BD Institutional Architecture: Coordination Among Key Actors



Source: Adapted from Swisscontact SAFE-BD project documentation.

5. Export Outcomes

SAFE-BD is a recently approved project (April 2025 to March 2028), and quantitative export outcome data attributable to the project are not yet available. The sector context can be characterized by the recent trajectory of fresh vegetable export earnings, which frames the baseline against which project outcomes will be measured. Table A2-2 summarizes the recent trend using Bangladesh EPB data.

Table A2-2. Bangladesh Fresh Vegetable Exports, Fiscal Years 2022-23 to 2024-25

Period	Export Value (USD million)	Year-on-Year Change
Fiscal year 2022-23	61.14	n/a
Fiscal year 2023-24	112.47	+83.9%
Fiscal year 2024-25 (July-December)	29.60	-57.9% vs. same period FY2023-24

Source: Bangladesh Export Promotion Bureau (EPB), as reported in Bangladesh media (The Daily Star, January 2025).

The fiscal year 2023-24 peak of USD 112.47 million reflects recovering post-pandemic demand and relatively favourable freight conditions. The subsequent contraction in the first half of fiscal year 2024-25 underscores the fragility of current export performance and the sensitivity of sector earnings to

The available source materials indicate the following intended SAFE-BD outcome trajectory by project completion in March 2028.

- Expanded integration of producers, processors, and exporters in international vegetable markets.
- A strengthened vegetable value chain with closer collaboration among MSMEs and agri-processors.
- Mobilization of commercial finance demonstrating a correlation between SPS compliance initiatives and private sector investment.
- Increased compliance rates, improved product quality, and enhanced readiness to access high-value international markets.

6. Risk Allocation Model

A central design principle of the SAFE-BD blended model is the explicit separation of risk types and their allocation to the actors best positioned to manage them. The STDF grant absorbs the public-good and market-creation risk associated with regulatory capacity building and smallholder GAP adoption, activities whose returns accrue slowly and across the sector as a whole. IFIC Bank carries the commercial lending risk for enterprise upgrading, where returns are more direct and recoverable.

Table A2-3. Risk Allocation in Bangladesh's SAFE-BD SPS Blended Finance Model

Risk Category	Primary Risk Bearer	Nature of Risk	Mitigation Mechanism
Residue and contamination risk	Exporters and traders	Pesticide residue violations triggering export rejection	GAP training, residue management protocols, and field monitoring by DAE
Certification and inspection risk	Exporters and traders	Non-compliance with importing country standards	Exporter SPS upgrading supported by STDF grant and Swisscontact technical assistance
Regulatory capacity risk	Government (DAE)	Insufficient inspection and oversight capacity	DAE capacity building through STDF-funded technical assistance
Financing risk	SMEs and agri-processors	Limited access to capital for compliance investments	IFIC Bank co-financing through business development fund, linked to project participation

Risk Category	Primary Risk Bearer	Nature of Risk	Mitigation Mechanism
Market linkage risk	Producers and exporters	Weak or inconsistent buyer relationships	Market systems development component; export linkage facilitation by Swisscontact
Reputational and loan portfolio risk	IFIC Bank	Borrower non-performance or sector underperformance	Project-linked lending with Swisscontact monitoring and structured business development support
Donor dependency risk	Sector broadly	SPS compliance reverting after grant period ends	Commercial co-financing designed to create self-sustaining financing relationships beyond project life in addition to government support

Source: Authors, based on Swisscontact SAFE-BD project documentation and STDF Financing Study key informant consultation, February 2026.

7. Replicability Assessment

The SAFE-BD model offers a replicable framework for mobilizing commercial co-financing alongside STDF grants, particularly in lower-income country contexts where government regulatory capacity is limited and private sector SPS investment has historically been donor-dependent.

The model's most transferable lesson is the shift from corporate social responsibility to business development framing. In practical terms, this means repositioning a development project as a commercial investment opportunity rather than a philanthropic one. This shift is not automatic; it requires structured engagement with financial institutions, a credible business case, and a project design that gives banks a direct client relationship rather than a passive funding role.

Box A2-1. Applying Bangladesh's Model: Pre-conditions for Replication

The SAFE-BD blended finance model is most directly replicable in contexts where the following conditions are present:

- A commodity with demonstrated export demand and identifiable international buyers willing to pay a compliance premium.
- A development organization or project implementer capable of bridging the gap between SPS technical requirements and commercial bank engagement.
- A commercial bank or financial institution with an agricultural or SME lending mandate open to business development framing.
- A functioning national SPS authority able to provide regulatory oversight, even at relatively limited capacity.
- A project structure that separates grant-funded technical assistance from commercially financed SME and enterprise upgrading.

The model is particularly relevant for contexts where donor grants have historically been the default SPS financing mechanism and where commercial banks have not yet recognized the lending opportunity in export-oriented agri-SMEs. The key replication step is repositioning engagement with financial institutions from corporate social responsibility to business development, which requires structured project design and a credible commercial case.

The model is less directly applicable in contexts where the regulatory environment is so weak that even system-wide investment cannot plausibly generate compliance outcomes, or where there are no commercial banks with agricultural or SME lending mandates. In those contexts, a more intensive programme of institutional strengthening may be required before blended finance becomes viable.

8. Strategic Lesson for SPS Financing

Four factors explain why commercial co-financing became viable in the SAFE-BD model.

- SPS investments were reframed as trade competitiveness and market access tools rather than regulatory compliance obligations, creating a credible commercial narrative for private sector engagement.
- The project design created a direct commercial opportunity for the bank: participation gave IFIC Bank access to a new agricultural lending client base, not simply an opportunity to support development activities.
- The separation of grant-funded public-good activities from commercially financed enterprise upgrading meant that IFIC Bank was financing activities with identifiable commercial beneficiaries and recoverable investment potential, not activities with diffuse or long-term returns.
- The choice of financial institution was a strategic decision. Not all banks have the incentives or operational capacity to finance rural or agricultural sectors. IFIC Bank's rural footprint and agricultural market depth provided it with a clear strategic incentive to participate, building on its existing competitive advantage and sectoral familiarity.

The broader lesson is that blended SPS finance requires deliberate investment in constructing the commercial case. It is not sufficient to seek co-financing after a project is designed; the commercial opportunity must be built into the project structure from the outset. Financial institutions respond to structured business propositions, not development impact narratives alone.

"For IFIC Bank, SAFE-BD is not a corporate social responsibility activity. It is a portfolio investment in the agricultural and SME sector that aligns with our long-term strategic priorities. Working through Swisscontact, we have direct access to vegetable exporters, processors, and SMEs in high-potential clusters. These are the financial services clients who will sustain our agricultural portfolio for the next decade."

Rafiqul Islam, Deputy Managing Director, IFIC Bank

Key Insight

The Bangladesh case demonstrates that STDF grants can function as catalytic capital to mobilize private commercial co-financing, provided the project design includes explicit commercial engagement with financial institutions and positions SPS compliance as a business development opportunity.

The key design requirement is separating the grant-funded technical assistance component from the commercially financed enterprise upgrading component, allowing each to be financed through the most appropriate instrument. STDF could strengthen this model by building structured commercial bank engagement into project design from the outset, rather than treating private co-financing as an opportunistic addition.

Swisscontact's experience indicates that engaging financial institutions during project design, before implementation begins, significantly increases the likelihood of securing substantive business development commitments rather than token corporate social responsibility contributions.

9. Conclusion

Bangladesh's SAFE-BD project illustrates a different type of SPS financing model from the Colombia Hass avocado case. Rather than a mature, commercially anchored sector model built over fifteen years, SAFE-BD represents an early-stage blended finance intervention in a context of limited government capacity and fragmented private sector investment.

The case's primary contribution to the STDF SPS Financing Study is the demonstration that commercial bank co-financing is achievable in challenging SPS contexts, provided the investment case is structured credibly and the engagement with financial institutions is positioned around commercial opportunity rather than development philanthropy. The USD 300,000 IFIC Bank commitment alongside the USD 1

million STDF grant represents a significant private sector co-financing ratio for an early-stage SPS project.

For STDF, this case reinforces that catalytic grant financing is most effective when it is explicitly designed to attract private investment. The Bangladesh model demonstrates that how the commercial case is designed and presented matters as much as the availability of grant funding itself.

Notes

[1] Swisscontact (2025). SAFE-BD Project Documentation and Implementation Framework. Dhaka: Swisscontact Bangladesh.

[2] IFIC Bank PLC (2025). Business Development Fund co-financing commitment to SAFE-BD. Dhaka: IFIC Bank.

[3] STDF (2025). SAFE-BD: Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh. Project Approval Documentation. Geneva: Standards and Trade Development Facility.

[4] Swisscontact and STDF Financing Study key informant consultation, 26 February 2026.

[5] Bangladesh Export Promotion Bureau (EPB) export data reported in Asia News Network and The Daily Star, 7 January 2025.

[6] European Commission, Rapid Alert System for Food and Feed (RASFF) annual reports on pesticide residue notifications and border rejections, fruits and vegetables category.

References

Bangladesh Export Promotion Bureau (EPB) (2025). Monthly export statistics, fresh vegetables category, fiscal years 2022-23 to 2024-25. Dhaka: EPB.

European Commission (2019). Commission Implementing Regulation (EU) 2019/1793 on the temporary increase of official controls and emergency measures governing the entry into the Union of certain goods from certain third countries. Brussels.

European Food Safety Authority (EFSA) (2024). The 2023 European Union report on pesticide residues in food. Parma: EFSA.

IFIC Bank PLC (2025). Business Development Fund: Co-financing commitment to SAFE-BD project. Dhaka: IFIC Bank PLC.

Rapid Alert System for Food and Feed (RASFF) (2024). Annual report on notifications of pesticide residues and border rejections. Brussels: European Commission.

STDF (2025). SAFE-BD: Improving the Implementation of SPS Best Practices for Export-Oriented Vegetables in Bangladesh. Project Approval Documentation. Geneva: Standards and Trade Development Facility.

Swisscontact (2025). SAFE-BD Project Documentation and Implementation Framework. Dhaka: Swisscontact Bangladesh.

Swisscontact and STDF Financing Study (2026). Key Informant Consultation. Conducted 26 February 2026 by Jennifer Maurer, STDF Financing Study Consultant.

The Daily Star (2025). High prices, freight costs take a toll on Bangladesh's vegetable exports. 7 January 2025. Dhaka.

Annex 7. Case Study 3: Public Investment and Multi-Donor Coordination in SPS Compliance for Livestock Exports in Ethiopia

Acknowledgements

This case study was developed with the technical contributions of Dr Fikru Regassa Gari, State Minister for the Livestock and Fishery Resources Development Sector, Ministry of Agriculture; and Dr Alemayehu Mekonnen Anbessie, Senior Advisor, Office of the State Minister for Livestock and Fishery Resources Development, Ministry of Agriculture. The findings, interpretations, and conclusions expressed in this document are those of the authors and do not necessarily represent the views of the STDF, its partner organizations, or its donors.

Executive Summary

Ethiopia's livestock and livestock product exports have remained well below the sector's potential, constrained by non-compliance with internationally recognized standards for food safety, animal health, and plant health, by repeated trade bans linked to transboundary animal disease outbreaks, and by weak institutional coordination across the export value chain.

The STDF-funded project "Facilitating livestock exports in Ethiopia" (project reference STDF/PG/477) was implemented by FAO, with USD 569,827 disbursed. The project ran from July 2018 to October 2023, with three no-cost extensions granted in response to the COVID-19 pandemic, security disruptions in northern Ethiopia, and government restructuring. It focused on building SPS compliance capacity for sheep, goat, and cattle meat exports to Middle East and North Africa (MENA) markets.

The project delivered substantial capacity-building results. Fifteen standard operating procedures (SOPs) were revised and validated; quality management systems (QMS) were introduced at the Veterinary Drug and Feed Administration and Control Authority (VDFACA) and three regional veterinary laboratories; a national residue monitoring plan was developed and made operational; and biannual federal-regional coordination forums were established. The revised Animal Health and Welfare Proclamation (No. 1376/2025), prepared with project support, was ratified by Parliament in April 2025 and published in the Federal Negarit Gazette in August 2025, establishing a modern legal framework for disease control, public health, animal welfare, and trade regulation.

The project was designed to complement the national Livestock Master Plan (LMP) investment framework rather than to function as a standalone donor intervention, and that alignment subsequently contributed to the Government of Ethiopia securing and operationalizing the US$D 176 million World Bank Livestock and Fisheries Sector Development Project (2019), anchored in the LMP. Embedding STDF-funded capacity building within the LMP framework transformed a time-limited project into the investment readiness phase of a much larger national programme, creating the institutional and political continuity that attracted the complementary World Bank commitment.

The project's market-linkage objectives were not achieved. Bilateral SPS negotiations, trade fairs, business-to-business events, and the planned SPS information website were blocked by a combination of geopolitical barriers in MENA markets, halal certification requirements that extend beyond Ethiopia's current system, COVID-19 travel restrictions, and the reorganization of regulatory mandates between the Ministry of Agriculture (MoA) and the new Ethiopian Agricultural Authority (EAA). This outcome is an important finding for STDF's financing study: SPS compliance investment can produce substantial regulatory gains while commercial market access remains constrained by factors outside the compliance architecture.

Key Insight

The Ethiopia case demonstrates that STDF grants are most effective when aligned with national sector investment plans and positioned as catalytic instruments within a multi-donor coordination framework. The Terminal Report adds a substantive qualification: SPS compliance investment is necessary but not sufficient for market access. Non-technical barriers, including geopolitical factors, halal certification requirements, and trade policy dynamics, can block commercial returns even when regulatory capacity is substantially improved. Grant-funded SPS capacity building should be paired with explicit follow-on mechanisms for recurrent cost sustainability. The P-IMA framework and the Project Preparation Grant are most valuable when they help governments develop investment-ready programmes aligned with a realistic assessment of market access conditions.

1. Sector Context and SPS Challenge

Ethiopia has the largest livestock population in Africa and remains one of the world's major livestock-producing countries. According to the most recent published CSA livestock sample survey (2021), the country's livestock population is estimated at 70.3 million cattle, 42.9 million sheep, 52.5 million goats, and 8.1 million camels, underscoring the sector's strategic importance for food security, rural livelihoods, dairy development, meat production, and export potential. This resource base positions Ethiopia as a country with considerable latent export potential in meat and live animals, particularly to the growing markets of the Middle East and North Africa.

Despite this potential, actual export performance has remained limited relative to sector capacity. According to the Ethiopian Meat and Dairy Industry Development Institute (EMDIDI), Ethiopia could produce and export approximately 500,000 metric tons of meat annually, generating up to USD 1.8 billion in foreign exchange earnings. In practice, total meat export earnings averaged around USD 100 million per year over the project implementation period, well below the Growth and Transformation Plan II (GTP II) target of USD 909 million for combined live animal and meat exports by 2020.

The principal constraint has been non-compliance with the SPS requirements of importing countries. Repeated trade bans imposed by MENA countries in response to outbreaks of transboundary animal diseases (TADs), including foot-and-mouth disease (FMD) and Rift Valley fever (RVF), have disrupted export revenue and undermined commercial confidence. A single RVF-related ban in 2000 was estimated to have caused a loss of US$132 million in added value and a 36% fall in GDP in the Somali region of Ethiopia alone.

The 2011 PVS Evaluation, the 2012 PVS Gap Analysis, and the 2025 PVS Follow-Up Evaluation together document a systemic pattern of SPS constraints across the full value chain. At production level, disease surveillance covers only 35 to 40% of districts, with coverage falling sharply in pastoral and agro-pastoral areas from which most export animals are sourced. At market and feedlot level, biosecurity standards are weak, and animal health checks are inconsistently applied. At abattoir level, Good Hygiene Practice (GHP), Hazard Analysis and Critical Control Point (HACCP), and ISO quality management systems are not consistently applied, and cold chain integrity is frequently compromised. At institutional level, coordination between federal and regional veterinary services has historically been weak, the legal framework governing animal health was outdated until the 2025 proclamation, and laboratory diagnostic capacity was insufficient for international credibility at the start of the project.

Ethiopia recognized these constraints in its national policy framework. The LMP, developed by the International Livestock Research Institute with the Ministry of Agriculture in 2015 and integrated into GTP II, set explicit export targets and identified animal health, veterinary services, abattoir monitoring, disease surveillance, and SPS compliance as critical enabling conditions for sector growth. The LMP subsequently informed a World Bank-supported livestock sector investment programme of USD 176 million, one of the largest such livestock investments in the region. STDF support played an important upstream role in translating this policy priority into a practical SPS and market-access agenda for meat exports: by strengthening the capacity of Ethiopia's competent authority to apply, inspect, and monitor SPS measures along the export meat value chain, and by supporting linkages between Ethiopian exporters and importers in selected Middle East, North African, and Southeast Asian markets, the STDF project helped lay the regulatory and institutional foundation on which the larger World Bank programme subsequently built. The STDF project was prepared through a Project Preparation Grant in consultation

with key stakeholders in Ethiopia's meat value chain, making it a relevant bridge between national livestock-sector planning and operational SPS capacity-building for export competitiveness.

2. Financing Problem Addressed

The central financing challenge in Ethiopia's livestock export sector is the public-good nature of most SPS investment. Disease surveillance, laboratory capacity, regulatory frameworks, and official certification systems generate benefits that accrue broadly across the sector and cannot be recovered by any individual private actor. This structure means that financing SPS compliance falls principally on the public sector, while private actors, including abattoir operators, feedlot owners, and livestock traders, face considerable uncertainty about returns on compliance expenditure.

Private sector investment in SPS compliance is inhibited by two reinforcing problems. First, SPS certification has limited commercial value unless importing countries accept the national veterinary certification system as credible. Credibility depends on the functioning of the entire regulatory architecture, including laboratory quality, disease surveillance reliability, and inspection integrity. A single compliant abattoir operator cannot independently establish that credibility. Second, market access is fragile: even after compliance investments are made, a single TAD outbreak can trigger an immediate trade ban, eliminating the commercial return on prior investment.

The Terminal Report and Independent End-of-Project Assessment of STDF/PG/477 confirm that these risks materialized during project implementation. Non-technical barriers in MENA markets, combined with halal certification requirements and COVID-19 travel restrictions, prevented export deal-making despite significant compliance improvements at institutional level. This is material for SPS financing strategy because it demonstrates that public grant financing is the appropriate instrument for foundational SPS investment, not because it guarantees commercial returns, but because private financing cannot be mobilized before the foundational public investments are in place.

3. Financing Mechanism and Delivery Model

The STDF project was approved by the STDF Working Group in March 2017 and became operational in July 2018, implemented by FAO together with the Ministry of Agriculture of Ethiopia. The total STDF grant disbursement reached USD 569,827. The Government of Ethiopia contributed in-kind personnel, office space, and budgetary resources, with a planned co-financing contribution in the project document.

The project was designed to complement the national LMP investment framework rather than to function as a stand-alone donor intervention. It targeted two interlocking outputs. The first was strengthened competent authority capacity to apply and monitor SPS measures across the meat export value chain. The second was increased coordination and market linkages among sector value chain actors and with destination markets.

The STDF project played an upstream catalytic role, laying the technical and institutional foundation that subsequently enabled Ethiopia to operationalize larger investments such as the USD 176 million World Bank Livestock and Fisheries Sector Development Project anchored in the Livestock Master Plan (LMP). Subsequent co-investments by the World Bank, the European Union, and USAID built on the LMP groundwork, scaling up sector-wide initiatives within the enabling environment that STDF-supported activities had helped to establish. The relationship between the STDF grant and the larger donor portfolio was therefore complementary and sequenced, with the STDF project both preceding and operating alongside the wider investments rather than functioning as a parallel intervention.

Under the delivery model, implementation was distributed across national and international partners through Letters of Agreement. FAO provided implementation oversight, technical coordination, and access to international expertise. The Ministry of Agriculture, and subsequently the Ethiopian Agricultural Authority established under Proclamation No. 1263/2021, served as the principal government counterpart, leading regulatory activities and legislative development. The National Animal Health Diagnostic and Investigation Center (now the Animal Health Institute, AHI) coordinated laboratory quality improvements and LIMS rollout across regional veterinary laboratories. VDFACA led residue monitoring plan development and QMS work at the Kality quality control laboratory. Wageningen University and Research (WUR) provided specialized training on residue testing methods. The Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise (IZSAM) provided LIMS installation and technical support. CIRAD delivered qualitative and quantitative risk analysis training. The Ethiopian

Meat Producers and Exporters Association (EMPEA) and the Ethiopian Live Animals Traders Professional Association (ELTPA) engaged the private sector in SOP implementation and market linkage activities.

Table A3-1. Ethiopia's SPS-Backed Livestock Export Compliance: Financing Structure

Investment Area	Main Financing Source	Lead Institution	Financing Logic	SPS Relevance
Legislative and regulatory framework (animal health and welfare)	STDF grant and Government co-financing	MoA and EAA, with FAO legal support	Public investment in regulatory modernization	Provides a legal basis for systematic SPS enforcement and export certification. Proclamation No. 1376/2025 ratified April 2025.
Risk analysis capacity at MoA and EAA	STDF grant (technical assistance)	MoA Directorate of Epidemiology and CIRAD	Grant-funded institutional capacity building	Risk analysis unit established within EAA Quarantine Department. Supports evidence-based control of trade-sensitive diseases.
National residue monitoring plan and Kality laboratory (VDFACA)	STDF grant and Government co-financing	VDFACA and WUR	Blended public investment and grant	National plan developed, validated, and operational. Kality laboratory able to detect banned substances in muscle and milk; ISO/IEC 17025 accreditation in progress.
Regional veterinary laboratory LIMS and QMS (Yabello, Jijiga, Semera)	STDF grant and AHI coordination	AHI (formerly NAHDIC) and regional laboratories	Grant-leveraged network investment	Supports disease surveillance, export testing, and traceability. Mekelle excluded due to conflict.
SOPs and good practices across the meat value chain	STDF grant (technical assistance and training)	MoA, EMDIDI, and abattoir operators	Capacity building co-investment	Fifteen SOPs revised and validated; 200 stakeholders trained across federal and regional levels.
SPS negotiation and bilateral market access	STDF grant	MoA and FAO	Grant-funded regulatory diplomacy	Intended to open MENA and Southeast Asian markets. Activity

Investment Area	Main Financing Source	Lead Institution	Financing Logic	SPS Relevance
				blocked by non-technical barriers.
Market linkage, trade fairs, and buyer engagement	STDF grant and private sector co-participation	EMPEA, ELTPA, and export abattoirs	Shared commercial facilitation	Objective not achieved. Blocked by geopolitical barriers, halal certification requirements, and COVID-19 travel restrictions.
Broader livestock sector investment (supporting LMP)	World Bank, EU, USAID	World Bank and development partners	Complementary multi-donor co-investment	The US$176 million World Bank programme anchored in the LMP provides longer-term institutional and financial continuity.

Source: Adapted from STDF/PG/477 Project Document (2018), Terminal Report (FAO and MoA, 2023), and Independent End-of-Project Assessment (2023).

4. Institutional Coordination and Traceability

Institutional coordination is both the central challenge and the primary instrument of the Ethiopia livestock SPS model. The sector's SPS governance spans multiple federal ministries and agencies, regional veterinary bureaus, and private sector associations, with historically limited coordination across these actors. The project addressed this through two parallel mechanisms.

A Project Steering Committee (PSC), chaired by the State Minister for Veterinary Services and Feed Quality Control, provided strategic oversight and ensured institutional ownership at the highest government level. The PSC brought together all relevant technical directorates, AHI, VDFACA, regional state representatives, meat producer and exporter associations, the national SPS committee, and the Ethiopian Standards Agency.

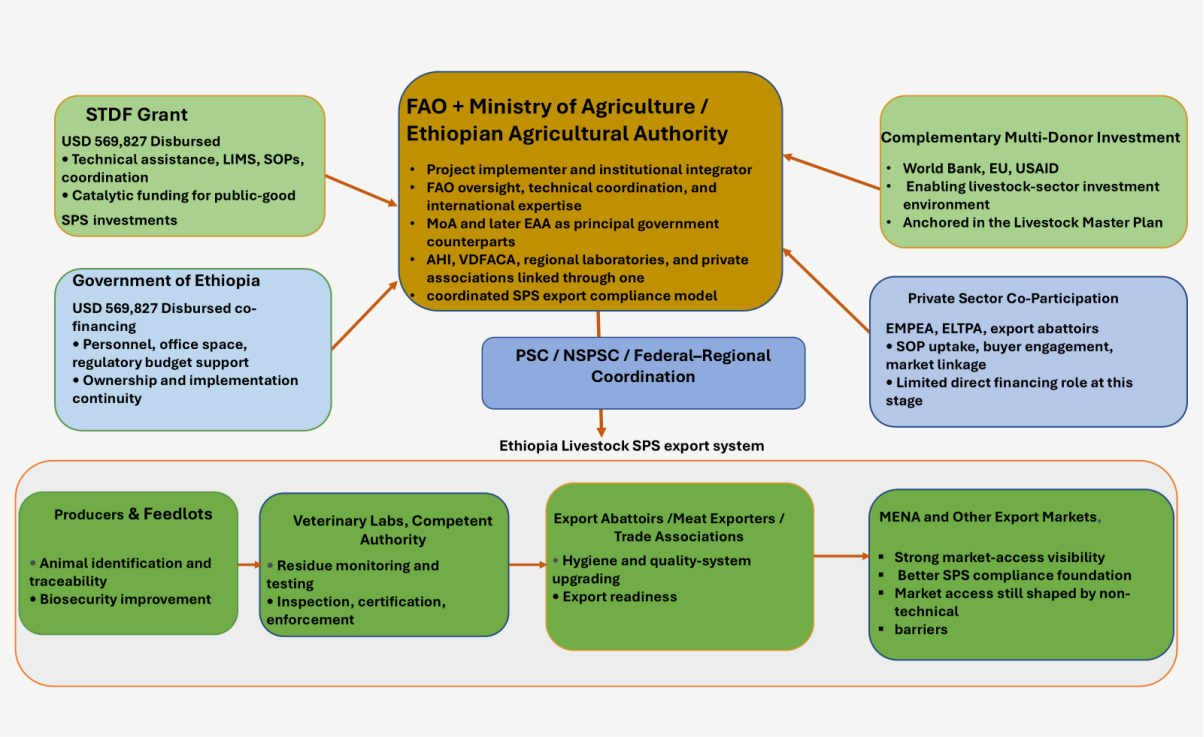
The National Sanitary and Phytosanitary Standard Committee (NSPSC) was revitalized under the project, with revised terms of reference and broadened membership. Membership was expanded to include public institutes, including MoA, the Ethiopian Food and Drug Authority (EFDA), the Ministry of Trade and Regional Integration, the Ethiopian Standards Agency, VDFACA, the Ethiopian Institute of Agricultural Research, and universities, alongside private sector bodies representing meat, live animal, horticulture, pulses, food manufacturing, coffee, and other export sectors. The NSPSC held its first meeting in June 2020 and a second in November 2021. Biannual federal-regional coordination meetings were held in September 2021 with 35 participants, and in May 2022 with 20 participants, both in Adama.

On laboratory traceability, the project introduced a Laboratory Information Management System (LIMS) across the federal-regional laboratory network. Three regional veterinary laboratories, namely Yabello, Jijiga, and Semera, were assessed for IT infrastructure and 48 staff were trained on the SILAB web-based information management system. LIMS was also installed at VDFACA, with 25 staff trained. The Mekelle regional laboratory could not be assessed due to the security situation in northern Ethiopia during the project period.

On animal traceability, the Ethiopian Livestock Identification and Traceability System (ET-LITS) has progressed significantly since project design. As documented in the 2025 PVS Follow-Up Evaluation, ET-LITS is now managed by the MoA under the Livestock Identification, Traceability Systems, and Welfare Directorate. The system uses tamper-proof, ISO-coded plastic ear tags and a mobile application for animal registration and event tracking, and is based on WOAH, FAO, and ICAR international standards. By 2025, 270,020 ear tags had been distributed and 253,605 applied across

five regions (Somali, Oromia, South Ethiopia, South-West Ethiopia, and Amhara) covering eight zones. The system is in an early stage of wider implementation, but it provides a credible foundation that MENA importing countries have identified as a condition for expanded trade acceptance. The ET-LITS system was developed outside the scope of STDF/PG/477 but reinforces the broader multi-donor investment environment within which the project operated.

Figure A3-1. Coordination Architecture: Institutional Relationships



Source: Adapted from project documentation and Government of Ethiopia institutional reporting.

5. Results and Output Performance

STDF project PG/477 closed in October 2023. The Terminal Report and the Independent End-of-Project Assessment together provide a full account of results achieved and results not achieved. The summary below distinguishes between outputs delivered and outputs constrained by implementation conditions.

5.1 Outputs Achieved

The Animal Health, Welfare, and Veterinary Public Health Legislation was reviewed, finalized in English and Amharic, accepted by MoA and the Attorney General, and submitted to the Council of Ministers and subsequently to Parliament. It was ratified by the House of Peoples' Representatives as Proclamation No. 1376/2025 in April 2025 and published in the Federal Negarit Gazette on 12 August 2025, establishing an integrated legal framework for disease control, public health, animal welfare, and trade regulation.

A qualitative and quantitative risk analysis training-of-trainers was delivered by CIRAD to 17 staff from MoA, VDFACA, AHI, and Addis Ababa University in March 2019. A risk analysis unit was subsequently established within the Quarantine Department of EAA.

The National Animal Source Food and Feed Chemical Residue and Biological Hazard Monitoring Plan was developed by VDFACA, validated at a multi-stakeholder workshop, and is now operational. Three specialized training sessions on residue testing methods were delivered by WUR to VDFACA laboratory staff. The Kality quality control laboratory is able to detect banned substances in muscle and milk, although sustained performance depends on recurrent access to internal standards and consumables that remain costly and difficult to procure locally.

VDFACA received seven QMS training sessions from AHI covering ISO/IEC 17025:2017 requirements, internal auditing, root cause analysis, measurement uncertainties, test method validation, and pathogen characterization. Total participants across all sessions reached 195, including 38 women. LIMS was installed at VDFACA and 25 staff were trained. ISO/IEC 17025 accreditation for Kality was initiated under the project and remains in progress. Separately, the Animal Products and Inputs Quality Testing Centre (APIQTC) under EAA, which performs complementary residue testing, achieved ISO/IEC 17025:2017 accreditation as reported in the 2025 PVS Follow-Up Evaluation, a significant milestone for the national system.

SILAB LIMS was introduced in three regional veterinary laboratories (Yabello, Jijiga, and Semera), with 48 staff trained. QMS work was initiated but not completed during the project period. The Mekelle regional laboratory could not be assessed due to the security situation in northern Ethiopia.

Fifteen SOPs and guidelines were reviewed, updated, and validated. Two hundred stakeholders participated in awareness creation workshops in December 2021, including federal MoA directorates, export abattoir meat inspectors, quarantine and border control inspectors, private exporters, and regional meat inspection staff.

Two biannual coordination meetings were held (September 2021 and May 2022). The NSPSC was revitalized with revised terms of reference and broadened membership. A national SPS sector stakeholder coordination meeting was held in June 2021 with 36 participants, and an awareness creation workshop was held in December 2021 with 40 participants.

5.2 Outputs Not Achieved or Partially Achieved

Three outputs were not achieved during the project period, in each case for reasons documented in the Terminal Report and Independent End-of-Project Assessment. Bilateral SPS negotiations with importing countries were blocked by geopolitical barriers in MENA markets, halal certification concerns beyond Ethiopia's current system, and COVID-19 travel restrictions that prevented in-person missions through much of the project period.

No trade deals were concluded between Ethiopian meat exporters and MENA or Southeast Asian importers, although the Government of Ethiopia secured separate livestock-related cooperation arrangements through independent bilateral channels.

An SPS-dedicated website was not established within the project timeframe, primarily because of the reorganization of regulatory mandates between MoA and the newly established EAA. These constrained outputs are documented in the Terminal Report and underpin the strategic lesson in Section 8 on non-technical barriers to SPS-led export expansion.

Table A3-2. Ethiopia Meat Exports, 2018 to 2023 (Volume in metric tons; value in USD thousands)

Product Category	2018	2019	2020	2021	2022
Total meat exports (volume, MT)	19,238	14,998	12,166	17,110	21,062
Total meat exports (value, US$ k)	101,119	77,406	66,661	93,017	112,610
Goat meat, fresh or chilled (vol.)	15,214	12,741	10,889	15,464	n/a
Sheep meat, fresh or chilled (vol.)	618	487	419	751	n/a

Product Category	2018	2019	2020	2021	2022
Cattle meat with bone (vol.)	3,073	947	166	317	n/a
Edible cattle offal (vol.)	331	822	686	559	n/a

Source: FAOSTAT data as reported in STDF/PG/477 Independent End-of-Project Assessment (2023). Principal destination markets for sheep and goat meat are the United Arab Emirates (52%) and the Kingdom of Saudi Arabia (41%).

The Independent End-of-Project Assessment characterizes the overall meat export trend over 2018 to 2023 as one of structural decline, with an apparent partial recovery in 2021 and 2022 followed by further contraction in the first seven months of 2023. Non-SPS factors, including escalating domestic meat prices that have made export trade less profitable, the persistence of large informal cross-border live animal trade, rising halal certification requirements, and competition from disease-free exporters in South America, Oceania, and Eastern Europe, have compounded the sanitary constraints addressed by the project.

6. Risk Allocation Model

The risk allocation structure in Ethiopia's livestock SPS model reflects the public-good character of most SPS investments in the sector. Unlike the Colombia model, where certification and market access risks are increasingly shared with commercially motivated private actors, the Ethiopia model retains a predominantly public sector risk profile. This is an accurate reflection of the sector's stage of development, not a design limitation, and it carries an important implication for SPS financing policy: in least developed and earlier-stage contexts, calls for more innovative or private-sector-led SPS financing must be accompanied by structured public investment in the foundational regulatory architecture. Without that foundation, blended or commercial finance instruments alone cannot bear the systemic risk associated with national SPS systems.

The underlying logic is that public investment in regulatory credibility, laboratory capacity, and legal frameworks reduces the systemic risk environment sufficiently to attract and sustain private commercial investment in due course. Without a credible national veterinary certification system, no individual abattoir operator can provide the assurances required by MENA importers. Public investment in these foundational systems is therefore the precondition for private investment, not an alternative to it.

The Terminal Report and Independent End-of-Project Assessment provide a frank evidence base for risk allocation analysis. Several risk categories identified in the original project risk log materialized during implementation: non-technical barriers blocked trade negotiations; COVID-19 disrupted field

Table A3-3. Risk Allocation in Ethiopia's Livestock SPS Export Compliance Model

Risk Category	Primary Risk Bearer	Nature of Risk	Mitigation Mechanism	Outcome
Transboundary animal disease (TAD) outbreak	Government (MoA) and producers	Trade ban triggered by FMD, RVF, or other notifiable disease	Risk analysis unit; improved disease surveillance; national residue monitoring plan; bilateral SPS negotiations	Risk remains active. Surveillance improved; ET-LITS rollout advancing but still partial. Importing country confidence is limited.
Export rejection and certification	Export abattoir operators and MoA competent authority	Consignments rejected due to hygiene, cold chain failure, or residue violations	Revised SOPs and GHP/HACCP training; cold chain monitoring; QMS in export abattoirs; residue testing at Kality	SOPs revised; QMS introduced; Kality detecting banned substances. Cold chain improvements are ongoing.
Regulatory capacity	Government (MoA,	Inadequate inspection, certification, or	STDF grant-funded capacity building; LIMS and QMS in regional	Significant capacity gains. LIMS installed in VDFACA and three

Risk Category	Primary Risk Bearer	Nature of Risk	Mitigation Mechanism	Outcome
	VDFACA, AHI)	laboratory capacity undermining importing country confidence	laboratories; ISO/IEC 17025 pathway for Kality	regional labs. APIQTC achieved ISO/IEC 17025; Kality accreditation in progress.
Legislative and enforcement	Government (Parliament and ministries)	Delays in promulgating updated animal health and food safety legislation	FAO-supported legislative specialist; PSC oversight and parliamentary liaison	Risk materialized during project period. Legislation ratified as Proclamation No. 1376/2025 in April 2025.
Market linkage	Export abattoir operators and trader associations (EMPEA, ELTPA)	Inability to secure or maintain buyer relationships in MENA and Southeast Asia	Business networking events and trade fairs; bilateral negotiation missions; buyer linkage facilitation	Risk fully materialized. No trade deals concluded. Geopolitical barriers and halal requirements blocked activities.
Non-technical and geopolitical	Government (MoA) and project management	MENA importing country decisions driven by geopolitical factors rather than SPS compliance status	Regular dialogue; exchange visits; IGAD inter-regional coordination	Major impediment. Under-weighted in project design. Terminal Report recommends political dialogue as a priority follow-up action.
Coordination and fragmentation	All public sector actors	Duplication or gaps between MoA, MoH, AHI, VDFACA, and regional bureaus	Strengthened NSPSC; biannual federal-regional coordination meetings; delineated institutional mandates	Partially addressed. NSPSC revitalized and two meetings were held. Institutionalization and legal standing remain a follow-up action.
Sustainability	Government and private sector	SPS improvements reverting after project completion due to recurrent cost pressures	World Bank USD 76 million Livestock and Fisheries Sector Development Project (running to July 2026; further continuation subject to extension) , and complementary EU and USAID investments	Ongoing. Recurrent cost pressures for laboratory consumables and reagents noted.

Source: Authors, based on STDF/PG/477 Terminal Report (FAO and MoA, 2023), Independent End-of-Project Assessment (2023), Ethiopia Livestock Master Plan (ILRI, 2015), and the 2025 PVS Follow-Up Evaluation.

7. Replicability Assessment

The Ethiopia model is most relevant for countries at an early to intermediate stage of SPS system development, where the sector has identifiable export potential, but where public regulatory infrastructure is not yet sufficient to support sustainable commercial export activity. It demonstrates what a well-designed STDF grant, aligned with a national sector investment plan and a multi-donor coordination framework, can achieve in building foundational SPS compliance conditions.

The LMP-linked investment approach is directly transferable. ILRI has developed livestock master plans for Tanzania, Rwanda, Uzbekistan, Bihar State (India), Odisha (India), and the Gambia, and is developing plans for Kenya and Nigeria. In each case, the LMP provides a vehicle for embedding SPS compliance within a broader, government-endorsed investment framework, creating the political and institutional alignment that makes sustained SPS financing viable.

The Ethiopia experience adds an important qualification to the replicability assessment. The project succeeded in building regulatory and laboratory capacity but did not achieve market-linkage objectives because of non-technical barriers that SPS compliance investment cannot address on its own. Countries replicating this model should assess three factors in addition to the standard enabling conditions.

First, geopolitical and trade policy dynamics in target export markets can override SPS compliance achievements. Market-linkage components in project designs should include explicit scenarios for non-technical barriers and alternative market strategies. Second, halal certification requirements in MENA markets represent a distinct compliance challenge beyond standard SPS measures. Any project targeting MENA export markets should address halal system requirements as a separate and explicit output. Third, government restructuring during project implementation creates significant disruption risk for multi-year projects. Ethiopia experienced multiple restructurings between 2018 and 2023, including the merger of the Ministry of Livestock and Fisheries into MoA and the creation of EAA in 2021. Project design should include explicit transition protocols for institutional counterpart continuity.

Box A3-1. Applying Ethiopia's Model: Pre-conditions for Replication

The Ethiopia model is most directly replicable in sub-Saharan African or MENA contexts where the following conditions are in place:

- A government-endorsed national livestock or agricultural sector plan that frames SPS compliance explicitly as an export competitiveness priority, providing a basis for sustained public investment.
- A competent authority with sufficient institutional capacity to engage in bilateral SPS negotiations, even if laboratory and certification systems require further development.
- A multi-donor coordination environment willing to co-finance complementary activities along the value chain, avoiding duplication and supporting sequenced investment.
- A private sector with commercial export orientation, including abattoir operators, feedlot owners, and trader associations, prepared to co-invest in compliance upgrades linked to verifiable market access.
- A realistic prior assessment of export market conditions: whether SPS compliance barriers are the primary constraint, or whether non-technical barriers such as geopolitical factors, halal requirements, or price competition are likely to dominate.

The model is less readily transferable where livestock export is primarily subsistence-oriented, where competent authority capacity is too limited for bilateral SPS negotiations, or where geopolitical or trade policy barriers are the dominant constraints on market access.

8. Strategic Lesson for SPS Financing

Four factors explain why the Ethiopia model represents an instructive SPS financing case for STDF. The first three were visible in the project design; the fourth emerges from the Terminal Report and Independent End-of-Project Assessment.

National plan alignment generates political sustainability. Embedding SPS compliance investment within the LMP and GTP II transformed a donor-supported project into a nationally owned programme with high-level Government commitment. This alignment is what catalysed the complementary USD 176 million World Bank livestock sector programme, which was anchored in the same LMP that the STDF project supported.

The public-good character of foundational SPS investments requires grant financing. Disease surveillance, laboratory quality, regulatory frameworks, and veterinary certification systems cannot be financed through commercially recoverable instruments at the stage of development Ethiopia was at in 2018. The STDF grant was the appropriate instrument precisely because these investments are preconditions for, rather than products of, commercial viability.

Multi-donor coordination is itself a financing instrument. The project's strategic value was partly in its coordination architecture: by complementing rather than duplicating existing European Union, USAID, and World Bank investments, the STDF grant achieved leverage well beyond its nominal value through synergies with the broader donor portfolio.

Non-technical barriers can nullify SPS compliance investments in export markets. Despite substantial capacity-building achievements, market-access objectives were not achieved. This is not a failure of the SPS compliance model, but it is a genuine limitation that must be factored into project design. Projects targeting specific export markets should include an explicit scenario analysis of non-technical barriers and contingency plans for market diversification at the design stage.

"The strength of the STDF investment in Ethiopia was that it did not stand alone. It worked because it was anchored in the Livestock Master Plan, sequenced alongside World Bank, EU, and USAID programmes, and led by Ethiopian institutions. Compliance is not built in a single project cycle. What this work has done is put in place the regulatory architecture, the laboratories, and the coordination mechanisms on which sustained export growth can be built. This will allow us to win the trust of our trading partners in MENA."

Dr Alemayehu Mekonnen Anbessie, Senior Advisor, Office of the State Minister for Livestock and Fishery Resources Development Sector
Ministry of Agriculture, Federal Democratic Republic of Ethiopia

Key Insight

The Ethiopia case demonstrates that STDF grants are most effective when aligned with national sector investment plans and positioned as catalytic instruments within a multi-donor coordination framework. The Terminal Report adds a substantive qualification: SPS compliance investment is necessary but not sufficient for market access. Non-technical barriers, including geopolitical factors, halal certification requirements, and trade policy dynamics, can block commercial returns even when regulatory capacity is substantially improved.

For STDF's financing study, this reinforces two points. First, the P-IMA framework and the Project Preparation Grant instrument are most valuable when they help governments develop investment-ready, nationally owned SPS programmes aligned with realistic assessments of market access conditions. Second, grant-funded SPS capacity building should be paired with explicit follow-on mechanisms for recurrent cost sustainability: laboratory and regulatory capacity built through grants will erode without a plan for covering ongoing operational costs once project funding ends.

9. Follow-Up Actions and Sustainability

The Terminal Report and Independent End-of-Project Assessment identify seven priority actions requiring Government attention following project closure. These are documented here as they bear directly on the sustainability assessment and the case for continued engagement in the livestock SPS sector.

- Enforcement and implementation of the Animal Health and Welfare Proclamation No. 1376/2025, including the development of subsidiary regulations, the establishment of the Veterinary Board, and the operationalization of sanitary mandate contracts.
- Capacity enhancement for expanding the livestock and livestock products export market, including trade agreement facilitation, SPS negotiation skills development, and compliance training for value chain actors.
- Strengthening disease surveillance and response activities for real-time detection and control of TADs, with targeted expansion into pastoral and agro-pastoral areas where export animals are sourced.
- Strengthening and scaling ET-LITS across all regions and livestock species, with sustainable financing for ear tags, devices, and field implementation, and with explicit links to export certification workflows.
- Strengthening the capacity of regional veterinary services and laboratories, including sustained funding for laboratory consumables, calibration, and proficiency testing.
- Institutionalization of the NSPSC with legal standing sufficient to execute its mandate on a continuing basis, and regular scheduled meetings at federal and regional levels.
- Strengthening control of cross-border illegal livestock trade and movement to reduce both the risk of TAD introduction and the erosion of formal export revenues.

10. Conclusion

Ethiopia's experience with STDF project PG/477 illustrates a third distinct SPS financing model in this case study series, alongside the market-anchored bundled model in Colombia and the blended finance model in Bangladesh. Ethiopia's model is characterized by multi-actor public investment, national plan alignment, and multi-donor coordination as the primary mechanisms for financing SPS compliance at scale.

The project achieved substantial capacity-building results. Proclamation No. 1376/2025 was ratified and published, providing a modern legal framework for the sector; a functional national residue monitoring plan was developed and made operational; LIMS was installed at VDFACA and three regional veterinary laboratories; fifteen SOPs were revised and validated; QMS training was delivered across federal and regional institutions; the NSPSC was revitalized; and biannual federal-regional coordination forums were established. These represent genuine foundational investments in Ethiopia's SPS regulatory architecture, and they are reflected in the level-of-advancement improvements documented in the 2025 PVS Follow-Up Evaluation.

At the same time, market-linkage objectives were not achieved, and the Terminal Report is clear about the causes. This outcome is an important contribution to STDF's financing study: it shows that SPS compliance investment can build significant regulatory capacity while commercial market access remains constrained by non-technical factors that lie outside the SPS compliance architecture.

For STDF, the Ethiopia case reinforces that catalytic grant financing generates its highest return when aligned with national priorities, coordinated with complementary donor investments, and paired with a realistic assessment of the market access conditions that will determine commercial returns. Recurrent cost sustainability, particularly for laboratory systems, requires explicit design attention beyond the grant period.

"For Ethiopia, this project was never only about meeting the standards of importing countries. It was about building the institutions, the laboratories, and the legal framework that a country with the largest livestock population in Africa needs to compete on its own terms. The Animal Health and Welfare Proclamation, ratified in 2025, gives us that foundation. The next task is to translate that capacity into the market access our producers deserve."

H.E. Dr Fikru Regassa Gari, State Minister for Livestock and Fishery Resources Development Sector, Ministry of Agriculture, Federal Democratic Republic of Ethiopia

Notes

[1] *FAO and Ministry of Agriculture, Ethiopia (2023). STDF/PG/477 Terminal Report: Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia. Rome: FAO.*

[2] *Asfaw, W. (2023). End-of-Project Assessment of the STDF Project: Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia, STDF/PG/477. Addis Ababa: Independent Evaluator's Report.*

[3] *Shapiro, B.I., Gebru, G., Desta, S., Negassa, A., Nigussie, K., Aboset, G., and Mechal, H. (2015). Ethiopia Livestock Master Plan: Roadmaps for Growth and Transformation. ILRI Project Report. Nairobi: ILRI.*

[4] *ILRI (2025). Livestock Master Plans: Impacts. International Livestock Research Institute website. Nairobi: ILRI.*

[5] *National Central Statistical Agency of Ethiopia (2014). 2013/2014 Agricultural Sample Survey. Addis Ababa: CSA.*

[6] *Ethiopian Meat and Dairy Industry Development Institute (EMDIDI). Export production capacity estimates cited in STDF/PG/477 Terminal Report.*

[7] *WOAH (2011). PVS Evaluation of the Veterinary Services of Ethiopia. Paris: World Organisation for Animal Health.*

[8] *WOAH (2012). PVS Gap Analysis Report for Ethiopia. Paris: World Organisation for Animal Health.*

[9] *WOAH (2025). PVS Follow-Up Evaluation Report for Ethiopia. Paris: World Organisation for Animal Health.*

[10] *Federal Democratic Republic of Ethiopia (2025). Animal Health and Welfare Proclamation No. 1376/2025. Federal Negarit Gazette, 31st Year, No. 63, 12 August 2025. Addis Ababa.*

[11] *STDF (2026). Information Session Presentation: Financing Study to Strengthen SPS Systems. Geneva: Standards and Trade Development Facility, February 2026.*

References

Asfaw, W. (2023). End-of-Project Assessment of the STDF Project: Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia, STDF/PG/477. Addis Ababa.

FAO and Ministry of Agriculture, Ethiopia (2023). STDF/PG/477 Terminal Report: Improving Sanitary Capacity and Facilitating Export of Livestock and Livestock Products from Ethiopia. Rome: FAO.

Federal Democratic Republic of Ethiopia (2025). Animal Health and Welfare Proclamation No. 1376/2025. Federal Negarit Gazette, 31st Year, No. 63, 12 August 2025. Addis Ababa.

ILRI (2025). Livestock Master Plans: Impacts. International Livestock Research Institute website. Nairobi: ILRI.

National Central Statistical Agency of Ethiopia (2014). 2013/2014 Agricultural Sample Survey. Addis Ababa: CSA.

Shapiro, B.I., Gebru, G., Desta, S., Negassa, A., Nigussie, K., Aboset, G., and Mechal, H. (2015). Ethiopia Livestock Master Plan: Roadmaps for Growth and Transformation. ILRI Project Report. Nairobi: ILRI.

STDF (2026). Information Session Presentation: Financing Study to Strengthen SPS Systems. Geneva: Standards and Trade Development Facility, February 2026.

WOAH (2011). PVS Evaluation of the Veterinary Services of Ethiopia. Paris: World Organisation for Animal Health.

WOAH (2012). PVS Gap Analysis Report for Ethiopia. Paris: World Organisation for Animal Health.

WOAH (2025). PVS Follow-Up Evaluation Report for Ethiopia. Paris: World Organisation for Animal Health.

World Bank and Government of Ethiopia (2019). Livestock and Fisheries Sector Development Project (USD 176 million). Project documentation. Washington, DC and Addis Ababa.

FIND OUT MORE

www.standardsfacility.org

STDFSecretariat@wto.org

#STDF

Linkedin