Putting Business to Work: Policy Interventions for a Nutritious Food System

Policy Briefs

Postharvest Loss Alliance for Nutrition

December 2018

gain
Global Alliance for Improved Nutrition

Global Knowledge Initiative
POSTHARVEST LOSS ALLIANCE FOR NUTRITION

About Global Alliance for Improved Nutrition

The Global Alliance for Improved Nutrition (GAIN) advances nutrition outcomes by improving the consumption of nutritious and safe food for all people, especially those most vulnerable to malnutrition. GAIN aims to improve the consumption of safe and nutritious foods for—at a minimum—1 billion people over the next five years and targets major improvement in food systems, resulting in more diverse and healthier diets for vulnerable people.

About Postharvest Loss Alliance for Nutrition

GAIN established the Postharvest Loss Alliance for Nutrition (PLAN) to bring together public and private sector actors to collectively reduce loss and waste of nutritious foods. PLAN aims to make nutritious food more accessible for all by driving research and promoting knowledge and technology exchange through its Business to Business Engine (B2BE). It currently includes country-level chapters in Nigeria, Indonesia, and Ethiopia and is looking toward expansion.

To engage the PLAN stakeholders on policies that encourage agribusinesses to reduce postharvest loss of nutritious foods GAIN asked to PLAN’s knowledge management partner, the Global Knowledge Initiative (GKI), to develop this policy briefing.

For more information about PLAN, please reach out to Teale Yalch (tyalch@gainhealth.org).

About Global Knowledge Initiative

The Global Knowledge Initiative (GKI) designs, builds, and manages networks and processes that deliver innovative solutions to global challenges. In 2018, GAIN and GKI convened a policy working group with stakeholders in Washington, DC that discussed the challenges and opportunities for governments in encouraging business to step up to reduce loss. Building on these insights, GKI researched and authored this compendium of case study briefs, which draws on secondary research and interviews with the experts listed on the following page.

About this Policy Briefing

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www.gainhealth.org www.globalknowledgeinitiative.org
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>01</td>
</tr>
<tr>
<td>Introduction: The Role of Government in Improving Food Systems</td>
<td>02</td>
</tr>
<tr>
<td>Case Study 1: Promoting Cold Chain Development in India</td>
<td>05</td>
</tr>
<tr>
<td>Case Study 2: Enhancing the Market Orientation of Ghana's Agriculture Sector</td>
<td>08</td>
</tr>
<tr>
<td>Case Study 3: Supporting Technology Uptake in Bangladesh</td>
<td>11</td>
</tr>
<tr>
<td>Case Study 4: Improving Access to Finance in Tanzania</td>
<td>14</td>
</tr>
<tr>
<td>Conclusion: Emerging Lessons for Application</td>
<td>17</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

A confluence of forces is reshaping the nature of food systems from localized networks of production and consumption to national and international market systems with rapidly consolidating corporate interests. Businesses play a central role in providing food, nutritious and otherwise, to the world’s growing population. Government initiatives aimed at promoting food and nutrition security can encourage businesses to play a part in increasing the availability of nutritious foods using a number of methods, including policies and government programs.

This policy briefing is intended to engage stakeholders in conversations about effective policies and public sector programs that can enable businesses to increase the availability of nutritious foods by reducing postharvest loss of those foods. It is organized around 4 case studies, set in Bangladesh, Ghana, India, and Tanzania, each of which offers insight into a different government-led initiative.

While the government interventions presented were not designed with the exclusive intent of reducing postharvest loss, they were all broadly designed to create an enabling environment conducive to the professionalization of agriculture. Professionalization includes any number of processes by which an occupation transforms into a profession based on integrity and competence, including informal processes like changing social dynamics as well as formal processes like education, training, and certification programs. As agricultural value chains are dependent on the interrelationships between actors, the broad-based reduction of postharvest loss is dependent upon many of the same factors as professionalization. The policies and programs introduced in these case studies use a variety of mechanisms to affect change within the enabling environment, including mechanisms aimed at achieving sector-wide growth and others aimed at promoting growth at the firm level.

For instance, the case in Bangladesh focuses on the provision of technical extension services and market linkages for rural smallholder farmers, with the goal of uplifting the most vulnerable populations. The Ghana case highlights coordination mechanisms throughout the value chain that support the interactions between farmer groups and agribusinesses and enhance the market-orientation of the agriculture sector. In India, our case shows how financial incentives can be used to encourage the development of new business models, specifically, cold chain as a service, to increase the quality and safety of food. Lastly, in Tanzania, our case frames how a government-backed bank employed a variety of funding mechanisms to increase access to finance across the agriculture sector, with a focus on rural innovation.

Together, these cases offer lessons that other governments can consider when developing initiatives to increase professionalization and reduce postharvest loss.

INTRODUCTION

Overview

The dual trends of urbanization and population growth are transforming the nature of food systems. Once predominantly characterized by localized systems of production and consumption, food systems are now driven by markets on local, regional, national, and international scales. This positions the operations of agribusinesses, such as processors, transporters, and exporters, as vital actors in the supply chain. These businesses form the principal gateway of access to nutritious foods for the majority of the world’s population, as the majority of food consumed in most low- and middle-income countries is purchased at markets rather than grown by households.

Public sector initiatives aiming to improve food systems are best grounded in an understanding of this changing landscape, within which businesses can be part of solutions that increase the accessibility and affordability of nutritious foods. Figure 1 illustrates how governments can influence food systems in this light. GAIN developed PLAN around this model to

Figure 1. Transforming Food Systems through Governance

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FOOD SYSTEM
Determines affordability, accessibility, and desirability of nutritious foods

HEALTH SYSTEM
Addresses malnutrition

Governance

Policy and Programs

Businesses

Food Choices

Consumers

Diet

Population Health

Population Growth and Urbanization
Increases market reliance for nutritional needs
help government and business seize the latent opportunity to incentivize businesses to improve food systems. Specifically, PLAN engages small- and medium-sized enterprises (SMEs) in the food system to reduce postharvest loss and increase the quality and quantity of nutritious foods reaching markets.

This policy briefing codifies knowledge generated through four government-led initiatives to reduce postharvest loss in Bangladesh, Ghana, India, and Tanzania. The case studies illustrate how governments have engaged and incentivized private sector actors to sustainably improve food systems through a variety of public sector initiatives. Lessons that emerged from this research can be used to engage a variety of stakeholders—governments and businesses alike—in policy discussions on how to best encourage businesses to reduce postharvest loss.

Numerous mechanisms are available to governments to encourage businesses to engage in postharvest loss reduction. Leveraging a framework from FAO and UNIDO, we analyze how different enablers in the policy environment can contribute to increasing the professionalism of the agriculture sector as a means of developing value chains. Doing so requires a host of factors, such as infrastructure, food safety standards, and a favorable business environment, which provide agribusinesses with the enabling environment to increase their operational efficiency. As such, professionalization represents an important component of reducing postharvest loss.

The FAO framework that this research leans on defines three categories of policies that encourage agro-industrial competitiveness, which can be viewed as dimensions related to professionalization within food systems. The enablers within each category facilitate economic development at various levels:

**Figure 2. Enabling mechanisms for economic growth.**

- **All Industry Essential Enablers**: Public works that impact all industries, including food systems, and are essential to all facets of economic development and productivity.
- **Food System Important Enablers**: Guidance and support directed toward all food sector businesses, ensuring system-wide growth.
- **Firms Useful Enablers**: Mechanisms that improve or optimize food sector business functions, including profitability and the delivery of quality services or products.
Within each of these categories, the framework identifies indicative public sector initiatives. For instance, infrastructure and trade policy are viewed as Essential Enablers, as they are foundational to all facets of economic development and productivity. Important Enablers include agri-finance facilities and food safety standards, as these provide guidance and support for how food system sectors conduct business. Finally, Useful Enablers encompass elements such as licensing regimes that affect sectors at the level of the individual firm, who are either able to obtain the proper licensing or not.

This policy briefing presents case studies on public sector initiatives in the categories of Important and Useful Enablers which include mechanisms to support sector-wide and firm-level growth, respectively. Correspondingly, the case studies highlight how governments can develop policies and programs aimed explicitly at each level, or policies and programs that attempt to work at both levels. Table 1 below offers an overview of the enablers detailed in each case.

<table>
<thead>
<tr>
<th>Country</th>
<th>Initiative</th>
<th>Category</th>
<th>Enabler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ghana</td>
<td>Market Oriented Agriculture Program (MOAP)</td>
<td>Firm</td>
<td>Value chain coordination; Business development services</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>National Agriculture Technology Program – Phase 2 (NATP-2)</td>
<td>Firm Food System</td>
<td>Value chain coordination; Technological research &amp; development</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Tanzanian Agriculture Development Bank (TADB)</td>
<td>Food System Firm</td>
<td>Financial services; Business development services</td>
</tr>
<tr>
<td>India</td>
<td>Integrated Cold Chain Development</td>
<td>Food System</td>
<td>Postharvest infrastructure; Financial services</td>
</tr>
</tbody>
</table>

The GKI team conducted a high-level global scan for case examples to study in this policy briefing. We filtered our findings using the following inclusion criteria:

(1) a focus on nutritious foods such as fresh fruits and vegetables,

(2) the promotion of private sector activities that contribute to postharvest loss reduction, and

(3) demonstrated reduction of postharvest loss as a direct or indirect impact of the policy or program. All cases commenced between 2000.
and 2015 and reflect contemporary public sector approaches to engaging business in postharvest loss reduction.

GKI developed the case studies through a combination of primary and secondary research. Primary research involved a series of interviews with key informants who have specialized knowledge of specific cases, including the design and implementation of government policies and programs. The intelligence gathered through these interviews supplements secondary research, which draws from government documents, funder reports, and publications on impact. This research offers insight into factors that contributed to the success of each initiative and how particular competitiveness enablers and enabler combinations might be adapted in different contexts.

Finally, each case study brief provides an executive level overview of the key elements of each policy, including: the (1) duration of the policy or program, (2) specific enablers introduced to foster business competitiveness and postharvest management, and (3) funding source. High-level insights for application are offered in the form of key lessons, and evidence of the scale of impact is provided where available.

Over the past decade, India has emphasized integrated cold chain development through a variety of policies and schemes. These initiatives are designed to align with a common agenda set by the National Center for Cold-chain Development (NCCD). Thought leadership at the NCCD has influenced the design and implementation of key programs such as the Integrated Cold Chain, Value Addition and Preservation Infrastructure Scheme, implemented through the Ministry of Food Processing Industries, and the Cold Storage and Fruits & Vegetables Development Program, which is implemented through the National Cooperative Development Corporation and state governments.
**Context**

Farm production in India is highly capable of expansion. While supply often exceeds local demand, farmers struggle to reach distant, informal markets as well as the growing organized retail industry. To facilitate effective services that connect farmers with these markets, the Government of India sought to first enhance its understanding of agro-logistics.

The NCCD was developed to engage with industry and coordinate government schemes within various ministries. Its strategy to overcome market fragmentation was designed with two goals in mind: to (1) increase farmer incomes and (2) expand the utility of increased production and processing power. Today, statewide and international food system connectivity has both improved farmer livelihoods and increased the variety and quality of nutritious foods.

**BY THE NUMBERS**

The kinnow fruit cold chain began at pilot scale as one of 122 cold chain projects in 2014, and has achieved considerable improvements.

- **60 days** increase in holding time
- **Reduced loss from 70% to 10%**
- **16%** decreased carbon footprint
- **Exports to Kazakhstan and UK, but began with an initial 500 km selling radius**
- **Galvanized farm-gate productivity**

**Policy Design**

In 2012, the NCCD was approved as an independent knowledge society to engage stakeholders to rationalize and design cold chain polices based on life sciences and system models. For instance, it established a common glossary to align stakeholders, policymakers, and implementers and crafts evidence-based programs and trainings. These efforts have guided the Government of India’s vision to create end to end cold chain management for multi commodity systems in the form of a services model. With this momentum, the government set a new goal to double farmers’ incomes by 2022.

In order to aid this type of development, the government has granted “Infrastructure” status to cold chain businesses, processes, and technologies. This status enables direct financial support and incentives. For example, the Integrated Cold Chain, Value Addition and Preservation Infrastructure Scheme was introduced to avail grants to individuals and entities (including cooperatives and businesses) interested in developing integrated cold chain infrastructure. The motivation behind this program is to develop facilities without any break from the farm gate to the consumer. Similarly, the Cold Storage and Fruits & Vegetables Development Program provides cooperatives and state governments with technical and financial assistance in all areas of postharvest operations, but specifically to create infrastructure.
Implementation and Impact

The NCCD has designed cold chain infrastructure to increase the holding life of a product, which begins at the time of harvest. From here, products move to preconditioning hubs, transporter agencies, and finally, terminal demand. To effectively organize supply chain logistics around the concept of holding life, the NCCD has engaged numerous actors to help develop solutions. These actors include producers, pre-harvest contractors, wholesalers, processors, cold storage and logistics operators, and retailers.

An example of extended holding life is at the very beginning of the supply chain. Aggregation hubs are equipped with limited capacity cold stores, which ensure that delivery capacity is appropriately matched. Aggregators communicate fill capacity to farmers, who stop harvesting, knowing that crops are best left on the vine until more storage is available. In this way, farmers’ produce retains higher quality over time, creating more value for the farmer. As a result of such cold chain activities, many logistics operators have transitioned from standard transport to cold chain transport. Success in cold chain development has also enabled the establishment of Mega Food Parks. These food parks are receiving increased investment in food processing for export, which further incentivizes domestic cold chain development.

Largely operating for the Ministry of Agriculture, the NCCD also provides advice to the Ministries of Food Processing; Transport, Shipping, and Commerce; and Environment, Forestry, and Climate Change. This integrated, multi-sectoral approach has allowed for the design and implementation of a variety of initiatives. For instance, the NCCD is guiding cold chain users to be more environmentally friendly in their operations by supporting the investigation of alternative energy options such as geothermal sources.

While the NCCD guides national programs and policies providing finance and technology, each state can vary its requests from the government based on a variety of factors, including commodity focus. For instance, Delhi has the largest wholesale market in South Asia, but at one point, there existed a knowledge gap regarding ripening chemicals. After engaging industry players, the state government developed a campaign to spread awareness of ripening chambers and placed chemical sensors on borders to enforce new policies. In this way, the centralized scheme in India is amenable to decentralized application.

Lessons for Application

1. Develop an authoritative knowledge source:

   An independent, central knowledge society with stakeholders invited from the private sector, the NCCD has helped develop science-based policies and programs. Its independence allows it to collaborate effectively and coordinate the activities of various ministries.

2. Take a systems approach:

   By analyzing agro-logistics and the life sciences behind the holding time of a product, the NCCD was able to guide the Government of India to consider the separate and distinct needs of preconditioning hubs, transporter agencies, and markets of terminal demand.

3. Think “fork to farm”:

   Policies and schemes in India have enabled demand to drive supply. Correspondingly, cold chain is being developed as a service wherein value flows back to the producer “with equanimity.” As such, horizontal integration is seen as preferable to vertical integration or contract farming.

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1. Dr. Pawanexh Kohli, personal communication, Nov. 8, 2018.
Since 2004, the Ghanaian Ministry of Food and Agriculture (MoFA) has implemented the Market Oriented Agriculture Program (MOAP) with financial support from the German government through the German Society for International Cooperation (GIZ). This MoFA-led initiative aims to improve the ability of businesses within the agriculture sector to both access lucrative international markets and serve the demands of their populations. By creating new agricultural value chain coordination mechanisms, MOAP has improved the profitability of agribusinesses. As a result, agribusinesses have diversified and significantly reduced the postharvest loss of tropical fruits.
Prior to 2004, Ghana’s agriculture sector was primarily focused on food security and increasing the productivity of staple crops. This is perhaps best demonstrated by the theme of National Farmer’s Day in 2001 “Grow what we eat, eat what we grow, and can what we cannot eat.” However, while staple crops are important to food security, tropical fruits such as pineapple and mango often fetch higher prices in international markets. Ghana needed a strategy to realize the comparative advantage of its tropical climate and produce these products with an orientation toward growing the economy and generating additional income for those in the food sector, estimated at over 60% of the labor force.

Extending the value and life of perishable products for export to international markets required a different approach to agriculture and agribusiness. MOAP is designed to improve business linkages by creating more inclusive business models in four horticultural supply chains. By strengthening the linkages between producers and agribusinesses along the supply chain, MOAP is helping orient Ghana’s agriculture sector toward these more lucrative opportunities. In doing so, the program is having significant effects on PHL reduction.

### BY THE NUMBERS

Over 14 years of programming, MOAP has helped:

- **Create more than 30,000 jobs at agribusinesses like processing companies.**
- **Halve postharvest loss in the pineapple value chain from 30% to 15%.**
- **Escalate commercial agri-processing at four companies now processing more than 300 metric tons of fresh fruits and vegetables an hour.**

### Policy Design

MOAP began in 2004 as a partnership between Ghana’s MoFA and GIZ. Both stakeholders recognized that Ghanaian farmers and agribusinesses producing staple crops with low efficiency along the value chain could increase their profits by growing foods with higher commercial potential. MOAP was designed as a governmental intervention to reorient the agriculture sector toward these opportunities by improving supply chains for four key products: pineapples, mangos, citrus, and chillies. The program enhances supply chain connectivity, or linkages between supply chain actors, from point of production to sale or export. The primary means for delivering on this goal is the Inclusive Business Model (IBM), which serves as a value chain coordination mechanism to bring agribusinesses and farmers to the table. While similar to a traditional offtake agreement, the IBM also aims to provide transparency into the business concerns of each actor, which in turn incentivizes them to work together and improve the movement of goods from farm to market.
Implementation and Impact

To facilitate the expansion of agribusiness, MOAP’s IBM facilitates agreements between farmers and businesses. Groups of farmers organized into farmer-based organizations, or FBOs, and were linked with offtakers, such as processors or exporters, with established businesses that understand supply needs. Offtakers set quality and quantity requirements for their operations, and farmers negotiate agreement terms per unit input produced. This also provides farmers with a view into the core business operations of offtakers and how input quality affects the profits of all supply chain actors, including their own.

Agreements negotiated through IBM have helped agribusinesses secure a more reliable supply needed for operations. This is particularly important for processing, which requires reliable supplies of raw materials to run commercial-scale facilities. Such instances add to the proliferation of agribusiness in Ghana. Companies like Blue Skies and the Sea-Freight Pineapple Exporters of Ghana have expanded their operations, creating jobs and investing in the processing and transport equipment to reduce postharvest loss in their own operations.

MOAP also faces some challenges. For instance, decentralized governance necessitates that the program is implemented at the district level. However, district governments weigh the importance of agribusiness in relation to other local budgeting priorities, like schools and hospitals, and develop budgets that reflect these priorities. Therefore ensuring the sustainability of the services provided through MOAP is a challenge. Additionally, bureaucratic inefficiencies extend the licensing and registration process for new companies from a few months to up to two years. These challenges disincentivize entrepreneurs who would like to enter the agri-processing industry.

Overall MOAP illustrates how a policy or program aimed at improving transparency can bring businesses and farmers to the table for mutually beneficial outcomes, including improved profits, and the reduction of PHL.

Key Lessons for Application

1. Create transparency:

The Inclusive Business Model (IBM) improves transparency between supply chain actors. This is important because it facilitates trust between actors – an incentive to improve operations along the entire supply chain. The result is added value for all stakeholders.

2. Navigate bureaucracy:

To fully scale impact, MOAP requires an enabling environment conducive to program goals. The bureaucratic inefficiencies that arose at the local level, where MOAP is implemented, could potentially be addressed through program design or redesign that works with local stakeholders to identify potential bottlenecks and solutions.

The Government of Bangladesh seeks to increase incomes and eliminate extreme poverty by 2030. The National Agricultural Technology Program (NATP) supports this vision through its strategies to improve national agricultural productivity, market linkages, and farmer income with a focus on small, marginal, and female farmers. The second of three five-year phases, NATP-Phase 2 (NATP-2) aims to enhance the creation, diffusion, and adoption of agricultural technologies toward increased farm productivity and reduced postharvest loss. NATP-2 is currently propagating postharvest management practices throughout the sector, incentivizing farmers to develop business plans, and expanding the profitability of select business operations.
Bangladesh is a predominantly agricultural country that has experienced significant declines of poverty over the past decade, especially in urban areas. However, sustainable transformational changes in rural areas are required to support further socioeconomic development. As rural poverty reduction and increased nutrition outcomes hinge on the agriculture sector, a national agriculture agenda has been developed to address these priorities. The most pressing challenge within agriculture and postharvest management is a “low-technology trap” that has permeated a cycle of low productivity, high postharvest losses, and poor quality nutritious foods with limited market reach, far from target customers.¹

After a decade of interventions coordinated by the government, funding and implementation partners, and national agricultural research and extension services, Bangladesh has seen significant gains in horticulture productivity, ranking 3rd globally in its annual acceleration rate of vegetable production.² However, remaining challenges include food safety, postharvest loss, lack of agro-processing, and the need to further develop and disseminate climate smart technologies.² This has led to a vision of horizontal integration, where technologies are introduced to cluster-based production and processing units with enhanced market linkages.

BY THE NUMBERS ³

- Services expanded to cover 270 out of 495 Upazilas (sub-districts)
- 1,699 Farmers’ Information and Advisory Centers (FIACs) established
- 55,102 demonstrations provided
- 8,145 female Common Interest Groups (CIGs, 30%) formed and mobilized
- 13,450 demand-driven Micro-Extension Plans proposed by CIGs per year
- Overall farm income in project areas increased by 24% and in non-project areas by 18%

Policy Design

The Government of Bangladesh is addressing its rural poverty challenge through the NATP, which is supported by long-standing financial, implementation, and research partners including the World Bank, IFAD, and USAID, respectively. The program’s objective is to increase income and reduce extreme poverty and hunger by improving agricultural productivity and the performance of the national agricultural technology system.⁴ Phase 1 (2008-2013) focused on increasing the effectiveness of agricultural research and extension systems.⁵ NATP-2 (2015-2021) is designed to reduce the value gap between farm-gate commodity value and ultimate retail value.¹ NATP-2 achieves its goals through two main activities: (1) strengthening decentralized, demand-driven research and extension services to generate and diffuse agricultural technologies and (2) promoting the sustainability of farmers’ Common Interest Groups (CIGs) and producer organizations through market-oriented, diversified smallholder production and market linkages.
NATP-2 is implemented through the Ministry of Agriculture, the Ministry of Fisheries and Livestock, and the Bangladesh Agricultural Research Council. These entities are tasked with providing research and problem solving technology to farmers through a decentralized extension system based around Upazilas, or sub-districts. These services are provided through Farmers’ Information and Advice Centers and Commodity Collection and Marketing Centers (CCMCs) within select Upazilas. Trained extension workers at these centers provide technical support to bridge critical skill and knowledge gaps related to production, postharvest management, value addition, income generation, and the importance of dietary diversification.

CCMCs train farmers and CIGs to sort, wash, and grade their commodities and then transport these commodities to urban markets. These activities help integrate small and marginal farmers into CIGs and the value chain, which supports the postharvest management and market linkage goals of NATP-2, including by linking them to cities such as Dhaka and nearby export markets. This exposure to export markets has boosted the focus on market-oriented production. For instance, variety 6 of the coastal mung bean is exported to Japan where it is sold at a market price 10-15% higher than the local markets.

The adaptation of technologies to specific commodity value chains has also been a successful aspect of the decentralized NATP-2 extension approach. For instance, polyethylene boxes from China have been imported to safely dry harvested fish and has helped prevent the spread of food borne diseases. Vietnamese crab hatchery methods have been adopted in Bangladeshi mangroves—the largest in the world—allowing SMEs to develop to meet international demand, as 95% of the crab collected is exported. Ongoing research is exploring potential applications of other technologies related to traceability, cold chain, and processing, such as drying technologies for seasonal fruits such as jackfruit, mango, and pineapple.

CIGs and other producer organizations are now developing their own enterprises based around the skills and technologies they have adopted through extension services. These organizations are able to register as formal cooperatives under the Department of Cooperatives to more easily open and maintain transparent bank accounts. Group savings are being used to acquire community resources and invest in income-generating activities. Long-term facilitation and support from NATP-2 will ensure that these organizations emerge as sustainable, independent institutions that bring agricultural commercialization to rural Bangladesh.

**Implementation and Impact**

**Lessons for Application**

1. Decentralized and demand-driven extension:

Micro-Extension Plans created by producers’ organizations and farmers’ CIGs are integrated into greater Upazila Extension Plans by extension workers. These plans guide Upazila Resource Teams in their specific funding requests for technologies and extension services, including demonstrations. Approved by District Extension Coordination Committees, these plans also influence upstream national technology research and development.

2. Support for developing enterprises:

CIGs are trained to develop by-laws, register with the Department of Cooperatives, raise group savings, and invest group funds. This, along with the training to develop Micro-Extension Plans, has contributed to the emergence of sustainable grassroots organizations and small businesses.
Overview

Tanzania Agriculture Development Bank (TADB) was established in 2011 by an act of parliament to enable commercial progress across Tanzania’s agriculture sector. TADB is envisioned to: (1) facilitate the attainment of food security and food self-sufficiency in Tanzania and (2) facilitate the transformation of Tanzania’s agriculture from smallholder’s subsistence production to commercial production. Through TADB, the government facilitates access to financial products and services for stakeholders throughout the agriculture sector. Additionally, these services have enabled businesses to seek targeted advice on their investment and growth strategies.
Context

Tanzania’s agriculture sector is vital to its economy, representing nearly 30% of Gross Domestic Product (GDP) and comprising about two-thirds of the labor force. Despite its prominence in the economy, the agriculture sector has struggled to commercialize. Access to finance is one of the most significant challenges faced by actors throughout the supply chain, including farmers, processors, and transporters.

Commercial banks and other financial institutions often lack the specialized knowledge needed to assess loan applications in the agriculture sector. Without access to lines of credit, agribusinesses cannot invest in capital that will help scale operations, increase efficiency, and improve the delivery of nutritious foods to market. TADB has been introduced to facilitate access to finance for actors throughout the supply chain, and support the development of the agricultural sector in line with the country’s national strategies, such as Vision 2025 which states the goal of a diversified and semi-industrialized economy.

BY THE NUMBERS

In its first few years of operation, TADB has:

- Served over 60,000 individuals through lending
- Received 90 applications for finance
- Dispersed USD 41 million in finance for the expansion of agricultural production and processing

Policy Design

TADB is a state owned development finance institution that was approved through legislation in 2011. The Ministry of Finance and Planning and the Ministry of Agriculture, Food Security, and Cooperatives played key roles in the design and development of TADB. With a financing goal of USD 380 million to be dispersed over eight years, the bank required significant startup capital. The African Development Bank issued a USD 93.5 million loan through the African Development Fund, and the remainder is directly from the Tanzanian government.

In addition to securing the needed finance, TADB also underwent several years of structuring after its approval, including an in-depth talent search for top management positions. It was officially launched in 2015 as an apex national-level bank. The mission is to facilitate development and support the transformation of the agriculture sector by providing short-, medium- and long-term finance for investments across agricultural value chains.
Implementation and Impact

TADB utilizes variety of innovative financing mechanisms to facilitate access to finance for agribusinesses in the form of short, medium, and long term credit. The most prominent service is direct lending to institutions involved in agricultural value chain financing. Customers are primarily financial intermediaries rather than farmers and agribusinesses themselves, such as commercial banks, community banks, microfinance institutions (MFIs), and savings and credit cooperatives (SACCOs). By providing financial products to such institutions TADB helps de-risk financing in the agricultural sector, which in turn helps more farmers and agribusinesses access finance. TADB has made investments in agro-processing a key component of their lending activities, which has helped facilitate the expansion of commercial processing facilities for tea and cashew.

Additional services includes refinancing, guarantees, and earmarked funding. Refinancing is facilitated by the use of warehouse receipt programs, out grower schemes, input loans, equipment finance, and other value chain financing interventions. Access to refinance helps small entities such as community banks, MFIs, FBOs, and SACCOs alleviate the burden of high credit rates. TADB also bears the risk of non-payment by borrowers and guarantees the loan on their behalf. This is in lieu of the collateral that many commercial banks request from customers without a proven credit history. Furthermore, to support the testing of new approaches in the agriculture sector that could enhance incomes in rural areas, TADB has set aside USD 5 million as a Rural Innovation Fund.

Challenges at TADB include the expansion of both bank capacity and access to the bank’s services. An independent report found that roughly USD 24 million of TADB’s initial capital is in a fixed deposit account to accrue interest. If the bank cannot access this money until the account reaches maturity, it reduces the ability of TADB to respond to the agricultural sector’s needs. Moreover, TADB’s office in the capital of Dar es Salaam is far removed from most agricultural activities, which occur in other regions of Tanzania. The Bank has plans to address this by opening new locations in the cities of Dodoma and Mwanza.

Key Lessons for Application

1. Align institutions with strategies:

TADB has been tasked with supporting the Tanzanian government’s goals for financial reform laid out in its strategic plan Vision 2025, which calls for the industrialization of the Tanzanian economy. TADB contributes to this vision by addressing both the need for a more modern and productive agriculture sector and desire to unleash the power of the market and the private sector.

2. Diversification increases access:

Diverse financial products and services allow TADB great flexibility in how it engages different stakeholders in the agriculture sector. Decentralization from its centralized office location would allow TADB to further expand such access.

References:

CONCLUSION

The case studies presented in this policy briefing highlight how governments can encourage the food industry and businesses operating within it to grow and sustain profitability while reducing food loss of nutritious foods. Across the world, agricultural producers and SMEs throughout the value chain are striving to access more lucrative, and sometimes more distant markets. This requires a focus on operations that extend the life of a product and retain its value throughout its journey to market. The four public initiatives studied present examples of how government-led initiatives can support the development of food systems by strengthening the enabling environment to promote both sectoral productivity and firm-level sustainability.

Enabling Mechanisms

Prosperity and food security have emerged as complementary goals for many countries. However, shifts in consumer preferences, caused by rapidly growing urban populations with overall higher incomes, are increasing the pressure on businesses to deliver safe, nutritious, and desirable foods to market. Governments explicity confront these shifts in the context of broader national development priorities.

This broader context, merged with the changing landscape of food and nutrition, shaped the design of each initiative included in this policy briefing. Each of these cases deployed a primary enabling mechanism, complemented by a secondary mechanism, to promote sector-wide growth or business competitiveness at the firm-level. This reflects two realities: (1) a multi-faceted approach can foster large-scale change in complex systems, such as food systems; and (2) food system improvement benefits from the inclusion of a multitude of stakeholders. The cases studied achieved success through various combinations of Important Enablers and Useful Enablers, as described on page 2.

Creating an enabling environment for sector-wide development underpins business profitability. For instance, Tanzania’s inclusive mandate TADB provides finance to a variety of stakeholders involved in the food system. While investing in the capital expenditures needed to improve operations for businesses will contribute to postharvest loss reduction, it is not a direct impact of TADB. Rather, it is an indirect impact resulting from the sector-wide improvement in access to finance.

Useful Enablers, or those that support business development at the level of the firm by supporting businesses to increase the efficiency of their operations and expand their market footprint, were the more common mechanism of choice within the cases studied. In these cases, the enabling mechanisms work directly with businesses to enhance product value and increase their uptake of postharvest management practices and technologies, as evidenced best by the cases in Ghana and Bangladesh. For these reasons, the impact on postharvest loss reduction is more prominent in cases where the focus is on a Useful Enabler. Governments aiming to specifically reduce postharvest loss should therefore target policies to the firm level.
Key Lessons for Application

While the specific design and implementation details of each policy are highly contextual, key lessons have emerged for application in new contexts. These lessons inform government actions and design decisions that can increase the likelihood of success:

- **Create transparency.** Successful agricultural value chains are dependent on knowledge of and trust between stakeholders because agricultural value chains are dependent on business transactions of perishable, time-sensitive goods. Policies and programs that create transparency can connect and facilitate trust between business partners, as it did in Ghana with the IBM, which also helped increase value within supply chains in Ghana.

- **Foster stakeholder inclusion.** Agricultural value chains are inherently complex, and numerous stakeholders involved in the process of bringing goods to market. Public sector processes for developing policies and programs can adopt a similar approach to ensure that those who will be most affected by an initiative have a say in the outcome, such as in Bangladesh and India, where NATP-2 and NCCA have created dedicated spaces for engaging farmers and industry actors.

- **Tailor policy to implementation region.** Agricultural value chains bridge the rural-urban divide, as food grown in rural areas is brought into urban areas. However, public sector initiatives should seek to understand where a policy or program will be implemented “on-the-ground” so that systems can be developed to ensure the good that the initiative is promoting will meet the intended users. This was not the case in Tanzania, where the TADB was located in Dar es Salaam, far from the agribusinesses it was trying to increase access to finance for.

Distinct Approaches, Similar Outcomes

Despite varied national priorities and approaches to encouraging business competition, the cases achieved similar outcomes. Both Ghana’s MOAP and Bangladesh’s NATP-2 directly support entrepreneurship and strive to build market linkages for cooperatives and FBOs but do so through different divergent tactics; NATP-2 prioritizes the provision of extension services to cooperatives that will facilitate access to urban markets, while MOAP seeks to create business models between FBOs and commercial actors. These divergent strategies have both resulted in observable success for the uptake of technologies and agricultural practices that reduce postharvest loss, particularly for perishable, nutritious foods. Similarly, the centralized TADB and decentralized system of cold chain development in India reflect different approaches to business finance. TADB finances the food system by working with actors ranging from FBOs and SACCOs to commercial banks. Conversely, India’s model incentivizes business development and competition specifically for cold chain, granting reefer vans, cold storages, and other technologies a specialized “infrastructure” status. Both approaches increase the competitiveness of the sector and stimulate investment in technologies vital to preserving food value and reducing postharvest loss of nutritious food.

Driving Policy Discussion

Policy development at the national and subnational levels can engage a variety of stakeholders, including farmers, retailers, exporters, processors, and other businesses along the value chain. Engaging these actors in the decision-making process, such as through business associations, can help ensure the needs of these diverse stakeholder groups are taken into account, and the policies being developed will help them solve challenges they face in bringing healthy, safe food to market. This policy briefing provides a shared evidential base for policy discussions and is intended to inform such conversations through the Postharvest Loss Alliance for Nutrition and other fora.