Supply Chain and Operations Management

From Port to Plate

Opportunities for In-Country Food Recovery at Ports

November 2025

About HELP Logistics

HELP Logistics reimagines supply chains as a catalyst for resilience, efficiency, and sustainability at the intersection of humanitarian action, development, and climate response. The organization works with governments, NGOs, and international agencies to diagnose and optimize supply chains, support the next generation of supply chain leaders through internships and young professional programs, and convert applied research into actionable strategies, digital solutions, and policy guidance. With hubs in Africa, Asia, the Middle East, and Europe, HELP channels global expertise into local solutions that move faster, waste less, and achieve greater impact for vulnerable communities. It is an operational non-profit initiative of the Kühne Foundation.

Acknowledgments

We are grateful to our partner The Global FoodBanking Network for their dedication to this project. Their feedback, inputs, network, and outreach have been essential for this report. We also want to express our sincere appreciation to the food banks that provided valuable insights into the local contexts: Rise Against Hunger Philippines, Simply Share Foundation and FoodBanking Kenya.

Content Management

Timna Eckschmidt
Supply Chain Consultant, Food Systems and Sustainability
HELP Logistics Asia-Pacific

Bensolomon Baraka
Supply Chain Consultant, Food Systems and Agricultural Economics
HELP Logistics East Africa

Gary Asige
Supply Chain Consultant, Procurement and Local Production
HELP Logistics East Africa

Content Reviewers

Anthony Kitchen
Field and Knowledge Services Senior Director
The Global FoodBanking Network

Victoria Njunu
Regional Director – HELP Logistics East Africa

Colin Wee
Regional Director – HELP Logistics Asia-Pacific

Seynabou Diakhoumpa
Senior Supply Chain Advisor, Operations Management
HELP Logistics West Africa

Eïda Ouchtar
Supply Chain Advisor
HELP Logistics Europe

With contributions from:

Contents

Abbreviations

DSWD	Department of Social Welfare and Development
FAO	Food and Agriculture Organization of the United Nations
FBK	FoodBanking Kenya
GFN	The Global FoodBanking Network
KRA	Kenya Revenue Authority
MT	Metric Tonne
TEU	Twenty-Foot Equivalent Unit

Figures

Tables

Executive Summary

Food insecurity remains a critical global challenge, with 30% of the global population affected and between 691 and 783 million people experiencing hunger in 2022 (FAO, 2023). At the same time, food losses account for 21% of total production in Sub-Saharan Africa (Maryam, 2017) and 15% in Eastern and South-Eastern Asia (SGD 12 HUB, 2024). While food banks play a crucial role in redistributing surplus food to those in need, certain segments of the food system remain underutilized in food recovery efforts. One such overlooked area is ports and transport nodes, which have a throughput of significant volumes of imported and exported food products.

To explore the potential for food recovery at these critical points, HELP Logistics and its partners conducted assessments at key ports and transport hubs in the Philippines and Kenya. The findings indicate that while some surplus food exists—mainly in the form of abandoned and seized cargo—the overall volume is limited. This is largely due to stringent regulatory inspections, which minimize food rejections, as well as the relatively small share of food products physically handled at ports. Currently, the primary mechanism for redistributing surplus food at ports is through public auctions. However, participating in these auctions presents financial and logistical challenges for food banks, making food recovery at ports a costly and complex endeavour.

To maximize food recovery opportunities, this report recommends raising awareness about food waste at ports and strengthening collaboration between food banks and port authorities. By fostering these partnerships, food banks can gain more direct access to viable surplus food, reducing waste and enhancing food security efforts. This study showed that there is potential for further research on food losses at other high-potential areas within domestic food systems—such as open-air markets, fish ports, and food processing facilities—where food losses are expected to be more substantial and recovery efforts can have a greater impact

Actionable Key Points for Food Banks

1. Accessing Surplus Food at Ports

- **Evaluate Feasibility of Auction Participation**: Assess the financial viability of bidding for abandoned food products in port auctions, while exploring cost-effective alternatives.
- **Advocate for Direct Food Donations**: Engage with port authorities to establish mechanisms for direct food donations when auctions fail or when surplus food is at risk of disposal.

2. Strengthening Partnerships and Advocacy

- **Raise Awareness with Port Authorities**: Actively engage with port stakeholders to highlight the role of food banks in reducing food waste and feeding vulnerable communities.
- **Build Government Support**: Advocate for policy support and streamlined regulations to facilitate surplus food recovery at ports and transport nodes.

3. Expanding Food Recovery Beyond Major International Trading Ports

- **Engage Private Processing and Handling Facilities**: Establish partnerships with packing houses, processing centres, and first border inspection facilities to recover surplus food. Strengthen collaboration with horticultural packhouses to systematically recover imperfect yet consumable produce.
- **Explore Local Fish Port Food Rescue**: This study focused on major international trading ports. The findings suggest a need to assess opportunities to recover surplus food from local fish ports that were outside the scope of this study.

4. Optimising Food Recovery Operations

- **Streamline logistics at food recovery sites:** Deploy logistics resources, such as crates, at institutions that provide capacity for food recovery to streamline surplus food collection and minimise operational disruptions.
- **Invest in Logistics Capacity**: Enhance haulage capacity and workforce to facilitate efficient surplus food collection and distribution.

Introduction

Worldwide, 30% of the population was moderately or severely food insecure, and between 691 and 783 million people faced hunger in 2022 (FAO, 2023). In the same year, 22% of children under five years were stunted, and 7% experienced wasting. Similarly, 42% of the population (3.1 billion people) was unable to afford a healthy diet (FAO, 2023). Despite these concerning statistics, it was reported that 931 million tons of food was wasted at the household, retailer, restaurant and food service level in 2019 (SGD 12 HUB, 2024). This represents 17% of the food available to consumers. Not only is food wasted at the retail and consumer level, but there are also significant losses along the supply chain of food products[1]. In 2020, 13% of the total amount of produced food products was lost along the supply chain, starting from post-harvest losses at the farm level up to, but excluding, the retail level. In Sub-Saharan Africa, food losses represent 21%, and in Eastern and South-Eastern Asia 15% of the food production in these regions (SGD 12 HUB, 2024). In the Kenyan context, 40% of food is lost from farm to fork (FAO, 2014). Worldwide, food losses have an approximate monetary value of 400 billion USD. Moreover, it is estimated that globally, food waste costs 1 trillion USD in economic costs, 700 billion USD in environmental costs and 900 billion USD in social costs per year (SGD 12 HUB, 2024).

In response to the stated issues, food banks have been redistributing food that would otherwise be wasted to people facing hunger. In general, food banks receive food donations from retailers, manufacturers, farmers, restaurants and other entities and redistribute them directly to consumers or intermediaries, such as soup kitchens and food pantries.

While many food banks have long-standing collaborations with retailers, manufacturers and farmers, food recovery from ports, such as sea and airports, largely remains unexplored. Nevertheless, it is assumed that there are large quantities of food losses at these port levels. This project was built on this hypothesis. Therefore, this project aims to shed light on the possibilities of food banks accessing ports, receiving food donations and redistributing these otherwise lost food products.

In 2024, HELP Logistics partnered with The Global FoodBanking Network (GFN) to address this situation. GFN is an international nonprofit organization dedicated to alleviating global hunger by supporting and strengthening food banks around the world. Founded in 2006, GFN works with a vast network of food banks in over 50 countries, providing technical assistance, resources, and strategic guidance to enhance their capacity and effectiveness. In collaboration with various partners, GFN also engages in advocacy efforts to influence policies and practices that support food security and reduce food waste. Their holistic approach not only addresses the immediate needs of those facing hunger but also contributes to long-term solutions for food system sustainability. This project, undertaken in partnership with GFN, aims to analyse the quantity of food losses at ports in the Philippines and Kenya and develop tangible strategies to access and redistribute those products, ultimately contributing to the broader goal of ending hunger and promoting food security worldwide.

Given the focus on the Philippines and Kenya, the findings of the assessment cannot be generalized. Nevertheless, the assessments demonstrated dynamics that are similar in both countries and may shed light on the dynamics in other contexts as well. This report highlights the findings of the assessments and the resulting recommendations that are applicable to both, Kenya and the Philippines. Detailed separate reports on the assessments in each country are available.

[1] The term 'food loss' is used to describe losses along the supply chain of food products, from the farm to the retail stage, excluding retail. The term 'food waste' is used to describe losses at the consumer and retail level, i.e. household, restaurant, food services and retail.

Project approach

This project was conducted simultaneously in Kenya and the Philippines, with support from third-party consultants and food banks in both countries. The study was structured into four distinct phases, each aimed at systematically assessing food recovery opportunities at ports and transport nodes.

Phase One: Mapping and Data Collection

The initial phase focused on developing a high-level overview of key in-country ports—including seaports, dry ports, and airports—as well as critical transport nodes such as international border crossings and railway stations in Kenya and the Philippines. Macro-level data on cargo handling capacities, food product throughput, and logistical processes were gathered. This foundational data informed subsequent phases, particularly in identifying priority ports for further analysis. Following additional research and site visits to the identified ports and transit nodes, the assessment concentrated on Mombasa Sea Port and Jomo Kenyatta International Airport in Kenya, and Cebu and Manila seaports in the Philippines, as they exhibit the greatest potential for surplus food recovery.

Phase Two: In-Depth Assessment

The second phase involved a detailed examination of food loss and potential food recovery opportunities at selected ports and transport nodes in both countries. By analysing operational processes and food handling systems, this phase aimed to pinpoint areas where surplus food could be recovered effectively.

Phase Three: Opportunities for Recovery

Building on the insights from Phase Two, the third phase focused on formulating opportunity areas for food banks in Kenya and the Philippines to recover surplus food from the assessed ports.

Phase Four: Addressing Challenges and Constraints

The final phase identified potential challenges and operational constraints within the proposed opportunities. It provided food banks with key considerations for navigating regulatory, logistical, and financial hurdles in implementing food recovery strategies at ports and transport nodes.

The research methodology combined primary data collection—through interviews with port and customs authorities—with secondary research from relevant sources. On-site port visits further enriched the findings by offering firsthand insights into food product movement, handling processes, and operational practices.

Collaboration with local food banks was central to ensuring that the recommendations aligned with the realities of each country's food system. FoodBanking Kenya (FBK), Simply Share Foundation, and Rise Against Hunger Philippines—operating in Nairobi, Cebu, and Manila, respectively—were actively engaged throughout the project. Their expertise and local context knowledge helped refine the proposed strategies, ensuring their practicality and relevance.

Analysis

Mapping of Priority Ports

Priority Ports in the Philippines

Almost all food products that are imported to the Philippines are transported by sea. Despite the 23 major seaports and 100 minor seaports in the Philippines, the seaports of Manila, comprising the Manila North Harbor and the Manila International Container Port, and Cebu were chosen as priority ports for this assessment based on the amount of throughput of food products and the importance of these ports for international food trade.

The Manila and Cebu ports handled a throughput of 60 million MT and 68 million MT of general cargo, and 1.6 million MT and 0.5 million MT of incoming food products ian 2023, respectively (PPA, 2023). The Philippines is a net importer of agricultural products, with total agricultural exports recorded at USD 6 billion and imports at USD 18 billion in 2023 (PSA, 2024).

The commodity groups of edible fruits and nuts and animal or vegetable fats and oils represent the largest share of those exports. Cereals represent the largest group of imported agricultural products at 21%, while fodder and residues from the food industry is the second largest imported commodity (PSA, 2024). Most food imports are handled by the Manila ports. While the Philippines has several international airports, 99% of food products are shipped via sea, which is why this analysis focuses on seaports only (USDA, 2023).

Figure 1: Priority ports in the Philippines

Table 1: Statistical Information on Cargo Throughput of Manila and Cebu Ports

Category	Manila Ports	Cebu Port
Number of Twenty-Foot Equivalent Units (TEU)	5,202,316 TEU	893,371 TEU
General Cargo Throughput	59,925,803 MT	67,517,998 MT
incoming food product	1,592,946 MT	548,339 MT

Priority Ports in Kenya

Based on the map of Kenya (see Figure 2), which highlights a network of key trade and transport nodes including multiple cross-border points, dry ports, airports, and the Mombasa Sea Port, it is evident that the country possesses a broad logistics infrastructure supporting regional and international trade. However, our assessment of food imports and exports focused solely on the main entry and exit points which are Mombasa Sea Port and Jomo Kenyatta International Airport (JKIA) in Nairobi due to their relative importance regarding food cargo throughput. The seaport of Mombasa handled a total of 1.6 million TEUs of food cargo in 2023. On the other hand, food commodities that use air freight largely move through the Jomo Kenyatta International Airport in Nairobi, which was reached by a total of 344 thousand metric tonnes of cargo in 2023. Wheat, rice, sugar, and maize are Kenya's top imports (1,333 million USD) while fruits, nuts, vegetables, palm oil and legumes are the major exports (884 million USD) (Kenya Revenue Authority, 2024).

Figure 2: Map of priority ports in Kenya (map by The World Bank, 2023)

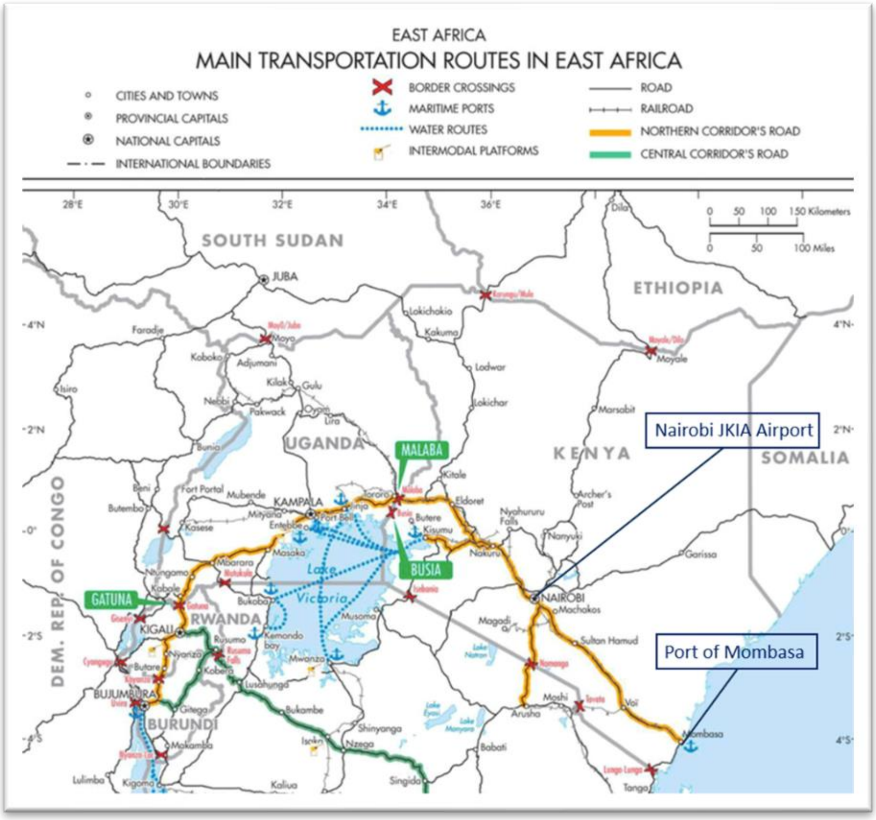

Table 2: Statistical Information on Cargo Throughput of Mombasa Seaport and Jomo Kenyatta Airport (Nairobi)

Category	MOMBASA PORT	JOMO KENYATTA AIRPORT (Nairobi)
Number of Twenty-Foot Equivalent Units (TEU)	1,600,000 TEU	N/A
General Cargo Throughput	35,980,000 MT	344,207 MT
Food Imports	2,992,776 MT	3,274 MT

Food Losses at Ports

This assessment led to surprising insights regarding food losses at ports in both countries. Contradicting the initial hypothesis, minimal food losses and subsequently minimal opportunities for food recovery could be found at the port level in the Philippines and Kenya. While facing difficulties in accessing historical data on food losses at ports, the visits to the Port of Mombasa, Jomo Kenyatta International Airport and Manila Seaports revealed that opportunities to obtain surplus food for donation were quite limited. This was largely due to the stringent quality checks carried out during packaging and dispatching food for both import and export and the subsequent penalties incurred for importing commodities that were found to have quality issues. Moreover, ports generally do not handle the food products within the containers and losses occur at an upstream or downstream level of the supply chain. By the time the food reaches the ports, there were few reasons for rejection, which included but were not limited to:

» Quality issues, such as contamination, spoilage, damage, toxicity, pests and diseases, and expired products.
» Regulatory non-compliance (missing phytosanitary certificates, non-adherence to food safety standards, and smuggled food products).
» Documentation errors, including lack of proper licenses.
» Lacking payment of duties and taxes.

Despite the above reasons, some agricultural consignments remain safe for consumption and could theoretically be recovered by local food banks. In Kenya, for example, food found to be infested with pests is isolated and fumigated. Once cleared, it can re-enter the market. In the Philippines, there are frequent cases of food consignments arriving with incorrect declarations. Although these products cannot be sold commercially, they are often still safe to eat. In the assessed ports, surplus food is either condemned or auctioned. Products that are considered unsafe for human consumption due to contamination, diseases, spoilage, or others, or that are forfeited and seized are condemned at the ports. The means of condemnation and disposal is decided by a committee consisting of various port agencies.

Besides disposing surplus food items, there is the possibility of releasing them through auctions. The most frequently auctioned food products are rice and sugar in the Philippines and auctions mainly focus on non-perishable food products. Auctions are organized by the Bureau of Customs in the Philippines and the Kenya Revenue Authority (KRA) in Kenya and registered bidders may compete for these products. While the auction system might entail possible incurrence of high costs for food banks, participating in auctions is currently the only available strategy for food banks to access surplus food products at the assessed ports. In addition to these options, importers or port authorities may choose to donate these consignments. Donations are rarely taking place in either assessed port, while they would present an opportunity for food recovery by food banks that supports hunger relief efforts.

Recommendations

The recommendations presented in this report are based on assessments conducted at ports in the Philippines and Kenya. These recommendations are mutually exclusive and, based on the collected data, are considered collectively exhaustive. With thoughtful consideration of the operational context, food banks in other regions may also choose to adopt some of these recommendations where applicable.

Accessing Surplus Food at Ports

Evaluate Feasibility of Auction Participation:

Registered bidders, including food banks, are eligible to participate in auctions for abandoned food products—typically non-perishable goods in full container loads. The food banks consulted expressed interest in recovering such food if it aligns with the needs of their beneficiaries, noting that they have the logistical capacity to handle them, including adhering to cold chain requirements. While this route offers opportunities for food recovery, it also imposes financial barriers. Competition with private bidders can drive up prices, rendering participation economically unviable for food banks. Therefore, alternative mechanisms should be explored to allow access to surplus food without incurring unsustainable costs.

Advocate for Direct Food Donations

The current system for managing surplus food at the analysed ports offers limited opportunities for direct donations to food banks. While public auctions serve as a revenue stream for port authorities, they also present challenges for food banks seeking to recover surplus food. There is the need to develop a structured approach to food donations at ports between port authorities and food banks, to be put in place rapidly in occasions where auctions fail or food products – though still safe for consumption - are at risk of disposal.

Strengthening Partnerships and Advocacy

Raise Awareness with Port Authorities

Establishing effective food donation mechanisms requires strong, trust-based relationships between food banks and port authorities. These relationships are fundamental in enabling rapid, coordinated responses when surplus food becomes available. In the Philippines, for example, the Department of Social Welfare and Development (DSWD)—the government body mandated to manage charitable food donations—must be an integral stakeholder in any food recovery efforts involving ports. Their involvement ensures compliance with national food safety and donation regulations, as well as alignment with broader social protection policies. Currently, there are no formalised partnerships between food banks and port authorities in either of the assessed countries. Creating structured engagement channels, such as Memorandums of Understanding (MoUs) or joint protocols, can lay the groundwork for sustained collaboration. Such partnerships would allow for smoother coordination during food donations, enhance the legitimacy of food recovery practices.

Build Government Support

Government endorsement and policy support are essential to institutionalize surplus food recovery and ensure long-term sustainability. There is a need for comprehensive legal frameworks that explicitly recognize food donation as a valid and encouraged practice, particularly from ports, customs warehouses, and other logistics hubs. This includes introducing or strengthening Good Samaritan laws that protect donors from liability when donations are made in good faith, and streamlining customs clearance processes for food deemed safe for consumption but otherwise destined for disposal. Additionally, governments can play a proactive role by offering fiscal incentives—such as tax deductions or import duty exemptions—for entities that donate surplus food.

Expanding Food Recovery Beyond Major International Trading Ports

When conducting this assessment, despite the shortfalls in gathering reliable food loss data across the ports and transport nodes that serve the export – import pathways of the Philippines and Kenya, we considered other feasible entry points for food recovery that are within the general scope of food trade in these countries. We believe that these would be vital opportunities for food rescue among food banks.

Engage Private Processing and Handling Facilities

Beyond conducting food safety inspections, port authorities at the assessed locations do not directly manage food products. Instead, activities such as storage, ripening, and processing are managed by private facilities that operate independently of port governance. This assessment identified these private facilities—particularly packing and processing centres—as potential opportunities for food surplus recovery. Additionally, first border inspection facilities, which are currently not under port jurisdiction, present promising avenues for collaboration in food rescue efforts.

A separate yet complementary study conducted by HELP Logistics in 2023, in collaboration with FBK, emphasised the potential to enhance FBK's engagement with processing packhouses to improve food recovery efforts. To facilitate this, increased investment in haulage capacity and workforce by FBK may be necessary. One practical solution is the prepositioning of FBK's recovery crates within packhouses. This approach serves two key functions:

1. **Efficiency in food rescue** – By having designated crates readily available, packhouses can immediately place imperfect yet consumable produce into these crates during export processing, reducing handling time and streamlining the food donation process.
2. **Minimizing operational disruptions** – By using FBK's crates for donations, packhouses can avoid tying up their own crates while awaiting food bank pickups, thus lowering opportunity costs, and ensuring that normal operations are not disrupted and lowering associated opportunity costs.

Such proactive measures would demonstrate food banks' commitment to working collaboratively with packhouses, ensuring that food recovery efforts align with industry operations rather than creating logistical bottlenecks. Strengthening these partnerships can significantly enhance surplus food recovery while maintaining the efficiency of food processing and export activities.

Explore Local Fish Port Food Rescue

In the Philippines, local fish ports are believed to be a potential source of surplus food that could be recovered by food banks. Given the topography of the Philippines, local fish ports are omnipresent and handle large quantities of fish all together. These ports are not included in the scope of this study, as each individual port does not fulfil the criteria for this study. The consulted food banks stated interest in recovering fish that cannot be sold, especially frozen fish and fish products.

Conclusion

This project allowed us to challenge and refine our initial assumptions regarding the scale of food loss occurring at port facilities in the Philippines and Kenya. Contrary to earlier expectations, the assessment revealed that significant food loss at these ports is not as widespread or systemic as hypothesised. This is an encouraging outcome, suggesting that port-level operations, although complex, may not be major contributors to food loss when functioning within existing regulatory and logistical frameworks. The food loss occurring at ports is suggested to be recovered through auctions and food donation efforts require strengthening of relationships between port and government authorities and food banks.

In addition, the broader food system continues to experience considerable volumes of surplus and lost food, particularly at other stages of the supply chain, including upstream and downstream of ports. These losses represent missed opportunities to redirect edible food to vulnerable populations.

The recommendations outlined in this report provide targeted, actionable strategies to strengthen surplus food recovery, specifically by improving access to surplus food at ports, enhancing collaboration with stakeholders, and investing in logistics infrastructure. By implementing these measures, food banks and their partners can unlock new pathways for food recovery at and beyond the port level.

Ultimately, every gram of food rescued from being discarded contributes to reducing food insecurity, improving supply chain efficiency, and promoting more equitable and sustainable food systems. With stronger partnerships, policy support, and investment, the food recovery ecosystem in these regions can grow more resilient, helping ensure that nutritious food reaches those who need it most rather than going to waste.[2]

[2] The detailed country reports upon which this consolidated version is based can be accessed on request.

References

FAO. (2014, February). *Global Initiative on Food Loss and Waste Reduction. Food Loss Assessment: Causes and Solutions. Case Study in Small-Scale Agriculture and Fisheries Subsectors.* Rome: Food and Agriculture Organization of the United Nations.

FAO. (2023). *The State of Food Security and Nutrition in the World 2023. Urbanization, agrifood systems transformation and healthy diets across the rural-urban continuum.* Rome: FAO.

Kenya Revenue Authority. (2024). Primary data received by the Kenya Revenue Authority.

Maryam, R. (2017, July). Food Loss and Waste in the Food Supply Chain. *Nutfruit*, pp. 26-27. Retrieved from FAO Corporate Website: https://openknowledge.fao.org/server/api/core/bitstreams/36cb45bc-392c-41fb-97f1-90ca1f16ee7f/content

PPA. (2023). *Annual Statistical Report. Port Statistics*. Retrieved from https://www.ppa.com.ph/-annual-statistical-report-by-year-vol-1

PSA, P. S. (2024, April 11). *Annual Agricultural Export and Import*. Retrieved from Highlights of the 2023 Foreign Trade Statistics for Agricultural Commodities in the Philippines: Final Results: https://psa.gov.ph/statistics/agricultural-export-import/annual

SGD 12 HUB. (2024, 10). *Target 12.3 Food Loss & Waste*. Retrieved from SGD 12 HUB: https://www.oneplanetnetwork.org/sdg-12-hub/see-progress-on-sdg-12-by-target/123-food-loss-waste

USDA. (2023). *Connecting Port to Plate amid Evolving Food Preferences*. Retrieved from https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=Connecting%20Port%20to%20Plate%20amid%20Evolving%20Food%20Preferences_Manila_Philippines_RP2023-0071

Head Office

HELP Logistics AG
Dorfstrasse 50
8834 Schindellegi
Switzerland

help-logistics.org

help.information@kuehne-foundation.org

linkedin.com/company/help-logistics

youtube.com/c/helplogistics

learning.help-logistics.org

Regional Offices

HELP Logistics Ltd
352 Tanglin Road,
#02-01 Strathmore Building
Singapore 247671

HELP Logistics Limited
4th Floor, West Wing
Vienna Court
State House Crescent
Nairobi, Kenya

HELP Logistics BdR
Großer Grasbrook 17
20457 Hamburg
Germany

HELP Logistics AG
158 Makkah Street
Alhijaz Towers
Amman, Jordan

HELP Logistics BdR
Almadies, Zone 9
B.P. 24915, C.P 12300
Ouakam Dakar, Senegal