



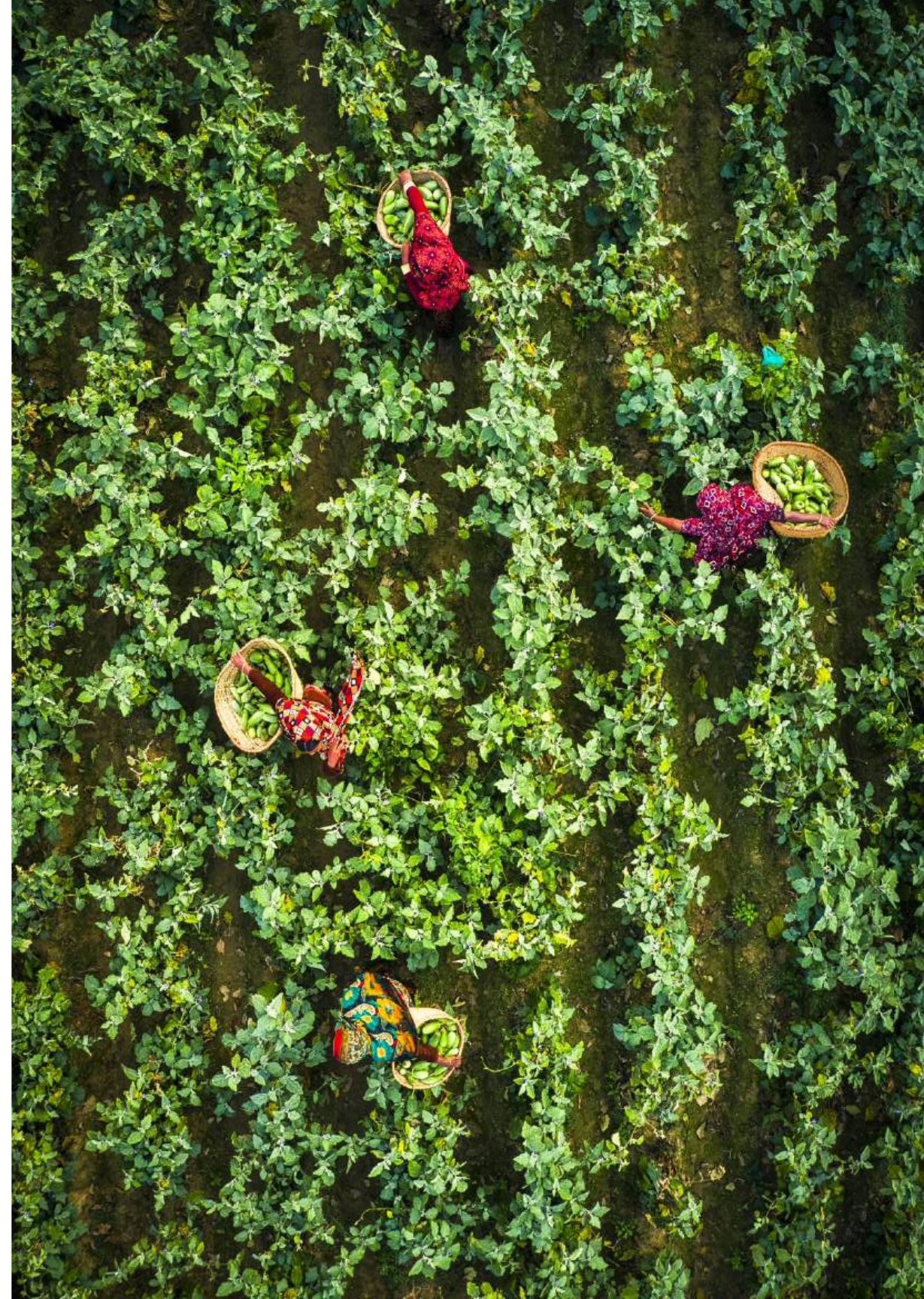
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Addressing Post-Harvest Food Losses in Bangladesh

Post-harvest food loss is a critical issue in Bangladesh, impacting food security, the economy and farmer livelihoods. This presentation showcases how WFP is using the aggregation center model to address the drivers of PHL and implement innovative solutions to mitigate these losses.

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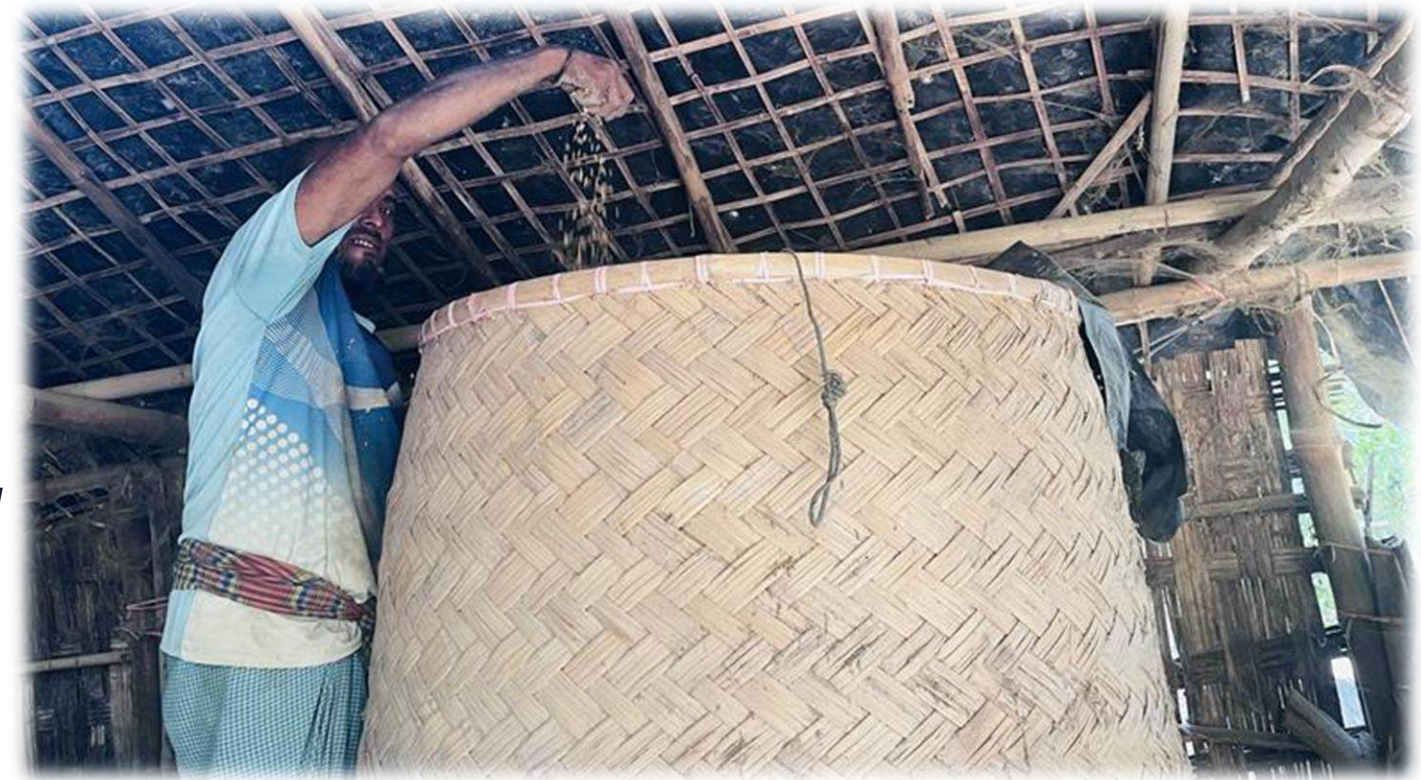
PHL Management in WFP

Value chains of focus

WFP has a strong focus on value chains that form part of the food basket for food assistance; Rice, Fruits and vegetables, Poultry and Fish.

Types of PHL:

- **Quantitative loss:** decrease in the weight/volume of food due to biotic and abiotic factors (e.g. pest infestations, leakages, high temperatures etc.)
- **Quality loss:** decrease in food attributes that reduces its value for intended use (e.g. non-compliance with quality standard)
- **Nutritional loss:** loss of nutrients in food due to preparation and handling practices
- **Economic loss:** translation of quantitative and qualitative losses into economic and monetary terms





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The Challenge

Significant Food Losses

Rice Losses

An estimated 8% to 15% of rice in Bangladesh (World Grain, 2017) is lost after harvest due to inefficient handling and inadequate storage*



Fresh Fruits & Vegetables Losses

Losses are even more dramatic, with Bangladesh annual estimates ranging from 25% to over 40% (worth \$2.4 billion) due to their perishable nature and lack of cold chain infrastructure (Daily Observer, 2025; The Business Standard, 2024).*



** Statistical References outlined in last slide.*



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The Challenge

Significant Food Losses

Poultry

Insufficient studies exist that assess the magnitude of losses in poultry and livestock in general, but few studies suggest about 17% in losses are incurred ([IFPRI, 2024](#)).*



Fish

Between 20-30% of fish is lost or wasted post-harvest in Bangladesh ([FAO \(2021\)](#), World Fish & BFRl). Unfortunately, consumer preference for live fish discourages investments in processing and frozen fish value chains.*



* Statistical References outlined in last slide.



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Smallholder Farmers

Facing Multiple Hurdles

Market Inefficiencies

Fragmented supply chains and numerous intermediaries.

Low Bargaining Power

Forced to sell produce at low prices to avoid spoilage.

Limited Knowledge

Lack of awareness of market quality standards and modern agronomic & postharvest management techniques.

Climate-related Risks

Unpredictable weather patterns and extreme events impact crop yields and quality

Inadequate Infrastructure

Poor rural roads, inappropriate dry / cold transportation vehicles hinder market access; Shortage of proper dry and cold storage impacts food quality and longevity; Limited access to processing infrastructure impacts the ability to preserve food quality and shelf-life immediately

Inadequate Credit access

Access to credit / financing affects farmers' ability to purchase required inputs.

Addressing these root causes will enable smallholder farmers to reduce their food losses during the initial supply stage of the value chain while simultaneously increasing their income as a result of improved capacities to meet the quality demands of the market.

WFP's Solution

Establishing Aggregation Centres



With support from Min. Agriculture, WFP, together with FAO and NGOs established 62 Aggregation Centres (ACs) in Cox's Bazar and 4 in Kurigram District.

The ACs are marketing cooperatives established to aggregate individual farmers' commodities and meet institution buyer standards.

These centers address challenges faced by smallholder farmers while securing supply of high-quality fresh foods and paddy for WFP's distribution to Rohingya refugee camps and local vulnerable communities.

This Aggregation Centre model can also be used to secure supply of high-quality paddy for national food-assistance programs (such as the Food Friendly Program).

Aggregation Centres: Current Situation

Comprehensive Farmer Support



Organizing Farmers

Into small producer groups with a lead farmer and facilitating acquisition of procurement contracts.



Capacity Building

- *Input support (seeds, fertilizers, compost, poultry vaccination, fingerlings) from Dept. Agricultural Extension;*
- *Training on agronomic practices (e.g. use of climate-resilient tech)*
- *Training on good post-harvest management practices (e.g. use of integrated pest control, good storage practices), food quality standards;*
- *Marketing*



Market Linkage

Enabling farmers to meet high-quality market demands; facilitating contracting with buyers.





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Aggregation Centres: What's Next

New Initiatives & Scale-Up

Agri-Business Service Centres

AC to ABSC - To be established in the scale-up phase to provide enhanced PHL solutions.

Mechanization Support

WFP, with strategic partnerships to provide customized fish drying machinery (w/ JICA), rice drying machinery for post-harvest management to preserve quality, add value and ensure longevity of commodities' shelf-life.

Hermetic Storage

New solutions to protect aggregated grains against infestation and moisture for up to 2 years in storage (TAAT Africa, 2025).

Traceability

WFP is developing a traceability solution to increase value chain transparency and use IoT sensors to improve cold chain and handling management.



New Initiatives: Building Market Linkages

For Inclusive GoB Food Procurement

WFP is exploring the establishment of A.Cs in other locations to secure quality-assured paddy for national food-assistance programs such as the Food Friendly Program (FFP).

- *FFP : subsidized rice for most vulnerable during lean seasons; 5M+ beneficiaries across country*
- *Up to 20% MoFood allocation for paddy rice procurement from small holder farmers; structured farmer engagement needed to maximize*
- *Farmers gain access to comprehensive support (trainings, inputs, centralized coordination /aggregation)*
- *A.Cs located near renovated DAM storage facilities mitigate inadequate storage challenges.*
- *By managing quality degradation and postharvest losses at farm gate, farmers can ensure good quality and quantity of produce for both market and home consumption.*
- *MoFood can secure high-quality paddy from smallholder farmers via A.Cs, strengthening market linkages.*



Aggregation Centre Model

Implementation: Way Forward

Aggregation Centre Model provides various opportunities to test, implement PHL mitigation strategies at farm level:

- Unlock long-term value by mobilizing blended finance (climate finance, private capital, and cross-sectoral development partnerships) to overcome initial investment costs in dry and cold chain PHL solutions.*
- Increase private sector engagement by co-creating profitable models that align with market incentives.*
- Strengthen PHL resilience by integrating climate-smart technologies and adaptive infrastructure.*
- Boost farmer adoption by investing in tailored outreach, peer-led demonstrations, and affordable financing mechanisms.*
- Ensure sustainability of Aggregation Centres by embedding operations within government systems and local development plans.*



THANK YOU

References

- *World Grain* (2017). *The International Business Magazine for Grain, Flour and Feed*. 35(11): 40.
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- *TAAT Africa*, 2025. [‘PICS: Hermetic Bags for Safe Storage of grain’](#).