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Administrative and Managerial Matters

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Report on Post-Delivery Losses for the Period 1 January–31 December 2015

Executive Summary

As part of its commitment to achieving zero hunger and the Sustainable Development Goals, WFP aims to eliminate food losses. Utilizing an integrated supply chain developed with partner governments, United Nations agencies, non-governmental organizations and private-sector entities, in 2015 WFP distributed 3.2 million mt of food in 75 countries with minimum losses: only 0.36 percent – 12,694 mt – of the food handled was lost after receipt in-country and before beneficiaries received it, the lowest rate since 2005.

Post-delivery losses totalled USD 11 million in 2015, 0.42 percent of the USD 2.6 billion value of food handled, mainly as a result of security, storage and transport issues. The loss rate was lower than in 2014 as a result of enhanced mitigating measures in high-risk areas such as convoy escorts and risk-based selection of storage locations.

WFP's recent adoption of the integrated supply chain approach enables it to adapt rapidly to changing situations. Its flexible finance tools, enhanced sourcing options to maintain food quality and expedite deliveries, and advanced planning and tracking tools support operational excellence and optimum logistics management. WFP is well placed to minimize food losses, even in challenging and insecure environments.

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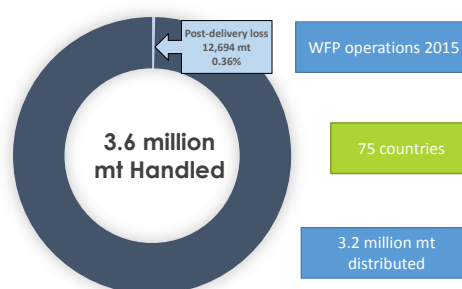
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Introduction

1. WFP aims to eliminate food losses; its supply chain, support systems and control mechanisms have been designed with this goal in mind. This report presents 2015 post-delivery losses and outlines the measures taken to prevent or reduce losses in the future. The annexes give detailed information about country-specific post-delivery losses and countries with losses above WFP's reporting thresholds.¹ The report does not cover pre-delivery losses or any unintended uses of food after it has been distributed to beneficiaries.²

Characteristics of 2015 Post-Delivery Losses

2. The 2015 post-delivery losses are presented in terms of tonnage and value, and are compared with previous years in terms of volume, value, cause and operational context.
3. The tonnage of post-delivery losses in 2015 was the lowest recorded since 2005 in absolute terms and the second lowest since 2005 in terms of percentage of the food handled.³ The 2015 post-delivery losses amounted to 12,694 mt – 0.36 percent of the food handled; the figure in 2014 was 0.49 percent (see Figure 1).
4. In terms of value, post-delivery losses were the lowest since 2010 in absolute terms and in percentages of total handled. In 2015 the value of post-delivery losses was USD 11.0 million, 0.42 percent of the USD 2.6 billion value of food handled; the figures for 2014 were USD 15.6 million and 0.61 percent (see Figure 1 and Annex VIII).⁴
5. WFP has enhanced its supply chain system in recent years and the resulting integration and flexibility have helped to improve planning, sourcing arrangements and in-country monitoring of food commodities. These improvements enable WFP to adapt rapidly to changing circumstances, and hence to minimize losses, as described later in this report.

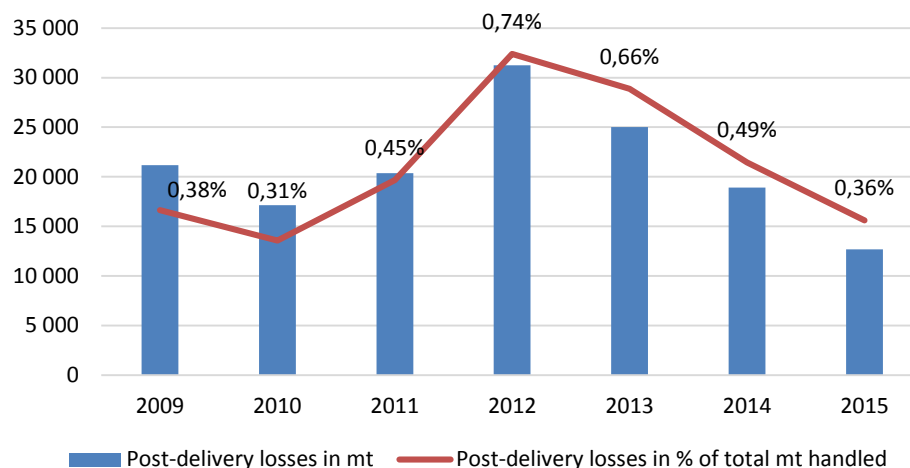


¹ These are: i) countries where losses of a single food type amount to at least 2 percent of the tonnage handled and have an absolute value of at least USD 20,000; and ii) countries where losses of a single food type have an absolute value of more than USD 100,000.

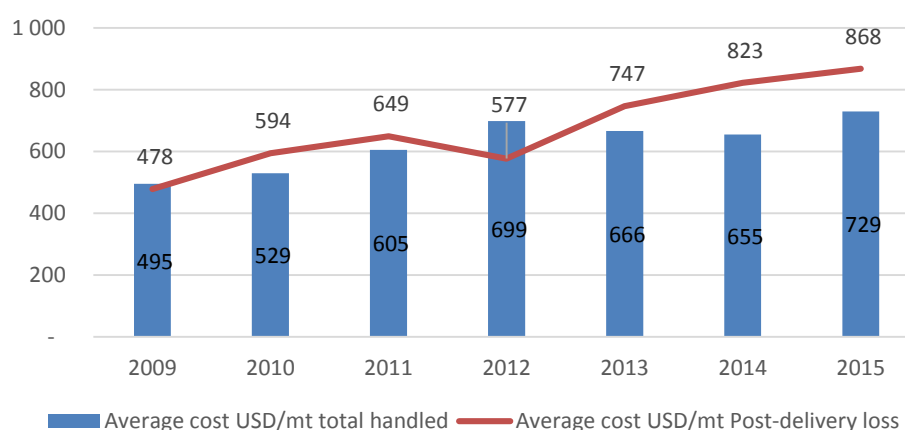
² Pre-delivery losses occur before food arrives in the recipient country. They are insured against all risks, with settlements received by WFP for reprogramming. Unintended uses such as sharing, theft or sale are captured through monitoring and addressed.

³ Tonnage of food handled is defined as "... opening stocks in the recipient country plus commodities received in the recipient country".

⁴ In the WFP Information Network and Global Systems (WINGS) food items are valued according to "moving average prices", whereby the cost of each item is determined from the weighted average of the costs of similar items at the beginning of and during the period. The losses in this report are valued at moving average prices at the end of 2015.

Figure 1: Post-delivery losses, 2009–2015

6. The value of post-delivery losses in 2015 was lower than in previous years in absolute and quantitative terms. In 2015 the average value of food handled was USD 729/mt, 11 percent more than the USD 655/mt in 2014, but the average value of post-delivery losses – USD 868/mt – was only 6 percent higher than the USD 823/mt in 2014.

Figure 2: Average cost of food handled and average post-delivery loss (USD/mt)

7. There were two main reasons for the higher average value of post-delivery losses: i) 20 percent of post-delivery losses – 2,561 mt at an average value of USD 887/mt – occurred in South Sudan, where operating costs are higher than average because of insecurity and the complexity of the operations; and ii) losses of corn-soya blend (CSB) increased from 871 mt in 2014 – 5 percent of the post-delivery losses – to 1,906 mt in 2015 – 15 percent of the post-delivery losses. The average value of CSB was 1,010 USD/mt in 2015 and thus contributed to increased average value of the post-delivery losses. Three incidents caused 81 percent – 1,537 mt – of the CSB losses: i) a quality issue in Ethiopia accounted for 742 mt; ii) fighting in South Sudan for 458 mt; and iii) a fire in Ghana for 337 mt (see Annex I).

Main Reasons for Post-Delivery Losses

8. In 2015, 73 percent – 9,239 mt – of post-delivery losses were attributable to inadequate or over-long storage, pilferage/theft, civil strife and short-deliveries⁵ or inadequate transport (see Figure 3). Inadequate storage, short deliveries and pilferage/theft are long-standing causes of loss, but in recent years the effects of civil strife and conflict have become more evident, particularly in Iraq and South Sudan. The other main reasons included poor handling, which

⁵ Short-deliveries are food losses incurred during transport in a recipient country; their value is usually recovered from transporters' invoices.

accounted for 625 mt, fire – 551 mt, infestation – 475 mt, reconstitution, rebagging or repacking – 471 mt, and deterioration of food due to problems at origin –300 mt.

Figure 3: Five main reasons for post-delivery losses in 2015

Over-long/improper storage	Pilferage/theft	Civil strife	Short-delivered	Inadequate transport
<ul style="list-style-type: none"> • 3,981 mt • 0.11% of total food handled 	<ul style="list-style-type: none"> • 2,214 mt • 0.06% of total food handled 	<ul style="list-style-type: none"> • 1,278 mt • 0.04% of total food handled 	<ul style="list-style-type: none"> • 1,087 mt • 0.03% of total food handled 	<ul style="list-style-type: none"> • 679 mt • 0.02% of total food handled

9. Post-delivery losses from inadequate or over-long storage fell from 7,136 mt in 2013 to 4,251 mt in 2014 and 3,981 mt in 2015. WFP's enhanced systems for planning, monitoring food near its expiry date and identifying food-safety issues contributed to this. In 2015, post-delivery losses in this category accounted for 31 percent of the total, 0.11 percent of the tonnage handled.
10. Pilferage/theft and civil strife accounted for 3,492 mt of losses, 28 percent of the total and 0.1 percent of the food tonnage handled in 2015, a significant decrease from 6,006 mt/32 percent and 0.15 percent of total food handled in 2014.
11. In 2015, ten countries reported post-delivery losses related to civil strife: 71 percent, accounting for 902 mt, occurred in South Sudan when warehouses and transports were looted. WFP has developed special procedures to reduce risks in countries affected by civil strife.
12. Pilferage/theft was the cause of 1,742 mt of losses – 79 percent of 2015 post-delivery losses – in South Sudan, the Syrian Arab Republic and the Central African Republic, which occurred during transport or storage, often through armed attacks. Escorted convoys are among the approaches adopted to mitigate these losses.
13. In 2015, post-delivery losses during transport – of 1,766 mt, comprising short deliveries of 1,087 mt and inadequate transport losses of 679 mt – accounted for 14 percent of post-delivery-losses and 0.05 percent of tonnage handled, similar percentages to those in 2014. Of this, 1,096 mt – 62 percent – resulted from transport losses in the Central African Republic, South Sudan, the Sudan and the Syrian Arab Republic. WFP's contracts include provisions for recovering post-delivery losses from service providers, which led to the recovery of USD 2.73 million in 2015. Rigorous selection and performance reviews of service providers are crucial for minimizing losses related to them.⁶

Post-Delivery Losses by Country

14. In 2015, WFP's ten biggest operations in terms of volume of food handled were, in descending order, Ethiopia, Syrian Arab Republic, Pakistan, Yemen, South Sudan, Kenya, the Sudan, Malawi, Iraq and Afghanistan. These countries handled 2.4 million mt – 68 percent – of the food handled by WFP in 2015. Figure 4 provides a regional overview.

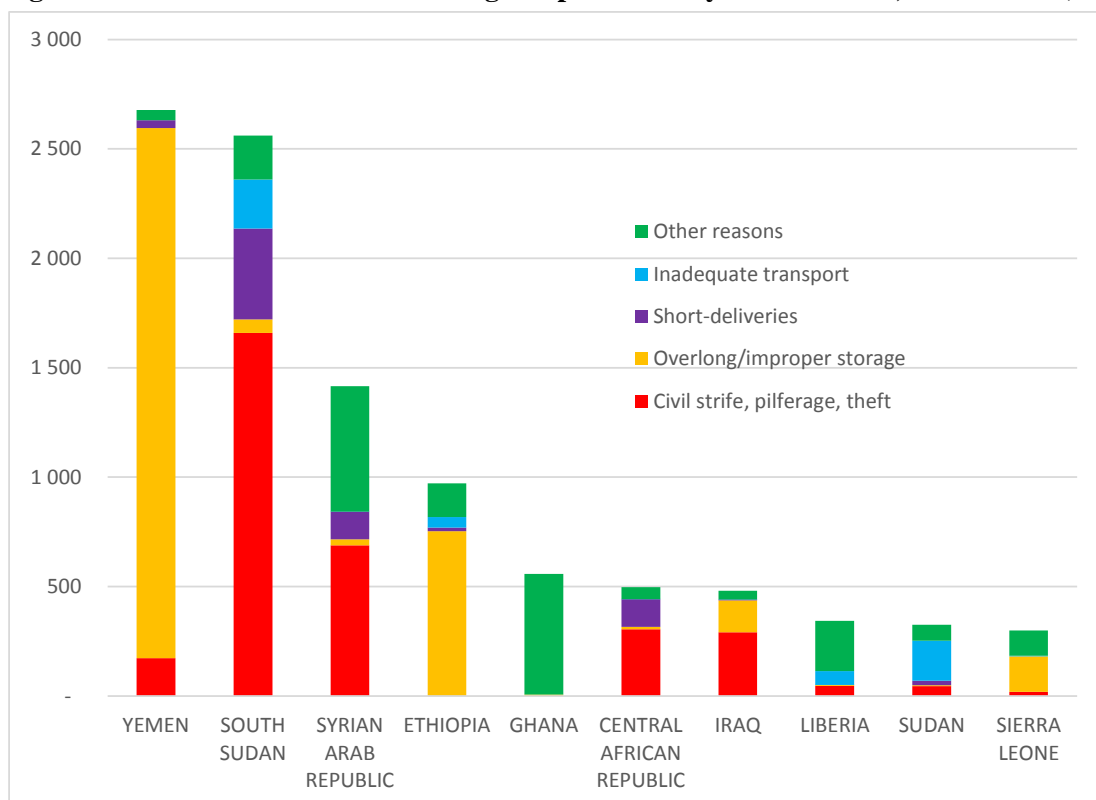
⁶ Poorly performing service providers receive a warning or are removed from the shortlist. Performance indicators for transporters include amounts lost in transit.

Figure 4: WFP operations by region – food handled and post-delivery losses (tonnage and percentage of total handled)



15. The ten country operations with the largest post-delivery losses accounted for 10,131 mt, 80 percent of total 2015 post-delivery losses (see Figure 5). Six of these countries are among WFP’s largest operations. South Sudan, the Syrian Arab Republic and Yemen account for 50 percent of post-delivery losses even though the rate of loss in terms of operation size is well below the 2 percent threshold (see Figure 4). Sixteen countries had above-threshold post-delivery losses in 2015 (see Annex I).

Figure 5: The ten countries with the highest post-delivery losses in 2015, with causes (mt)



Post-Delivery Losses in 2015: Summary

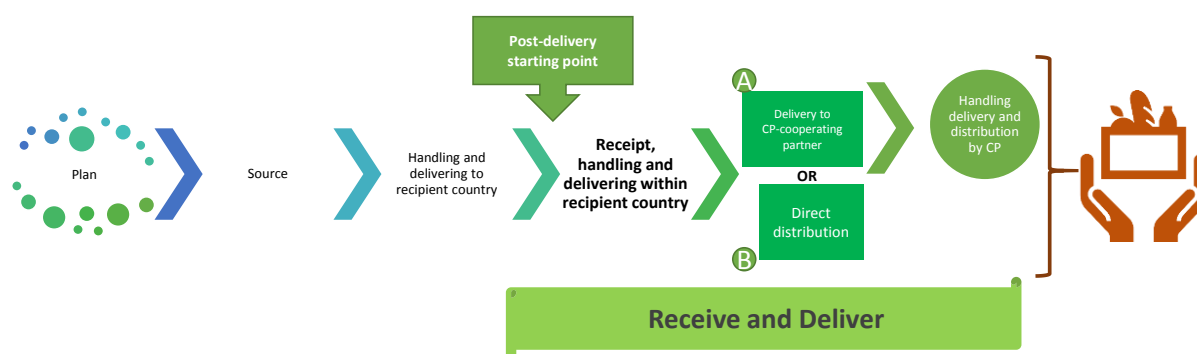
16. Losses decreased in absolute and percentage terms compared with 2014. The volume of losses was the lowest since 2005 in absolute terms and the second lowest since 2005 in terms of percentage of the total handled.
17. The value of post-delivery losses was the lowest since 2010 in absolute terms and as a percentage of the total handled, but the average value increased. This was largely as a result of losses in South Sudan, where average operating costs are high because of insecurity and the complexity of operations, and an increase in losses of CSB in Ethiopia, Ghana and South Sudan.
18. Post-delivery losses in South Sudan, the Syrian Arab Republic and Yemen accounted for 50 percent of post-delivery losses in 2015 mainly as a result of disposal of beans in Yemen, and armed looting of warehouses and trucks in South Sudan and the Syrian Arab Republic.

WFP Measures for Preventing and Mitigating Losses

19. This section describes some of the initiatives adopted in 2015 for preventing and mitigating post-delivery losses. They complement the best practices set out in manuals, procedures and control mechanisms developed by WFP. In recent years, building on its operational excellence in procurement and logistics, WFP has intensified efforts to integrate an end-to-end supply chain.

The Integrated Supply Chain Approach

20. WFP has brought together its resource mobilization, programme design, sourcing and delivery functions to develop end-to-end supply chain management. The procurement and logistics divisions at Headquarters have been combined into the Supply Chain Division with a view to ensuring reliable, cost-efficient and flexible food assistance.
21. The increased availability of flexible advance financing has supported the integrated supply chain approach and corresponding plan-based management. The Global Commodity Management Facility is an example of the way in which demand-driven supply enabled by innovative financing can minimize response times.



Planning WFP's Supply Chain

22. Supply chain planning starts with programming of resources – the amounts and types of assistance required, the locations where it is needed and what is feasible with the funding, sourcing and delivery options available. Minimizing losses in the supply chain involves matching supply and demand, taking context and challenges into consideration, and minimizing storage times to prevent food from being exposed to theft or damage.
23. The supply chain optimization initiative piloted in 2015 makes it possible to consider simultaneously all food, sourcing options, routes and transfer modalities to find the optimum modalities for an operation. The model enables country offices to identify ways of reducing operational costs without compromising the quality and nutritional value of the food baskets supplied.

Sourcing for WFP Operations

24. The processes for sourcing and procuring food help to prevent post-delivery losses. Ensuring food safety and quality management throughout the supply chain is a major concern, particularly at the sourcing phase.
25. WFP assesses and audits its suppliers with a focus on high-risk foods such as wheat flour, vegetable oil, pasta, high-energy biscuits (HEBs), date bars, canned food, rations and special nutritious foods. Assessment and audit findings support decision-making by the Vendor Management Committee and provide manufacturers with guidance on good practices.
26. WFP, the United Nations Children's Fund, the United States Agency for International Development and Médecins sans frontières have harmonized their specifications for lipid-based nutrient supplements, which now require stronger packaging to provide greater flexibility in the supply chain. WFP also updated the specifications for products such as micro-nutrient powder, fortified rice, lentils and couscous.
27. WFP worked with private-sector partners during 2015 to incorporate best practices in specifications compliance and supply chain management. Four long-term agreements were signed with inspection companies under the new scope of work for inspection services, enabling WFP to leverage its consolidated regional volumes to attract reliable inspection companies and laboratory services.

Receiving and Delivering Food

28. The final phases of the supply chain are where the results of work in the previous phases are seen. Integrated supply chain management, which bases planning and sourcing on the capacities of delivery and distribution networks, can reduce post-delivery losses.
29. Oversight is essential to support country offices as they manage changing environments. In 2015, WFP strengthened its own and its partners' food-supply management by continuing to roll out IT-based support systems – the Logistics Execution Support System (LESS) and the Country Office Tool for Managing Effectively (COMET). LESS now covers 30 countries and 62 percent of the food tonnages moved annually by WFP. COMET is expected to be fully rolled out in 2016.
30. As staff become accustomed to LESS, increased awareness of the enhanced options for food management is showing positive results, particularly with regard to the condition, expiry date and location of food products. Food data are now available in real time rather than after several days' delay, and decision-making on food management is correspondingly faster.
31. Implementation of WFP programmes and the achievement of results rely on partnerships with governments, non-governmental organizations (NGOs), communities, United Nations agencies and other actors. Partners play a very important role in managing and distributing WFP's food commodities, and COMET has been developed to ensure transparent and accountable monitoring and management of the resources managed by partners.
32. While WFP has always had global databases to capture this information, COMET provides a more comprehensive platform including not only food distribution, but also information from the planning phase to provide quality evidence on programme and partner performance and facilitate performance measurement. COMET facilitates an integrated supply-chain approach by serving as a single platform combining operational data provided by staff in various functions.

Post-Delivery Loss Prevention and Mitigation Initiatives at Country Offices and Regional Bureaux

33. The regional bureaux have a major role in providing support and oversight for country offices (see Box 1).
34. The work of the regional bureaux depends on specific regional requirements. In the Dakar bureau covering West Africa, for example, enhancement of country office capacities to identify risks proactively has been a key activity in 2015: a self-assessment matrix has been issued that covers aspects of warehouse management, loss prevention and reporting measures, among other things.
35. Country offices in Latin America have invested in training for partners on best practices in warehouse management and food conservation techniques. In Nicaragua, WFP and private-sector partners trained 21 participants from 9 cooperatives storing WFP and Purchase for Progress food in warehouse management.
36. In Burkina Faso and Uganda, WFP works with smallholder farmers to minimize post-harvest losses by leveraging its supply-chain expertise and using the Purchase for Progress network. This has led to immediate improvements in household food availability, incomes and health, and has improved the quality of food available for WFP and other major buyers. The availability of high-quality food in turn helps to mitigate WFP's post-delivery losses, partly because of its longer shelf-life.

Box 1: Examples of regional bureau functions

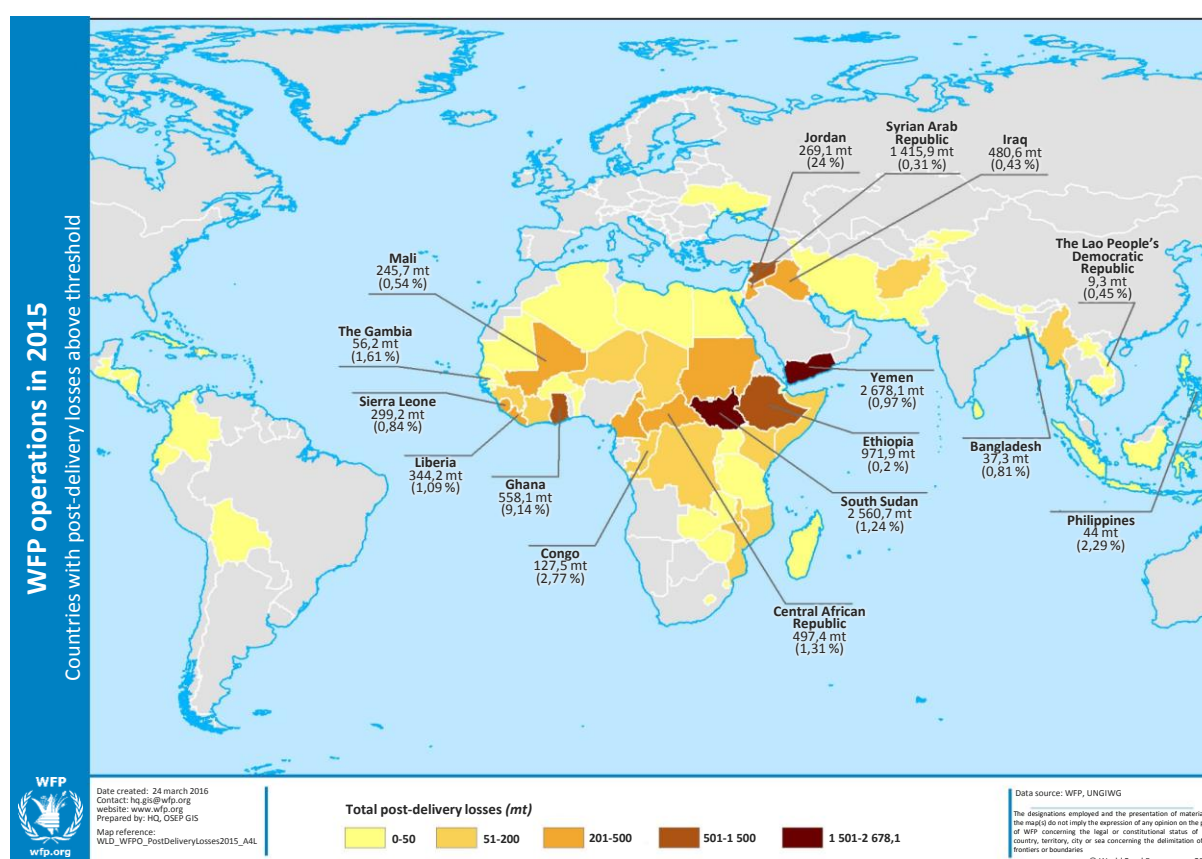
- Support programme planning and demand-and-supply planning at country and regional levels.
- Provide oversight, disseminate best practices and report foods at risk.
- Support capacity development for the staff of WFP and partners.

ANNEX I

Above-Threshold Losses, by Country

1. This annex presents post-delivery losses that exceed WFP's thresholds in: i) countries registering post-delivery losses of a single food type that account for at least 2 percent of the total tonnage of that food handled and that have an absolute value of at least USD 20,000; and ii) countries registering post-delivery losses of a single food type that have an absolute value greater than USD 100,000. The main reasons for the losses and the prevention and mitigation actions taken are also given.
2. In 2015, 20 projects in 16 countries recorded post-delivery losses in excess of these thresholds, amounting to 8,033 mt – 63 percent of the overall 12,694 mt lost post-delivery (see Figure A1). Total post-delivery losses in these 16 countries were 10,595 mt – 83 percent of total post-delivery losses.

Figure A1: Operations and countries with above-threshold post-delivery losses (mt and % of total food handled)



Bangladesh

3. Total post-delivery losses above thresholds were 26.9 mt of split peas valued at USD 27,427. These had been transported to Bangladesh by sea and delivered to WFP and partners' warehouses, where the quality was found to be below WFP standards – some bags were wet, there was an excessive proportion of broken kernels and some husk and caked grain. Sieving recovered 21.6 mt of sound grain; the remaining 5.3 mt was sold for animal feed or destroyed.
4. To mitigate future losses, WFP's Supply Chain Division was requested to strengthen the inspection of quality compliance at the load port; the country office deducted some of the fees of the superintendent and worked with the superintendent to improve inspection services at the discharge port.

Central African Republic

5. Above-threshold post-delivery losses of 284.4 mt of rice, maize and Plumpy'Sup valued at USD 398,755 were the result of armed looting during transport, even when the convoys were escorted.
6. To mitigate future losses, WFP will continue to use escorts provided by the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic on all roads assessed as insecure. Transporters are required to join the escorted convoys.

The Congo

7. Above-threshold losses consisted of 83.8 mt of rice valued at USD 43,209, which had deteriorated because storage capacity was limited as a result of an explosion in WFP's warehouse in 2012, as noted in the post-delivery loss report for 2014. The rice was destroyed in 2015.

Ethiopia

8. Post-delivery losses above thresholds were 694.7 mt of CSB valued at USD 479,399 resulting from a deviation from quality requirements when the food was purchased locally in 2013. When this was detected, the country office launched a thorough investigation of the entire stock and a total of 1,005 mt – out of approximately 10,000 mt – was identified as unfit for human consumption but fit for animal consumption; 695 mt of CSB was sold in 2015, and the remainder should be sold in 2016.
9. To prevent recurrence the country office assessed all in-country SuperCereal manufacturers, supported by the Food Safety and Quality Assurance Unit, and approved three suppliers. A re-evaluation of the Ethiopian inspection services resulted in a long-term agreement with the most technically competent and reliable provider.

The Gambia

10. Above-threshold post-delivery losses of 21.3 mt of vegetable oil valued at USD 20,720 resulted from a mismatch between local absorption capacity and the quantity stored, leading to some vegetable oil reaching its best-before-date before distribution, and inadequate warehouse practices at the cooperating partner level.
11. The immediate mitigation action was to sell any oil declared unfit for human consumption. To prevent future losses the country office supply-chain working group is working to make purchases of smaller quantities possible to ensure better matches among programme demand, storage capacity and supply. WFP is also working with the partner to improve storage practices.

Ghana

12. Post-delivery losses above thresholds of 518 mt of CSB, vegetable oil and maize valued at USD 406,907 were caused by: i) a fire at the central medical stores in Tema in which 408 mt was lost; and ii) infestation of maize as a result of over-long storage in government warehouses in the north; a government counterpart was responsible for storage, handling and delivery to beneficiaries, but funding constraints prevented on-time distribution.
13. To mitigate future losses WFP is working with the ministries of health and education to minimize fire risks, and the Government is constructing modern storage facilities and assessing insurance options. WFP's immediate measures for mitigating infestation were fumigation, with winnowing and re-bagging to save undamaged commodities. Longer-term measures include having WFP field monitors check commodities in government warehouses weekly; transporting imported commodities directly to where they are needed to avoid delays involved in intermediate storage; and working with regional ministers and councils to mobilize funds for transport.

Iraq

14. Above-threshold post-delivery losses of 430.8 mt of HEB and rations valued at USD 663,921 were the result of expiry, security and access issues. The 288 mt of HEB was inaccessible because it was located in an area occupied by militants and hence could not be verified as a loss, as noted

in the 2014 post-delivery loss report; the tonnage was written off and registered as a post-delivery loss in 2015. The immediate-response rations for internally displaced persons were lost because some items had a short shelf life and had to be removed before the rations could be distributed to new arrivals.

15. To mitigate the loss of the immediate-response rations, food that had not expired was separated and distributed through other programmes and the ration content was reviewed to exclude items with a short shelf life before pre-positioning.

Jordan

16. Above-threshold post-delivery losses comprised 269.0 mt of dates valued at USD 399,000 that had been received as an in-kind donation from the Government of Saudi Arabia but had not complied with the standards of the Jordan Food and Drugs Administration. The country office was obliged to sell the dates as animal food in accordance with food regulations.
17. To mitigate future losses WFP coordinates with donor countries on in-kind donations to ensure compliance with local regulations.

The Lao People's Democratic Republic

18. Above-threshold post-delivery losses of 6.3 mt of Plumpy'Sup valued at USD 22,429 occurred because of an unexpected fall in consumption which resulted in the product exceeding its shelf life while in storage at village health centres managed by volunteers combined with failure to adhere to the first-in first-out rule.
19. To avoid future losses of WFP food, partners' stocks – consumption and balances – are closely monitored, taking note of best-before dates in monthly reports and following up with mitigation actions, and facilitating training of partners on commodity management.

Liberia

20. Total post-delivery losses above thresholds were 30 mt of sugar valued at USD 22,295. This occurred because the sugar, which had been purchased in 2011, was transferred in 2013 to a new country programme that was unable to distribute it because of the donor's requirements for its use in particular nutrition activities; alternative uses in other programmes could not be established. The sugar was declared unfit for human consumption and disposed of in 2015.
21. To mitigate future losses, the country office Supply Chain Management Committee meets weekly to discuss the age and condition of food resources so that optimum decisions on distribution can be made.

Mali

22. Total post-delivery losses above thresholds were 30.7 mt of Plumpy'Sup valued at USD 109,993. A quality issue was detected and found to originate in the factory; after a combined supplier/Headquarters procurement mission, the Plumpy'Sup was destroyed and the full quantity replaced by the supplier.

Philippines

23. Total post-delivery losses above thresholds of 7.7 mt of Plumpy'Doz for a value of USD 27,935 were recorded, of which 7.4 mt was damaged product from WFP's immediate response to the 2013 typhoon; this was destroyed and registered as a loss in 2015. The loss was a result of defective packaging.
24. To prevent future losses, WFP superintendents are implementing rigorous random sampling of specialized nutritious foods, and quality issues will be reported to Headquarters for follow-up with suppliers.

Sierra Leone

25. Total post-delivery losses above thresholds were 128.3 mt of CSB and bulgur wheat for a value of USD 74,654, which resulted from over-long storage during the suspension of WFP programmes during the Ebola crisis and from food diversions during transport and distribution.
26. WFP's prevention and mitigation measures are: i) regular Supply Chain Working Group meetings to review stocks and ensure that food is distributed promptly; ii) engagement with local authorities with a view to preventing food diversions; iii) deduction of the value of losses from the invoices of service providers that are shown to be responsible; and iv) refresher training for WFP warehouse staff and training for cooperating partners in food handling and management.

South Sudan

27. Above-threshold post-delivery losses of 2,246.8 mt of food valued at USD 2.0 million resulted from civil strife and general insecurity, particularly in the form of looting and losses during transport.
28. The prevention and mitigation measures adopted by the country office are: i) pre-positioning of food in warehouses selected on the basis of risk analysis and located in areas cleared by the United Nations Mission in the Republic of South Sudan (UNMISS), avoiding locations near military establishments to reduce the risk of looting; ii) to reduce losses during transport, negotiating with the Government and opposing forces to allow road and river transportation of humanitarian assistance, opening an additional transshipment point in Uganda and requesting protection from UNMISS when necessary; and iii) improving the country office systems for recovering the value of losses from transporters, cooperating partners and guard-service companies.

Syrian Arab Republic

29. Post-delivery losses above thresholds of 829.9 mt of food valued at USD 702,859 were mainly caused by: i) armed looting of 384 mt from partners' warehouses in March 2015 when Idleb city was suddenly and unexpectedly taken over by opposition forces – most of the food was saved and distributed; ii) a fire at WFP's warehouse in Tartous, reported in 2014, which led to the eventual destruction of 134 mt in 2015 and registration of a post-delivery loss; and iii) transport issues affecting 89 mt, though sensitization of transporters and regular monitoring of the condition of trucks at WFP's warehouses helped to reduce such losses in 2015.

Yemen

30. Above-threshold post-delivery losses of 2,424.3 mt of fava beans valued at USD 2.0 million were reported. In 2014, 3,608 mt of fava beans were assessed as a loss because they were unsuitable for the population, and in 2015 they were sold for animal consumption. To date 2,424.3 mt has been collected by the buyer; the remainder will be collected in 2016 and recorded as a loss by WFP. Please refer to the 2014 report for details.

ANNEX II**Post-Delivery Losses from the 2014 Report being Verified****2014 Report****Eritrea**

1. Of the food delivered by WFP in 2005 to the Government of Eritrea, 64,538 mt with an estimated 2005 value of USD 31 million remains unaccounted for. WFP reports this food as advance stock, but it has not received distribution reports from the Government and is hence unable to determine whether the food has been distributed to the intended beneficiaries. WFP intends to recover the value of any food not utilized in accordance with Eritrea's contractual obligations, and will continue to seek a solution.

Central African Republic

2. At the end of 2014, the suspected theft of 261 mt during transport was being verified. This tonnage was confirmed as a loss in 2015 and its value was deducted from the transporter's fees.

Iraq

3. In 2014, it was expected that 288 mt of HEB in inaccessible locations would be recorded as a post-delivery loss. This was confirmed in 2015 (see Annex I, paragraphs 14–15).

The Sudan

4. The 32.5 mt of food under verification in 2014 was registered as a post-delivery loss in 2015.

Syrian Arab Republic

5. Of the 412 mt of food awaiting partners' confirmation of receipt in 2013, 182 mt was verified as a loss and 230 mt was recovered following late submission of proof of delivery by the transporters. In 2014, of the 328 mt affected by a technical error 76 mt were re-classified as pre-delivery losses and 252 mt were recovered.

Yemen

6. At the end of 2014, 3,608 mt of fava beans was under verification as a potential loss. They had been distributed for the first time in Yemen in March–April 2014 as part of the emergency ration, but distribution was halted after reports of people having allergic reactions to them. In 2015, the beans were sold to a local buyer for animal feed: to date 2,424 mt has been collected, and the remainder awaiting collection will be registered as post-delivery loss in 2016.

2015**El Salvador**

7. At the end of 2015, 3,004 mt of CSB and vegetable oil was under verification because of damage; laboratory verification is awaited and an update will be provided in 2016.

ANNEX III

LOSSES BY REASON		
	Value (USD)	post-delivery losses
Attack by termites	862	0.01
Broken during loading	12 890	0.12
Deterioration of food commodities mainly attributable to problems at origin	311 585	2.83
Deterioration of packaging materials	267 655	2.43
Flooding and other natural disasters	37 817	0.34
Improper/overlong storage	3 224 494	29.26
Inadequate transport	520 821	4.73
Infestation	501 718	4.55
Loss due to fire	514 499	4.67
Loss due to overscooping	13 566	0.12
Loss due to sampling food analysis	45 172	0.41
Loss during civil strife	1 341 829	12.18
Pilferage/theft	1 963 537	17.82
Poor handling	585 928	5.32
Processing/transformation of commodity	13 610	0.12
Reconstitution/rebagging/repacking	363 526	3.30
Short-delivered	884 323	8.02
Shortlanded	12 136	0.11
Unauthorized distribution	180 598	1.64
Variance in weight	40 796	0.37
Wet bags	15	0.00
Wet by gasoil	24 795	0.23
Wet by water	157 762	1.43
GRAND TOTAL	11 019 934	1.49

ANNEX IV

QUANTITIES AND VALUES OF LOSSES BY REGION								
	2015 Opening stock		Received in recipient country		Total handled*		Post-delivery losses	
Region	Quantity net (mt)	Value USD	Quantity net (mt)	Value USD	Quantity net (mt)	Value USD	Quantity net (mt)	Value USD
RBB	65 040	50 820 736	488 494	294 062 159	553 534	344 882 895	361	322 999
RBC	125 515	103 575 510	1 003 844	774 238 219	1 129 359	877 813 729	5 255	4 796 650
RBD	72 248	60 248 438	372 642	290 244 994	444 890	350 493 432	2 564	2 206 547
RBJ	70 559	50 311 654	225 237	161 418 623	295 796	211 730 278	546	367 970
RBN	166 481	143 731 750	933 209	641 429 984	1 099 689	785 161 734	3 850	3 250 944
RBP	19 663	12 804 041	16 244	13 437 896	35 907	26 241 936	119	74 825
GRAND TOTAL	519 507	421 492 129	3 039 669	2 174 831 875	3 559 176	2 596 324 005	12 694	11 019 934
							0.36%	0.42%

*Opening stocks in the recipient country + commodities received in the recipient country.

RBB Bangkok Regional Bureau (Asia and the Pacific)

RBC Cairo Regional Bureau (Middle East, North Africa, Eastern Europe and Central Asia)

RBD Dakar Regional Bureau (West Africa)

RBJ Johannesburg Regional Bureau (Southern Africa)

RBN Nairobi Regional Bureau (East and Central Africa)

RBP Panama Regional Bureau (Latin America and the Caribbean)

ANNEX V

LOSSES BY COMMODITY				
Commodity code	Commodity	Total handled* (USD)	Post-delivery losses (USD)	Losses in USD as % of total handled*
CERBAR	Barley	445 902	1 012	0.23
CERMAZ	Maize	205 352 527	283 901	0.14
CERMMF	Soya-fortified maize meal	17 985 655	3 046	0.02
CERMML	Maize meal	23 719 938	91 310	0.38
CERPAS	Pasta	14 514 195	44 899	0.31
CERQUI	Qui cereals	105 083	73	0.07
CERRIC	Rice	232 923221	847 853	0.36
CERSOF	Sorghum flour	7	7	100.00
CERSOR	Sorghum	320 228 383	1 198 845	0.37
CERWBG	Bulgur wheat	22 775 113	112 985	0.50
CERWHE	Wheat	391 312 738	111 738	0.03
CERWHF	Wheat flour	95 324 817	226 911	0.24
DAIDSP	Plain dried skim milk	14 552 771	15 936	0.11
FRUDFR	Dried fruits	8 659 045	413 545	4.78
FSHCFI	Canned fish	8 979 599	18 792	0.21
MEAMEA	Canned meat	34 478	5 472	15.87
MIXBIS	Biscuits	123	123	100.00
MIXBP5	Bp5 emergency rations	5	5	100.00
MIXCSB	Corn-soya blend	231 796 486	1 907 077	0.82
MIXCSBFAF	Faffa	406 209	25 628	6.31
MIXCSM	Corn-soya milk	221 323	244	0.11
MIXHEB	High-energy biscuits	27 882 585	625 630	2.24
MIXRSB	Rice soya blend	294 020	237	0.08
MIXRSF	Plumpy	112 429 277	577 779	0.51
MIXWSB	Wheat-soya blend	17 601 605	18 208	0.10
MSCAPI	Api cereals	1 483 495	7 697	0.52
MSCMNP	Micronutrition powder	279 319	3 306	1.18
MSCMNT	Micronutrition tablets	319 160	5 077	1.59
MSCSAL	Iodized salt	4 709 174	12 350	0.26
MSCSUG	Sugar	23 526 458	74 198	0.32
MSCYEA	Yeast	1 070 617	330	0.03
OILVEG	Vegetable oil	260 630 471	768 760	0.29
PPFRTN	Rations	279 653 202	472 698	0.17
PULBEA	Beans	55 846 294	2 314 307	4.14
PULCKP	Chickpeas	33 922 227	108 787	0.32
PULCPU	Canned pulses	16 050 907	44 877	0.28

LOSSES BY COMMODITY				
Commodity code	Commodity	Total handled* (USD)	Post-delivery losses (USD)	Losses in USD as % of total handled*
PULLEN	Lentils	28 325 600	172 640	0.61
PULPEA	Peas	11 128 558	43 366	0.39
PULSLN	Split lentils	1 382 215	7 631	0.55
PULSPE	Split peas	130 451 204	452 657	0.35
		2 596 324 005	11 019 934	0.42

* Opening stocks in the recipient country + commodities received in the recipient country.

* Total handled = Opening stocks in the recipient country plus commodities received in the recipient country.

ANNEX VI

QUANTITIES AND VALUES BY RECIPIENT COUNTRY						
Region	Country	Total handled*		Post-delivery losses		Losses in USD as % of total handled*
		(net mt)	(USD)	(net mt)	(USD)	
RBB	Afghanistan	89 787.1	59 292 350	106.5	87 203	0.15
	Bangladesh	4 601.7	6 730 734	37.3	41 015	0.61
	Bhutan	2 539.0	1 126 005	2.7	1 204	0.11
	Cambodia	12 643.8	14 085 779	9.3	8 920	0.06
	Democratic People's Republic of Korea	37 907.6	40 237 112	18.3	10 624	0.03
	Indonesia	3.0	3 052	0.1	278	9.10
	Lao People's Democratic Republic	2 056.0	2 627 129	9.3	24 674	0.94
	Myanmar	60 598.1	47 972 659	63.4	48 704	0.10
	Nepal	28 694.5	17 936 936	34.1	18 364	0.10
	Pakistan	306 014.5	146 051 462	21.5	15 751	0.01
	Philippines	1 923.2	2 016 639	44.0	53 490	2.65
	Sri Lanka	6 557.7	6 227 269	13.9	12 196	0.20
	Timor-Leste	172.4	510 678	0.2	467	0.09
	Vanuatu	35.8	65 092	0.1	109	0.17
RBB Total		553 534.4	344 882 895	360.6	322 999	0.09
RBC	Algeria	26 004.9	20 970 523	44.6	45 895	0.22
	Armenia	236.3	410 713	0.0	26	0.01
	Egypt	13 659.6	13 047 119	10.4	15 875	0.12
	Iran (Islamic Republic of)	3 444.4	2 469 450	13.7	9 348	0.38
	Iraq	110 570.3	84 159 300	480.6	700 340	0.83
	Jordan	1 121.4	1 627 016	269.1	399 239	24.54
	Kyrgyzstan	7 795.5	5 504 111	0.5	341	0.01
	Libya	3 727.6	5 754 530	1.3	1 933	0.03
	Palestine	28 280.9	16 650 191	13.8	8 865	0.05
	Sudan	185 152.6	111 366 001	325.0	182 980	0.16
	Syrian Arab Republic	457 532.7	403 317 036	1,415.9	1 140 639	0.28
	Tajikistan	9 523.3	6 387 633	0.4	296	0.00
	Ukraine	5 929.5	9 698 761	1.2	2 015	0.02
	Yemen	276 380.0	196 451 345	2 678.1	2 288 859	1.17
RBC Total		1 129 359.0	877 813 729	5 254.6	4 796 650	0.55

QUANTITIES AND VALUES BY RECIPIENT COUNTRY						
Region	Country	Total handled*		Post-delivery losses		Losses in USD as % of total handled*
		(net mt)	(USD)	(net mt)	(USD)	
RBD	Benin	1 581.5	758 850	4.5	2 115	0.28
	Burkina faso	15 510.8	16 685 647	21.2	20 050	0.12
	Cameroon	54 186.3	34 148 203	223.5	131 601	0.39
	Central African Republic	38 083.2	3 344 438	497.4	610 215	1.41
	Chad	50 956.5	45 649 653	84.7	86 988	0.19
	Côte d'ivoire	13 833.9	10 235 790	50.8	32 626	0.32
	The Gambia	3 489.3	2 361 742	56.2	45 077	1.91
	Ghana	6 104.5	4 843 662	558.1	434 383	8.97
	Guinea	40 849.7	23 425 359	98.6	62 488	0.27
	Guinea-bissau	2 630.7	2 115 114	1.9	1 119	0.05
	Liberia	31 675.6	20 759 360	344.2	240 137	1.16
	Mali	45 707.2	33 703 484	245.7	291 274	0.86
	Mauritania	17 057.1	12 447 097	11.6	8 402	0.07
	The Niger	83 325.0	73 163 129	57.8	50 030	0.07
	Sao Tome and Principe	324.1	209 214	0.2	148	0.07
	Senegal	3 963.4	2 847 122	7.9	5 369	0.19
	Sierra leone	35 611.5	23 795 566	299.2	184 524	0.78
RBD Total		444 890.2	350 493 432	2 563.6	2 206 547	0.63
RBJ	Congo	4 594.9	2 732 579	127.5	72 219	2.64
	Democratic Republic of the Congo	60 946.3	62 542 197	153.0	128 164	0.20
	Lesotho	7 271.0	4 322 430	9.6	12 886	0.30
	Madagascar	13 025.5	8 851 060	7.7	5 862	0.07
	Malawi	115 031.0	74 988 919	106.0	69 584	0.09
	Mozambique	14 112.1	7 842 401	98.2	50 520	0.64
	Swaziland	1 726.9	1 083 236	5.5	4 679	0.43
	Tanzania, United Republic of	41 656.5	26 228 360	16.5	9 654	0.04
	Zambia	7 180.7	2 210 574	7.0	3 204	0.14
	Zimbabwe	30 250.7	20 928 520	15.3	11 198	0.05
RBJ Total		295 795.7	211 730 278	546.2	367 970	0.17
RBN	Burundi	24 027.0	16 447 753	23.9	18 798	0.11
	Djibouti	11 192.0	6 144 499	10.9	7 373	0.12
	Ethiopia	493 452.4	308 971 372	971.9	733 456	0.24
	Kenya	190 049.4	143 826 785	135.6	101 949	0.07

QUANTITIES AND VALUES BY RECIPIENT COUNTRY						
Region	Country	Total handled*		Post-delivery losses		Losses in USD as % of total handled*
		(net mt)	(USD)	(net mt)	(USD)	
	Rwanda	11 617.5	7 401 977	0.8	652	0.01
	Somalia	83 577.8	82 446 773	112.0	95 824	0.12
	South sudan	206 013.3	164 205 686	2 560.7	2 270 129	1.38
	Uganda	79 760.0	55 716 888	34.6	22 763	0.04
RBN Total		1 099 689.4	785 161 734	3 850.4	3 250 944	0.41
RBP	Plurinational State of Bolivia	585.3	560 809	5.7	4 242	0.76
	Colombia	4 222.0	3 501 288	10.1	7 037	0.20
	Cuba	1 498.1	1 427 559	0.6	622	0.04
	Dominican Republic	0.3	946	0.3	946	100.00
	Ecuador	0.1	121	0.1	121	100.00
	El salvador	389.5	780 393	0.6	1 170	0.15
	Guatemala	2 822.7	2 201 615	2.6	3 578	0.16
	Haiti	23 840.4	15 153 160	92.9	51 872	0.34
	Honduras	2 302.2	2 275 678	6.2	5 224	0.23
	Nicaragua	246.6	340 366	0.0	12	0.00
RBP Total		35 907.2	26 241 936	119.1	74 825	0.29
Grand Total		3 559 176.0	2 596 324 005	12 694.4	11 019 934	0.42

* Opening stocks in the recipient country plus food received in the recipient country.

ANNEX VII

COMMODITIES WITH POST-DELIVERY LOSSES GREATER THAN 2% IN TONNAGE AND VALUE OVER USD 20,000; OR VALUE GREATER THAN USD 100,000								
Region	Country	WBS Element	Commodity	Total handled* net <i>mt</i>	Total handled* <i>USD</i>	Post-delivery losses net <i>mt</i>	Post-delivery losses <i>USD</i>	% Losses <i>mt</i> vs. total handled
RBB	Bangladesh	200243.F.1.C3	PULSPE	70.728	72 197.02	26.869	27 427.07	37.99
RBB	Laos People's Democratic Republic	200242.F.1.C2	MIXRSF	254.043	900 582.44	6.327	22 429.22	2.49
RBB	Philippines	200743.F.1	MIXRSF	43.200	157 526.78	7.661	27 935.48	17.73
RBC	Iraq	200035.F.1	MIXHEB	287.980	554 004.40	287.980	554 004.40	100.00
RBC	Iraq	200677.F.1	PPFRTN	101 167.744	77 860 719.14	142.819	109 916.36	0.14
RBC	Jordan	200433.F.1.JO	FRUDFR	270.588	401 420.00	268.960	399 004.85	99.40
RBC	Syrian Arab Republic	200339.F.1	CERRIC	89 918.824	41 720 535.96	243.242	112 859.42	0.27
RBC	Syrian Arab Republic	200339.F.1	CERWHF	62 955.264	25 206 658.15	253.876	101 649.41	0.40
RBC	Syrian Arab Republic	200339.F.1	PPFRTN	99 119.566	184 500 168.96	192.210	357 777.77	0.19
RBC	Syrian Arab Republic	200339.F.1	PULLEN	4 152.341	3 856 735.84	140.580	130 572.11	3.39
RBC	Yemen	200636.F.1	PULBEA	8 173.101	6 971 246.50	2 424.995	2 068 399.49	29.67
RBD	Central African Republic	200799.F.1.CF	CERMAZ	1 750.900	3 114 378.36	41.850	74 439.85	2.39
RBD	Central African Republic	200799.F.1.CF	CERRIC	21 294.076	23 042 319.64	216.120	233 863.45	1.01
RBD	Central African Republic	200799.F.1.CF	MIXRSF	988.989	3 386 021.42	26.419	90 451.26	2.67
RBD	The Gambia	200327.F.1	OILVEG	267.085	259 350.22	21.338	20 720.05	7.99
RBD	Ghana	200247.F.1.C2	MIXCSB	2 868.045	2 504 176.13	331.380	289 337.82	11.55
RBD	Ghana	200247.F.1.C2	OILVEG	206.330	300 045.09	47.505	69 081.77	23.02
RBD	Ghana	200247.F.1.C3	CERMAZ	331.800	115 658.84	139.100	48 487.48	41.92

COMMODITIES WITH POST-DELIVERY LOSSES GREATER THAN 2% IN TONNAGE AND VALUE OVER USD 20,000; OR VALUE GREATER THAN USD 100,000								
Region	Country	WBS Element	Commodity	Total handled* net <i>mt</i>	Total handled* <i>USD</i>	Post-delivery losses net <i>mt</i>	Post-delivery losses <i>USD</i>	% Losses <i>mt</i> vs. total handled
RBD	Liberia	200395.F.1.C1	MSCSUG	33.888	25 205.56	29.975	22 295.11	88.45
RBD	Mali	105830.F.1.C4	MIXRSF	652.732	2 342 132.96	30.654	109 992.68	4.70
RBD	Sierra Leone	200336.F.1.C2	MIXCSB	1 302.481	951 052.09	28.833	21 053.42	2.21
RBD	Sierra Leone	200336.F.1.C3	CERWBG	99.488	53 600.15	99.488	53 600.15	100.00
RBJ	Congo	200648.F.1.C1	CERRIC	139.995	72 157.62	83.831	43 209.01	59.88
RBN	Ethiopia	200253.F.1.C3	MIXCSB	7 923.650	5 929 663.48	394.385	295 138.01	4.98
RBN	Ethiopia	200712.F.1	MIXCSB	6 433.977	3 948 145.65	300.275	184 260.75	4.67
RBN	South Sudan	200572.F.1	CERSOR	53 283.298	26 413 814.46	331.830	164 496.13	0.62
RBN	South Sudan	200572.F.1	MIXCSB	7 387.329	13 926 421.24	260.646	491 363.79	3.53
RBN	South Sudan	200659.F.1	CERSOR	86 644.140	53 364 493.41	1 215.125	748 400.64	1.40
RBN	South Sudan	200659.F.1	MIXCSB	12 622.697	14 791 770.28	194.703	228 160.59	1.54
RBN	South Sudan	200659.F.1	MIXRSF	444.975	1 595 302.12	10.057	36 055.85	2.26
RBN	South Sudan	200659.F.1	OILVEG	7 436.690	17 564 909.34	70.162	165 717.43	0.94
RBN	South Sudan	200659.F.1	PULBEA	1 462.756	1 211 612.50	164.301	136 091.83	11.23

ANNEX VIII

POST-DELIVERY LOSSES 2005–2015						
Year	Total quantity handled (<i>mt</i>)	Quantity of losses (<i>mt</i>)	Losses as % of total <i>mt</i> handled	Total value handled (<i>USD</i>)	Value of losses (<i>USD</i>)	Losses as % of total value handled
2005	5 077 411	23 677	0.47	1 811 472 229	9 516 413	0.53
2006	4 994 321	24 133	0.48	1 781 348 513	9 540 580	0.54
2007	4 166 046	16 724	0.40	1 607 373 215	7 152 643	0.44
2008	4 831 067	21 699	0.45	2 604 005 060	11 388 899	0.44
2009	5 567 314	21 187	0.38	2 755 152 374	10 131 966	0.37
2010	5 508 365	17 128	0.31	2 915 989 860	10 180 080	0.35
2011	4 517 972	20 371	0.45	2 734 427 882	13 217 691	0.48
2012	4 201 302	31 251	0.74	2 936 389 248	18 033 222	0.61
2013	3 770 209	25 016	0.66	2 511 094 911	18 684 094	0.74
2014	3 898 691	18 921	0.49	2 553 059 658	15 563 533	0.61
2015	3 559 176	12 694	0.36	2 596 324 005	11 019 934	0.42

Acronyms Used in the Document

COMET	country office tool for managing effectively
HEB	high-energy biscuit
LESS	Logistics Execution Support System
UNMISS	United Nations Mission in the Republic of South Sudan