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#### Report on Post-Delivery Losses for the Period 1 January–31 December 2016

#### **Executive Summary**

In increasingly complex and insecure operating environments, WFP consistently delivers safe and quality food to an average of 80 million people every year. Robust supply chain management processes and risk mitigation measures are essential to ensure that the right food arrives at the right time to the people who need it most. Despite the complex and fragile contexts in which it works, thanks to proven processes and in-house expertise, WFP has historically kept its global post-delivery losses to less than 1 percent of the total food handled in any year. In 2016, WFP handled 4.2 million mt of food in 72 countries, of which 20,109 mt – equivalent to 0.47 percent of the total volume handled – was lost after receipt in-country and before it was received by people in need.

Approximately 73 percent of all post-delivery losses in 2016 occurred in South Sudan, the Syrian Arab Republic and Yemen, compared with 50 percent in 2015; all of these are countries where WFP has Level 3 emergency operations in response to severe and protracted conflict. The overall value of post-delivery losses – USD 18.1 million compared with USD 11 million – was also higher in 2016 than in 2015 because of major losses of high-value commodities in these three countries. For example, 10 percent of all post-delivery losses were of SuperCereal lost during fighting in South Sudan.

The primary reasons for post-delivery losses in 2016 were conflict and civil strife, reconstitution or repacking of food, storage and transport issues, and problems with food commodities at origin. Of losses resulting from conflict and civil strife – which comprised the greatest proportion of post-delivery losses – 89 percent occurred when the warehouse in Juba was looted during fighting in July 2016.

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#### Introduction

1. This report gives an overview of post-delivery losses in 2016 and describes recent measures to prevent or minimize them. The annexes detail country-specific losses and identify countries with losses above WFP's reporting thresholds. The report does not cover pre-delivery losses or unintended uses of food after distribution to beneficiaries.

#### **Characteristics of 2016 Post-Delivery Losses**

- 2. Post-delivery losses in 2016 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 operational context in 2016 was more challenging than in previous years. The distribution of higher tonnages in Level 3 emergencies and of a larger proportion of complex foods such as SuperCereal plus, family rations, ready-to-use supplementary foods and lipid-based nutrient supplements, coupled with changes in the balance of intervention modalities between cash-based and food transfers, contributed to the increased operational challenges that needed to be overcome.
- 4. The tonnage of post-delivery losses in 2016 was the third lowest since 2011 in absolute terms and in terms of the percentage of food handled.<sup>3</sup> The 2016 post-delivery losses amounted to 20,109 mt 0.47 percent of the food handled; the corresponding figures in 2015 were 12,694 mt 0.36 percent (see Figures 1 and 2 and Annex VIII).<sup>4</sup>
- 5. The value of post-delivery losses was higher than in 2015 and 2014, but lower than in 2013 in absolute terms and in terms of percentage of the total handled. In 2016, the value of post-delivery losses was USD 18.1 million, 0.72 percent of the USD 2.53 billion value of food handled; the corresponding figures for 2015 were USD 11 million and 0.42 percent.

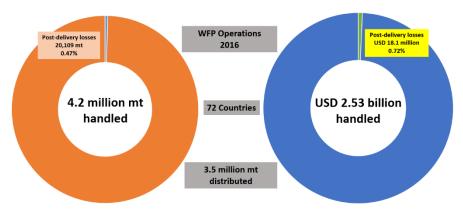


Figure 1: Post-delivery losses in 2016

6. The integration of the supply chain system has improved planning and sourcing arrangements and in-country monitoring of food handled, enabling WFP to adapt to changing circumstances and mitigate losses.

<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> Pre-delivery losses are those that 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.

<sup>&</sup>lt;sup>3</sup> Tonnage of food handled is defined as "... opening stocks in the recipient country plus commodities received in the recipient country".

<sup>&</sup>lt;sup>4</sup> 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.

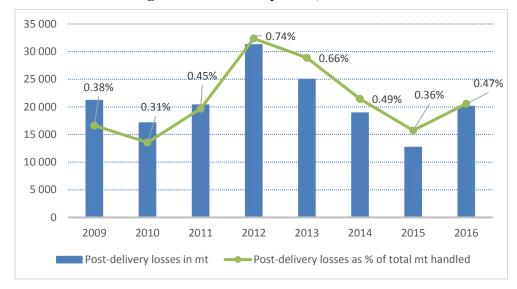
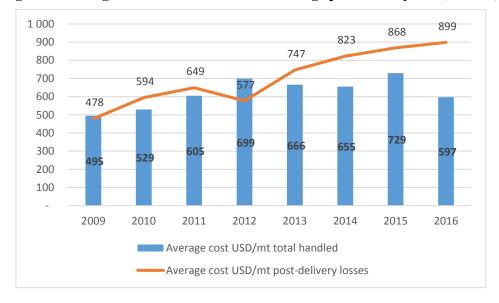


Figure 2: Post-delivery losses, 2009–2016

Figure 3: Average cost of food handled and average post-delivery loss (USD/mt)



- 7. The average value of food handled was USD 597/mt, compared with USD 729/mt in 2015, while the average value of post-delivery losses was USD 899/mt compared with USD 868/mt in 2015.
- 8. Insecurity and instability in three countries were behind 73 percent of post-delivery losses, of which South Sudan accounted for 33 percent 6,729 mt at an average value of USD 863/mt; the Syrian Arab Republic for 25 percent 5,000 mt at an average value of USD 889/mt; and Yemen for 15 percent 2,998 mt at an average value of USD 1,199/mt.
- 9. Losses of corn-soya blend amounting to 2,805 mt with an average value of USD 931/mt constituted 14 percent of the total. Of this, 1,963 mt were lost because of fighting in South Sudan.
- 10. Losses of 2,876 mt of beans in Yemen, the South Sudan and the Syrian Arab Republic, with an average value of USD 817/mt, accounted for another 14 percent of post-delivery losses.
- 11. Losses of other high-cost foods were: i) 1,317 mt of vegetable oil with an average value of USD 1,287/mt, of which 1,069 mt were lost in South Sudan, the Syrian Arab Republic and Yemen; ii) 1,410 mt of chickpeas, practically all in the Syrian Arab Republic, with an average value of USD 989/mt; and iii) 835 mt of Plumpy with an average value of USD 2,901/mt, lost mainly in South Sudan, the Syrian Arab Republic and Yemen.

#### Main reasons for post-delivery losses

12. In 2016, 80 percent – 16,097 mt – of post-delivery losses were attributable to civil strife, reconstitution or repacking, storage issues, inadequate transport and deterioration at origin (see Figure 4). Inadequate or overlong storage and inadequate transport are long-standing causes of loss, but in recent years the effects of conflict have become prominent, particularly in South Sudan and the Syrian Arab Republic.

13. Pilferage/theft accounted for 1,065 mt of post-delivery losses in 2016, short deliveries<sup>5</sup> for 928 mt and poor handling for 672 mt.

Figure 4: Five major reasons for post-delivery losses in 2016

Civil strife Improper/overlong Reconstitution/ rebagging/ food due to problems at origin repacking • 5,233 mt • 3,066 mt • 2,696 mt • 2,695 mt • 2,407 mt • 0.12% of total • 0.07% of total • 0.06% of total • 0.06% of total • 0.06% of total food handled food handled food handled food handled food handled • 26% of total • 15% of total • 13% of total • 13% of total • 12% of total post-delivery post-delivery post-delivery post-delivery post-delivery losses losses losses losses losses

- 14. Of the 5,233 mt of losses in 13 countries affected by civil strife, 89 percent occurred in South Sudan: 4,660 mt were looted from the warehouse in Juba during fighting in July 2016. The logistics unit is looking into a safer location for the warehouse to minimize future risks of this kind.
- 15. Post-delivery losses resulting from problems related to reconstitution or repacking increased to 3,066 mt 15 percent of the total and 0.07 percent of the food handled of which 82 percent occurred in the Syrian Arab Republic.
- 16. Inadequate or overlong storage accounted for 2,696 mt in post-delivery losses in 2016 13 percent of the total and 0.06 percent of total food handled, compared with 0.11 percent in 2014 and 2015. WFP's systems for planning, tracking, monitoring food near its expiry date and identifying food-safety issues contributed to this reduction.
- 17. Inadequate transport accounted for 2,695 mt in losses and short deliveries for 928 mt together accounting for 18 percent of post-delivery losses and 0.09 percent of tonnage handled of which 84 percent occurred in the Central African Republic, Ethiopia, Haiti, Somalia, South Sudan, the Syrian Arab Republic and Yemen. Contractual provisions for recovering post-delivery losses from service providers enabled recovery of USD 2.04 million in 2016. Rigorous selection and review of service providers are crucial for minimizing food losses.<sup>6</sup>
- 18. Deterioration of food commodities mainly attributable to problems at origin resulted in post-delivery losses of 2,407 mt 12 percent of the total and 0.06 percent of tonnage handled almost all in Yemen, where 2,062 mt were lost. Other countries concerned were Benin, Jordan, Myanmar, the Philippines, South Sudan and the Syrian Arab Republic (see Annexes I and VII).

#### Post-delivery losses by country

19. WFP's ten largest operations in terms of volume of food handled in 2016 were, in descending order, Ethiopia, the Syrian Arab Republic, Yemen, Malawi, South Sudan, the Sudan, Pakistan, Iraq, Uganda and Kenya. These handled 2.96 million mt of food – 70 percent of the total – and accounted for 15,887 mt – 79 percent – of post-delivery losses (see Figure 5 for a regional overview).

<sup>&</sup>lt;sup>5</sup> Food losses during transport in a recipient country; the value is usually recovered from the transporters.

<sup>&</sup>lt;sup>6</sup> Poorly performing service providers receive a warning or are removed from the shortlist. Performance indicators for transporters include amounts lost in transit.

20. Ten country operations accounted for 17,128 mt – 85 percent – of post-delivery losses in 2016 (see Figure 6). The operations in Ethiopia, the Syrian Arab Republic, Yemen and South Sudan are WFP's largest in terms of tonnage of food handled, and the Level 3 operations in South Sudan, the Syrian Arab Republic and Yemen accounted for 73 percent of all post-delivery losses. Fifteen countries had above-threshold post-delivery losses in 2016 (see Annex I and Annex VII).

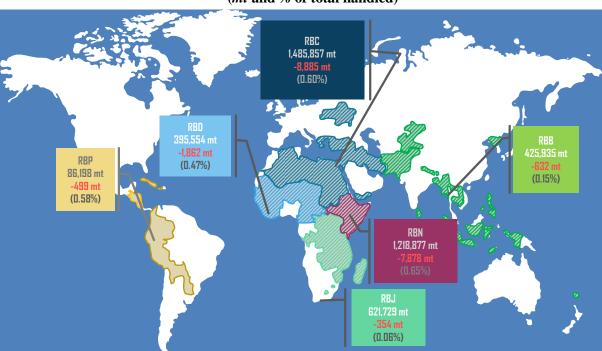
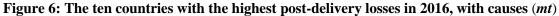
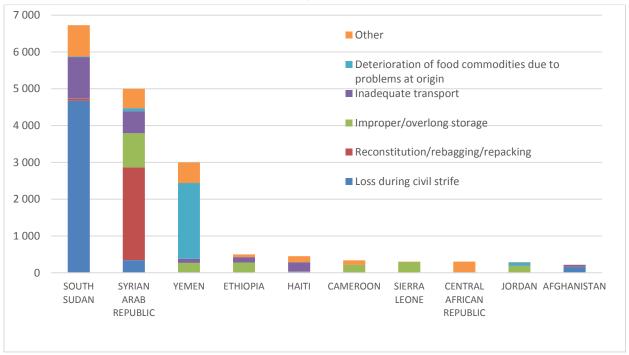


Figure 5: WFP operations by region – food handled and post-delivery losses (mt and % of total handled)





#### **Post-Delivery Losses in 2016: Summary**

21. Losses increased in absolute and percentage terms compared with 2015. The volume of losses was the third lowest since 2011 in absolute terms and in terms of the percentage of food handled.

- 22. Post-delivery losses in South Sudan, the Syrian Arab Republic and Yemen accounted for 73 percent of the post-delivery losses in 2016. Losses of corn-soya blend and beans constituted 28 percent of post-delivery losses in tonnage terms and 27 percent in value terms.
- 23. The value of post-delivery losses was higher than in 2015 and 2014, but lower than in 2013 in absolute terms and as a percentage of food handled. The average value was higher as a result of major losses in South Sudan, the Syrian Arab Republic and Yemen, and losses of high-cost foods corn-soya blend, beans, vegetable oil, chickpeas and lipid-based nutrient supplements.

#### **Measures for Preventing and Mitigating Losses**

#### **Integrated Supply Chain**

- 24. WFP's integrated supply chain brings together core functions from resource mobilization, programme design, sourcing and delivery operations. WFP also continues to derive benefits from the integration of its procurement and logistics divisions at Headquarters and in some field offices, which enables it to support operations better in providing more reliable, cost-efficient and flexible food assistance.
- 25. The Global Commodity Management Facility complements the supply chain by minimizing response times and costs through innovative financing to enable demand-driven supply. The Logistics Execution Support System (LESS) enables real-time tracking of deliveries, and the supply-chain dashboard provides visibility to inform evidence-based planning and decision-making: these enable synchronized implementation of activities, which in turn helps to minimize food losses.

Figure 7: Steps in the supply chain



#### **Planning WFP's Supply Chain**

26. Given the size, scale and complexity of WFP's activities and the difficulty of forecasting crises and donor contributions, it is critical to ensure that the right amount of the right food is available at the right time and place with minimum losses.

27. The supply-chain optimization model adopted in 2016 considers food needs, sourcing options,

delivery routes and transfer modalities simultaneously to find the best design for a particular operation (see Box 1). This makes it possible to identify ways of minimizing operational costs without compromising the quality and nutritional value of food baskets, and supply-chain managers can adapt the system to respond flexibly to complex needs and emergencies while minimizing losses.

# In view of the limited resources available, the optimization tool was used in Iraq to optimize the food basket. The result was the adoption of the family food parcel early in 2016, which reduced costs by 17 percent. The tool enabled WFP to maximize its efficiency and effectiveness and reflect the funding outlook and beneficiary preferences. The family food parcel is now

delivered to 500,000 beneficiaries every month, saving

USD 1.12 million a month.

Box 1: Iraq supply-chain optimization model

28. Sound supply-chain planning also contributes to WFP's broader mandate goals: connecting smallholder farmers to markets, increasing WFP's supply-chain spending in developing countries, enhancing local retail supply chains to minimize the risk of potential food losses, and strengthening government safety-net programmes.

#### **Sourcing for WFP's Operations**

- 29. Sourcing and procurement processes are constantly monitored to ensure that they are robust and that they maintain the nutritional value of food handled and minimize losses. Partnerships with United Nations agencies, non-governmental organizations, the private sector and the Government are essential in this area.
- 30. WFP continued its audit of suppliers and its partnerships with the United Nations Children's Fund, the United States Agency for International Development, private-sector organizations and *Médecins sans frontières*. The review of the performance of food-inspection companies helped to minimize post-delivery losses and ensure food safety throughout the supply chain.
- 31. WFP collaborated with food industry experts to gather robust data and technical expertise to support the improvement of its food baskets, for example by developing specifications for fortified rice that improved the products delivered to beneficiaries.
- 32. Packaging is critical in minimizing losses and maintaining food quality; WFP therefore started to review its packaging specifications for some foods in 2016 with a view to preventing deterioration along the supply chain. In 2016, WFP initiated an analysis to determine the amount of food losses at selected destinations that resulted from inadequate packaging. Based on this analysis, WFP worked with its food suppliers to determine the feasibility and cost-effectiveness of different packaging solutions. In addition, WFP worked closely with its inspection companies and supply-chain operators to improve internal controls on how packaging performance is evaluated across the supply chain.
- 33. WFP regularly tests food products to check that their quality and nutritional value match requirements before entry into the supply chain. In 2016, such testing was applied to SuperCereal, ready-to-use supplementary foods and vegetable oil from 12 suppliers in 12 countries, on the basis of which WFP is working with suppliers to improve the stability of the products. Testing of high-energy biscuits was concluded during the reporting year, enabling WFP to revise their shelf-life.
- 34. WFP reviewed food-related regulations in Jordan, Lebanon and Nigeria in 2016 to ensure that country-specific requirements and sensitivities were understood, thereby enhancing upstream and downstream quality management. This also helped to mitigate the risk of food losses and to build robust monitoring systems for cash-based transfers and, in Jordan and Nigeria, for ensuring the quality of emergency food supplies.

#### **Food Delivery**

35. Completion of the roll-out of LESS and the country office tool for managing effectively (COMET) in 2016 has enhanced the management of food supplies by WFP and its partners. LESS is now live at 1,200 locations and 90,000 final delivery points in 83 countries, tracking 4.2 million mt of food in 2016. The system enables WFP to track all food movements online and to have real-time information about matters such as best-before dates, batch quality, location and regulatory requirements – a level of detail that supports sound planning and helps to minimize food losses.

- 36. The introduction of LESS involved training for 2,500 staff in various functional areas, and the new knowledge-management strategy ensures that knowledge and operating skills are passed on to new users so that the benefits of the system are maintained in the long term.
- 37. The roll-out of COMET to all country offices enables them to combine data from other systems to manage programme cycles and food deliveries by partners. The 200 standard project reports submitted in 2016 were generated with data from COMET, LESS and the Information Network and Global System (WINGS) using the new Standard Project Report Intelligent Next Generation tool. The COMET system ensures transparent and accountable monitoring and management of the resources managed by partners and supports decision-making at all levels. With regard to accountability for the accuracy of data, country office programme officers must verify partners' distribution reports against monitoring and delivery information for validation in COMET.
- 38. Information on post-delivery losses was derived from COMET and LESS in 2016, which substantially reduced the need for manual reconciliations between country office logistics and programme teams.

#### Post-Delivery Loss Prevention at the Regional Bureaux

39. The Nairobi regional bureau fielded oversight and compliance missions at its country offices to ensure that food management and logistics were in line with WFP's policies and to identify risk areas. It also trained staff in the Somalia country office in handling special nutritious foods.

#### Box 2: Example of regional bureau support

The Dakar regional bureau instituted a gap analysis of procurement processes in the country offices to enhance understanding of the challenges they face and hence support them more effectively. Among other things, this will help to minimize post-delivery losses in the future.

- 40. The Cairo regional bureau employed a food technologist to train staff, suppliers and inspection companies in food safety and quality matters with a view to building trust and hence helping to mitigate post-delivery losses. Oversight missions to country offices and capacity-building for staff also helped to minimize losses.
- 41. Under the Panama City regional bureau, the Colombia country office formulated a risk-mitigation strategy that included storage and transport training for cooperating partners, verification of road conditions and coordination measures before food deliveries, and the use of smaller trucks to minimize damage to roads. The Guatemala country office trained 75 small farmer organizations in post-harvest practices to improve storage and increase shelf-life to minimize food losses.

#### **ANNEX I**

#### **Above-Threshold Losses, by Country**

1. This annex presents post-delivery losses that exceed WFP's thresholds in countries registering post-delivery losses of a single food type: i) valued at USD 20,000 or more and accounting for at least 2 percent of the tonnage handled; and ii) valued at USD 100,000 or more. Such losses amounted to 15,823 mt in 20 projects in 15 countries in 2016 (see Figure A1).

WFP operations in 201 Arab Republic 5,000 mt with post-delivery losses (1.23%)(1.07%)Sierra Leone (0.78%)303 mt (1.71%) Liberia Ethiopia Somalia 498 mt (0.08%) (0.65%)Philippines 128 mt (2.6%) Côte d'Ivoire Cameroon South Sudan (0.6%) (0.58%)Chad Central African Republic Total post-delivery losses (mt)

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

#### Cameroon

2. Above-threshold losses amounted to 125.2 mt of peas valued at USD 69,621 under regional emergency operation 200799, which were short-landed or received wet, mouldy or rotten after ocean transport, as substantiated by the superintendent's reports. The value of the losses is being recovered through WFP's self-insurance.

#### **Central African Republic**

- 3. Insecurity led to losses of 178.4 mt of rice valued at USD 158,564. In spite of convoy escorts, trucks were hijacked or damaged in several areas and 126.5 mt of food was lost. Theft from cooperating partners and a WFP warehouse accounted for 27.1 mt of food, and 16.3 mt were lost because of infestation, extended storage and rebagging.
- 4. To mitigate future losses, contractors are required to comply with the convoy system run by the United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic; any unjustifiable losses during transport are deducted from transporters' accounts.
- 5. Measures such as monthly loss-tracking reports and reinforcement of security and inventory checks at warehouses have been adopted to protect food stocks: security incidents and missing stocks are reported and documented for corrective measures.

#### Chad

6. Post-delivery losses included 57 mt of corn-soya blend valued at USD 102,994, most of which resulted from flooding that damaged trucks and spoiled 43 mt of food in transit between Gozbeida and Abeche and 2.8 mt in a WFP truck between Touloum and Iribal. The full value of the loss was recovered, but transporters object to the deduction of food value from invoices, and the legal unit at Headquarters is investigating.

7. Poor food handling was detected in the Abeche warehouse, where 1.1 mt of corn-soya blend was lost. At the Mao sub-office 5.4 mt was lost, of which half was related to poor handling and packaging and half to food expiry, which is being investigated. Corrective actions include stock monitoring through LESS, monthly inventory checks with the country office, and training for staff and partners.

#### Côte d'Ivoire

- 8. The main loss involved 20 mt of vegetable oil valued at USD 32,016 in protracted relief and recovery operation 200464, half of which resulted from extended storage of items with limited remaining shelf-life and half from repacking after leakage from poor original packing during delivery at the port, which was noted by the WFP superintendent.
- 9. Stock inspections have accordingly been upgraded to ensure that leaks are detected early, and the height of stacks has been reduced to minimize damage. Best-before dates are continuously monitored with a view to preventing extended storage.

#### **Ethiopia**

- 10. In Ethiopia, 286 mt of mixed and blended foods valued at USD 190,902 was lost, of which 267 mt was SuperCereal stored for too long following the supply of 1,005 mt of sub-standard product. Following investigation, the sub-standard product was certified fit for animal feed and sold.
- 11. Weekly stock positions and best-before date alerts have been activated through LESS, along with weekly stock reports from food hubs. Reports are shared with warehouse managers and supervisors and screened by the food-quality team to ensure appropriate management. Food-quality audits of ten previous manufacturers of SuperCereal shortlisted three manufacturers who fulfil hygiene and good manufacturing practice criteria.

#### Guinea

- 12. Overlong storage resulted in the loss of 33.7 mt of beans and 45.7 mt of corn-soya blend, total value USD 56,563. The beans had become infested and were unfit for human consumption.
- 13. At the end of the Ebola regional emergency operation in December 2015, large stocks were transferred to the country programme, some of which had already been stored for more than six months. Because the food was not needed immediately, some of it deteriorated as a result of extended storage. Corrective action included monitoring of stocks to minimize storage and training for staff in LESS operations.

#### Haiti

- 14. Losses of 170.7 mt of bulgur, vegetable oil, peas and beans valued at USD 121,742 resulted from a diversion of food by two transporters and looting during transport for the response to Hurricane Matthew.
- 15. WFP's measures to reduce the risk of looting include the use of: i) a chartered vessel to deliver food to Grande Anse; ii) security escorts for contracted transport between Les Cayes and Jeremie; iii) payment of a premium to enable transporters to arrange their own security escorts; and iv) distribution of food along delivery corridors. Looting has decreased significantly as a result. A transport market assessment will help to minimize the risk of diversions by ensuring that a list of reliable, efficient and safe transporters is maintained.

#### Jordan

16. Losses in 2016 involved 114.8 mt of date paste and 21 mt of date bars for school feeding, which were destroyed as unsuitable for human consumption; another 42 mt of date bars in a WFP warehouse will also be destroyed.

17. To minimize such losses, the country office has established a performance-management and compliance section that will carry out quality and quantity inspections and laboratory testing of all food before it is used or processed. The Jordanian Food and Drug Administration will also test WFP food.

#### Liberia

- 18. As a result of the slow rate of distribution, 9.9 mt of unused Plumpy'Doz reached its expiry date, and although it was subsequently certified fit for human and animal consumption a decision was made to dispose of it by sale.
- 19. The country office supply chain management committee meets weekly to discuss the resource situation and possible reallocations, subject to donor approval. Foods nearing their best-before dates are programmed for distribution three months before expiry.

#### **Philippines**

- 20. Losses of 111.9 mt of high-energy biscuits valued at USD 138,764 resulted from a manufacturing defect in Dubai. The country office increased the frequency of organoleptic tests of existing stocks. The process of loss recovery is ongoing. Extended storage of 8.1 mt of Plumpy valued at USD 29,617 that had reached its expiry date resulted in disposal.
- 21. Contingency stocks of high-energy biscuits for school feeding were used between six and nine months before their best-before date to mitigate quality problems, and a subsequent Headquarters directive limited the shelf life of high-energy biscuits to 12 months.

#### Sierra Leone

- 22. As a result of suspension of the country programme during the Ebola crisis from May 2014 to early 2016, some foods deteriorated in the heat and humidity. A donation of 1,557 mt of corn-soya blend that was infested and close to its best-before date on arrival was fumigated and sieved, but much of it was not fit for human consumption. Extended storage spoiled 39.5 mt of bulgur and 164.4 mt of corn-soya blend, and 3.5 mt of corn-soya blend was lost in an accident total value USD 151,598.
- 23. The country office has improved warehouse inspections, and a supply chain task force was created to manage the pipeline and optimize the use of stocks. Training for cooperating partner monitors and transporters in warehousing, management, tracking, reporting, and quality and quantity control is scheduled. The full value of losses in transit was recovered from the transporters.

#### Somalia

- 24. Losses at ports and warehouses and during distribution involved 121.6 mt of yellow split peas valued at USD 69,163. Poor roads, ineffective governance and poor service by contracted agents were contributory causes.
- 25. Mitigation measures include repairs to warehouses, performance bonds for freight forwarders and transporters and additional supervision at ports by logistics staff, who also monitor operations to mitigate the risk of loss. Partner staff are trained in food handling every year to minimize losses at final distributions. The country office is recovering the value of the losses from those responsible.

#### **South Sudan**

26. Operational challenges are exacerbated by conflict, access difficulties in rainy seasons when roads become impassable, and looting of pre-positioned food. Confiscation of WFP's barges and boats has prevented deliveries by water, and the economic crisis has led to more checkpoints and higher taxation. Losses in 2016 involved 6,487 mt of food valued at USD 5.7 million.

27. Problems with transport caused the loss of 1,230 mt, looting for 692 mt, and poor handling by transporters for 538 mt; the value of the latter was recovered. Looting during civil conflict accounted for 4,660 mt of the losses from the main WFP warehouse in Juba, and 597 mt was lost during distributions by cooperating partners. The value of other losses totalling USD 1.5 million was recovered from service providers.

28. WFP's information-gathering network enables managers to establish loss-mitigation measures, which include: i) making the pre-positioning of food subject to regular risk analysis; ii) avoiding insecure locations where the potential for looting is high; iii) obtaining clearance for movements by road, river and air from the Government and opposition forces to ensure safe passage; iv) recovering the value of losses from transporters, cooperating partners and security companies; v) factoring risks into transport rates, with transporters liable for failure to adhere to protocols; and vi) monitoring of storage facilities to ensure that ventilation and hygiene systems are operative.

#### **Syrian Arab Republic**

- 29. Conflict and instability resulted in food losses amounting to 4,820 mt valued at USD 4.4 million; of this, 2,653 mt is being investigated and will be reported in 2017. Most of the losses consisted of 1,394 mt of chickpeas, 960 mt of wheat flour, 330 mt of rations, 484 mt of rice, 334 mt of canned pulses, 287 mt of lentils, 465 mt of beans and 127 mt of Plumpy, valued at USD 3.9 million.
- 30. An air strike on a convoy near Aleppo destroyed 17 trucks and 234 mt of wheat flour. Other losses were caused by problems with transport and handling, an air strike on a cooperating partner's warehouse in Aleppo, and a flood in the Tartous warehouse. The disposal of 989 mt of food left from a fire in 2014 was concluded in 2016. Inventory anomalies in the Homs warehouse involving 2,653 mt of Plumpy'Sup, vegetable oil, chickpeas, beans, date bars, Plumpy'Doz, rice, salt, wheat flour, bulgur wheat, red lentils and white sugar are being investigated and will be reported in the 2017 post-delivery losses report.
- 31. Mitigation measures include: i) consultations with the United Nations Department of Safety and Security and local authorities to share information and obtain incident reports; ii) instructions to transporters for regular mechanical checks of their trucks, followed by inspection by WFP staff; and iii) loading inspections, use of tarpaulins and adherence to axle loads.
- 32. WFP recovered USD 146,000 from transporters, USD 63,000 from cooperating partners and USD 839,032 in relation to the 2014 fire. The country office is setting up a food accounting team to ensure that best practices are implemented and training supply-chain staff in food management.

#### Yemen

- 33. Continuing insecurity and problems with alternative routes contributed significantly to post-delivery losses, but WFP recovered USD 753,058 from service providers. The main losses involved 2,855 mt of food valued at USD 3.5 million: i) 442 mt of wheat flour, rice, wheat grain, vegetable oil and yellow split peas lost during transport, with full costs recovered from transporters; ii) 174 mt of wheat grain and yellow split peas lost during unloading from ships, with costs recovered; iii) 293 mt of time-expired date bars and vegetable oil rejected by the Yemen standardization organization and disposed of in February 2016; iv) 1,187 mt of sub-standard fava beans sold as animal feed; and v) 558 mt of defective Plumpy'Doz, with full costs recovered from the supplier.
- 34. The country office: i) used the ports of Hodeida and Aden to reduce transit times and deliver food before its expiry date; ii) trained partners and service providers in warehouse management and food conservation; iii) improved the coordination of procurement and logistics along the supply chain, particularly to ensure that Yemen standardization organization regulations are adhered to; iv) improved downstream reporting to monitor product shelf-life; and v) trained staff to use LESS to ensure that losses are correctly categorized.

**ANNEX II** 

## Post-Delivery Losses From the 2015 Report Being Verified 2015 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.

#### Yemen

2. At the end of 2014, 3,609 mt of fava beans was being verified as a potential loss after reports of allergic reactions; consignments of 2,422 mt and 1,187 mt were sold as animal feed in 2015 and 2016 for USD 252,697.

#### El Salvador

3. Damaged corn-soya blend and vegetable oil amounting to 3 mt deemed unfit for human consumption are being disposed of. Reconstitution of a large quantity of the vegetable oil limited post-delivery losses to only 8 kg.

#### 2016 Losses Under Verification

#### Syrian Arab Republic

4. Inventory differences of 2,653 mt of Plumpy'Sup, vegetable oil, chickpeas, beans, date bars, Plumpy'Doz, rice, salt, wheat flour, bulgur wheat, red lentils and white sugar in the Homs warehouse are being investigated because the tonnage was a result of non-reconciled inventory differences and eliminated from the system without justification. The outcome of the investigation will be given in the 2017 report.

#### **ANNEX III**

LOSSES BY REASON	Value (USD)	% of total losses
Attack by termites	10 961	0.06
Broken during loading	17 327	0.10
Deterioration of food commodities mainly attributable to problems at origin	3 553 795	19.67
Deterioration of packaging materials	184 515	1.02
Flooding and other natural disasters	47 065	0.26
Improper/overlong storage	2 007 647	11.11
Inadequate transport	2 032 933	11.25
Infestation	226 008	1.25
Loss due to fire	205 703	1.14
Loss due to overscooping	47 909	0.27
Loss due to sampling food analysis	53 881	0.30
Loss during civil strife	4 562 465	25.25
Pilferage/theft	845 514	4.68
Poor handling	536 683	2.97
Processing/transformation of commodity	16 359	0.09
Reconstitution/rebagging/repacking	2 856 498	15.81
Short-delivered	654 597	3.62
Unauthorized distribution	146 428	0.81
Variance in weight	8 286	0.05
Wet bags	23 671	0.13
Wet by gasoil	15	0.00
Wet by oil	8 650	0.05
Wet by water	24 027	0.13
Grand Total	18 070 937	

#### **ANNEX IV**

	QUANTITIES AND VALUES OF LOSSES BY REGION											
	2016 op	ening stock	Received in re	ecipient country	Total l	handled*	Post-deliv	very losses				
Region	Quantity net (mt)	Value (USD)	Quantity net (mt)	Value (USD)	Quantity net (mt)	Value (USD)	Quantity net (mt)	Value (USD)				
RBB	46 127	32 502 541	379 808	195 395 799	425 935	227 898 340	632	459 673				
RBC	174 821	104 576 144	1 311 036	855 347 675	1 485 857	959 923 818	8 885	9 104 093				
RBD	88 525	68 688 586	307 028	228 742 264	395 554	297 430 850	1 862	1 486 097				
RBJ	50 075	31 234 500	571 654	271 581 434	621 729	302 815 934	354	223 993				
RBN	154 706	95 901 960	1 064 171	580 815 602	1 218 877	676 717 563	7 878	6 459 492				
RBP	20 029	16 534 633	66 169	45 759 871	86 198	62 294 503	499	337 588				
Grand Total	534 283	349 438 363	3 699 866	2 177 642 645	4 234 149	2 527 081 008	20 109	18 070 937				
Percentage	of total handled	0.47	0.72									

<sup>\*</sup> Opening stocks in the recipient country plus 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*					
		100.000		0.00					
BEVJUI	Juice	189 339	-	0.00					
BEVMNW	BEVMNW	6 858	-	0.00					
BEVTEA	Tea	32 879	-	0.00					
CERBAR	Barley	1 030 840	2 430	0.24					
CERBHW	Buckwheat	130 102	226	0.17					
CERBRE	Bread	5 055 487	2 501	0.05					
CERMAZ	Maize	197 334 003	323 728	0.16					
CERMMF	Soya-fortified maize meal	3 049 441	2 167	0.07					
CERMML	Maize meal	46 836 648	83 181	0.18					
CERPAS	Pasta	3 011 496	3 547	0.12					
CERQUI	Qui cereals	48 480	-	0.00					
CERRIC	Rice	201 673 205	901 209	0.45					
CERSOF	Sorghum flour	5 431	27	0.49					
CERSOR	Sorghum	268 969 467	751 172	0.28					
CERWBG	Bulgur wheat	40 350 500	119 161	0.30					
CERWHE	Wheat	262 862 092	194 036	0.07					
CERWHF	Wheat flour	120 516 519	496 223	0.41					
DAICHE	Cheese	50 246	71	0.14					
DAIDSP	Plain dried skim milk	9 327 529	13 044	0.14					
DAIDWM	Dried whole milk	1 759 250	-	0.00					
DAIUHT	UHT milk	3 400 223	390	0.01					
FRUDFR	Dried fruits	8 897 272	267 801	3.01					
FSHCFI	Canned fish	14 641 105	6 220	0.04					
MEACHK	Canned chicken	2 430 884	70	0.00					
MEAMEA	Canned meat	865 545	1 346	0.16					
MIXBIS	Biscuits	1 513 177	2 663	0.18					
MIXBP5	BP5 emergency rations	35 838	-	0.00					
MIXCSB	Corn-soya blend	262 335 759	2 612 136	1.00					
MIXCSBFAF	Faffa	1 907	1 907	100.00					
MIXCSBVIT	Vitacereal	91	91	100.00					
MIXCSM	Corn-soya milk	5 609	411	7.33					
MIXHEB	High-energy biscuits	24 180 059	907 490	3.75					
MIXLNS	LNS	527 592	_	0.00					
MIXRSF	Plumpy	133 999 743	2 422 673	1.81					

		LOSSES BY COMMODI	TY	
Commodity code	Commodity	Total handled* (USD)	Post-delivery losses (USD)	Losses in USD as % of total handled*
MIXRTF	Ready-to-use therapeutic food	841 948	3	0.00
MIXWSB	Wheat-soya blend	24 277 378	99 779	0.41
MSCAPI	Api cereals	213 532	1 855	0.87
MSCCRA	Crackers	57 129	11	0.02
MSCHAL	Halawa	78 465	6	0.01
MSCMNP	Micronutrition powder	2 071 127	9 141	0.44
MSCMNT	Micronutrition tablets	374 574	328	0.09
MSCNUT	Nuts	144 990	-	0.00
MSCSAL	Iodized salt	5 118 274	38 168	0.75
MSCSPC	Spices	189 920	-	0.00
MSCSUG	Sugar	42 411 868	204 094	0.48
MSCTOM	Processed tomato	368 575	11	0.00
MSCYEA	Yeast	608 872	1 694	0.28
OILOLV	Olive oil	370 237	-	0.00
OILVEG	Vegetable oil	282 464 200	1 695 259	0.60
PPFRTN	Rations	122 151 594	753 877	0.62
PULBEA	Beans	127 450 549	2 350 066	1.84
PULCKP	Chickpeas	64 569 852	1 394 634	2.16
PULCPU	Canned pulses	1 515 187	290 674	19.18
PULCVE	Canned vegetables	380 111	-	0.00
PULLEN	Lentils	83 185 613	532 303	0.64
PULPEA	Peas	19 421 553	297 965	1.53
PULSLN	Split lentils	4 943 780	1 046	0.02
PULSPE	Split peas	128 791 388	1 284 103	1.00
TUBCAF	Cassava flour	5 674	-	0.00
Total		2 527 081 008	18 070 937	0.72

st Opening stocks in the recipient country plus commodities in the recipient country.

#### **ANNEX VI**

	QUANT	ITIES AND V	ALUES BY RE	CIPIENT COU	JNTRY	
		Total h	andled*	Post-deliv		
Region	Country	Net (mt)	(USD)	Net (mt)	(USD)	Losses in USD as % of total handled*
RBB	Afghanistan	85 659.3	45 596 914	219.4	99 908	0.22
	Bangladesh	38 365.5	16 205 203	67.1	42 369	0.26
	Bhutan	1 744.3	902 981	6.9	5 714	0.63
	Cambodia	9 035.1	7 052 311	8.4	6 220	0.09
	Democratic People's Republic of Korea	26 644.4	16 714 951	0.1	15	0.00
	Lao People's Democratic Republic	6 958.6	9 752 161	75.0	35 313	0.36
	Myanmar	42 007.2	22 571 133	79.9	56 235	0.25
	Nepal	14 743.8	9 944 846	19.2	13 131	0.13
	Pakistan	185 876.4	86 336 016	9.2	6 568	0.01
	Papua New Guinea	4 709.9	3 397 493	2.8	2 045	0.06
	Philippines	4 938.2	3 816 996	128.4	177 485	4.65
	Sri Lanka	4 875.3	4 881 818	15.2	14 569	0.30
	Timor-Leste	376.7	725 517	0.1	100	0.01
RBB Total		425 934.8	227 898 340	631.6	459 673	0.20
RBC	Algeria	25 579.0	13 183 397	29.4	25 235	0.19
	Armenia	2 552.0	2 198 827	0.5	554	0.03
	Egypt	18 091.3	15 786 680	131.6	101 193	0.64
	Iran (Islamic Republic of)	5 232.6	3 172 764	9.9	7 522	0.24
	Iraq	147 980.9	87 432 118	210.3	138 321	0.16
	Jordan	18 121.6	17 504 365	290.8	657 560	3.76
	Kyrgyzstan	9 041.7	5 706 554	24.3	13 621	0.24
	Lebanon	927.9	1 837 621	3.7	7 268	0.40
	Libya	10 999.8	16 402 021	7.1	25 564	0.16
	State of Palestine	34 923.9	19 513 090	5.4	5 205	0.03
	Sudan	225 949.0	87 996 945	173.2	83 981	0.10
	Syrian Arab Republic	581 753.8	446 198 283	5 000.3	4 443 174	1.00
	Tajikistan	9 312.4	6 044 409	0.4	286	0.00
	Ukraine	9 416.2	34 551 843	0.1	316	0.00
	Yemen	385 974.8	202 394 902	2 998.2	3 594 292	1.78
RBC Total		1 485 856.7	959 923 818	8 885.0	9 104 093	0.95

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			andled*	Post-delive	-	
Region	Country	Net (mt)	(USD)	Net (mt)	(USD)	Losses in USD as % of total handled*
RBD	Benin	2 650.6	1 363 766	35.5	15 167	1.11
	Burkina Faso	10 771.5	8 367 535	9.6	11 361	0.14
	Cameroon	58 465.2	31 191 061	338.7	194 703	0.62
	Central African Republic	34 017.9	32 703 365	302.5	291 984	0.89
	Chad	70 001.4	52 007 878	173.4	209 605	0.40
	Côte d'Ivoire	13 105.2	8 315 988	78.1	93 166	1.12
	Gambia	1 838.2	1 169 431	30.5	18 310	1.57
	Ghana	217.0	129 102	-	0	0.00
	Guinea	18 941.2	11 356 540	203.5	127 899	1.13
	Guinea-Bissau	7 192.4	6 550 645	45.1	22 881	0.35
	Liberia	13 801.7	8 634 507	89.5	84 361	0.98
	Mali	26 854.5	22 121 304	199.8	152 287	0.69
	Mauritania	12 092.9	7 828 168	8.8	4 996	0.06
	Niger	78 576.4	58 648 258	31.7	30 572	0.05
	Nigeria	27 954.7	33 523 690	4.9	4 676	0.01
	Senegal	1 317.8	2 608 866	7.3	7 579	0.29
	Sierra Leone	17 755.2	10 910 746	303.2	216 550	1.98
RBD Total		395 553.7	297 430 850	1 862.1	1 486 097	0.50
RBJ	Congo	3 499.5	1 991 413	35.2	19 773	0.99
	Democratic Republic of the Congo	45 969.7	40 501 426	152.4	117 924	0.29
	Lesotho	17 231.2	7 753 362	28.6	15 247	0.20
	Madagascar	37 893.9	20 303 221	13.1	6 491	0.03
	Malawi	327 286.8	147 540 760	43.3	25 119	0.02
	Mozambique	30 818.5	15 171 708	30.1	13 731	0.09
	Swaziland	11 561.9	5 921 911	6.3	3 001	0.05
	United Republic of Tanzania	55 811.9	23 431 223	21.0	12 475	0.05
	Zambia	7 004.0	2 185 674	2.5	721	0.03
	Zimbabwe	84 652.0	38 015 236	21.1	9 512	0.03
RBJ Total		621 729.3	302 815 934	353.5	223 993	0.07
RBN	Burundi	29 720.3	21 341 655	82.3	56 706	0.27
	Djibouti	11 064.9	6 408 262	113.2	54 228	0.85
	Ethiopia	629 657.0	286 506 933	498.0	296 352	0.10
	Kenya	88 378.7	45 535 438	157.1	69 844	0.15
	Rwanda	22 408.6	12 365 009	10.3	4 913	0.04

		Total h	andled*	Post-deliv		
Region	Country	Net (mt)	(USD)	Net (mt)	(USD)	Losses in USD as % of total handled*
	Somalia	55 214.2	42 406 843	219.2	130 138	0.31
	South Sudan	274 864.6	193 942 352	6 728.9	5 809 041	3.00
	Uganda	107 568.6	68 211 071	69.0	38 270	0.06
RBN Total		1 218 876.9	676 717 563	7 877.9	6 459 492	0.95
RBP	Plurinational State of Bolivia	720.4	590 935	0.4	260	0.04
	Colombia	4 597.0	3 430 270	14.3	10 816	0.32
	Cuba	2 395.8	1 489 098	1.5	2 740	0.18
	Dominican Republic	501.0	477 683	0.1	84	0.02
	El Salvador	1 223.6	1 430 095	24.4	33 538	2.35
	Guatemala	9 586.2	7 210 852	7.4	12 004	0.17
	Haiti	36 552.1	22 704 792	448.6	276 485	1.22
	Honduras	24 226.4	18 505 368	2.5	1 653	0.01
	Nicaragua	6 245.3	6 338 038	0.0	9	0.00
	Panama	30.0	28 500	-	0	0.00
	Paraguay	119.8	88 871	-	0	0.00
RBP Total		86 197.6	62 294 503	499.3	337 588	0.54
Grand Total		4 234 149.1	2 527 081 008	20 109.4	18 070 937	0.72

<sup>\*</sup> 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 (mt)	Total handled* (USD)	Post-delivery losses net (mt)	Post-delivery losses (USD)	Losses in mt as % of total handled*
RBD	Central African Republic	200799.F.1.CF	CERRIC	15 513.686	13 792 352.70	178.353	158 563.70	1.15
RBD	Côte d'Ivoire	200464.F.1	OILVEG	438.192	699 948.77	20.043	32 015.81	4.57
RBD	Cameroon	200799.F.1.CM	PULSPE	3 991.328	2 218 807.75	125.239	69 621.25	3.14
RBN	Ethiopia	200712.F.1	MIXCSB	40 019.406	25 735 489.34	285.795	190 902.00	0.71
RBD	Guinea	200326.F.1.C1	PULBEA	631.096	473 208.12	33.674	25 249.42	5.34
RBD	Guinea	200326.F.1.C2	MIXCSB	1 114.388	763 886.01	45.682	31 313.91	4.10
RBP	Haiti	200618.F.1	CERWBG	1 563.854	710 628.48	63.934	29 052.15	4.09
RBP	Haiti	200618.F.1	OILVEG	1 715.467	2 065 954.45	35.480	42 728.93	2.07
RBP	Haiti	200618.F.1	PULBEA	826.642	733 877.87	31.649	28 097.41	3.83
RBP	Haiti	200618.F.1	PULPEA	452.057	249 582.38	39.600	21 863.31	8.76
RBC	Jordan	200478.F.1	FRUDFR	207.966	305 608.38	169.652	249 305.53	81.58
RBC	Jordan	200478.F.1	MIXHEB	270.010	937 643.44	114.804	398 671.23	42.52
RBD	Liberia	200550.F.1	MIXRSF	9.948	33 397.45	9.948	33 397.45	100.00
RBB	Philippines	200743.F.1	MIXHEB	213.030	264 195.58	111.890	138 763.76	52.52
RBB	Philippines	200743.F.1	MIXRSF	294.845	1 074 773.51	8.125	29 617.37	2.76
RBD	Sierra Leone	200336.F.1.C1	CERWBG	50.475	27 460.48	39.525	21 503.23	78.31
RBD	Sierra Leone	200336.F.1.C4	MIXCSB	605.410	559 522.42	52.431	48 456.95	8.66

## 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 (mt)	Total handled* (USD)	Post-delivery losses net (mt)	Post-delivery losses (USD)	Losses in mt as % of total handled*
RBD	Sierra Leone	200938.F.1	MIXCSB	1 789.800	1 253 277.53	116.586	81 637.40	6.51
RBN	Somalia	200844.F.1	PULSPE	2 781.300	1 581 979.66	121.597	69 163.33	4.37
RBN	South Sudan	200572.F.1	CERSOR	67 227.059	43 220 820.95	548.777	352 813.18	0.82
RBN	South Sudan	200572.F.1	MIXCSB	8 676.721	9 377 010.19	958.184	1 035 518.04	11.04
RBN	South Sudan	200572.F.1	OILVEG	5 661.981	8 229 619.32	566.046	822 740.86	10.00
RBN	South Sudan	200572.F.1	PULBEA	2 443.090	1 661 254.48	169.933	115 551.19	6.96
RBN	South Sudan	200572.F.1	PULPEA	2 298.350	1 457 766.42	391.090	248 055.29	17.02
RBN	South Sudan	200572.F.1	PULSPE	3 801.595	3 106 411.99	352.568	288 095.25	9.27
RBN	South Sudan	200859.F.1	CERMAZ	10 479.800	4 687 851.12	299.197	133 837.57	2.85
RBN	South Sudan	200859.F.1	CERSOR	125 047.975	76 565 322.05	373.943	228 960.65	0.30
RBN	South Sudan	200859.F.1	MIXCSB	15 072.427	13 330 897.36	1 005.032	888 906.51	6.67
RBN	South Sudan	200859.F.1	MIXRSF	997.171	2 926 799.80	38.466	112 901.68	3.86
RBN	South Sudan	200859.F.1	OILVEG	6 633.336	8 453 731.97	127.907	163 008.70	1.93
RBN	South Sudan	200859.F.1	PULBEA	4 042.400	2 946 450.65	790.000	575 820.31	19.54
RBN	South Sudan	200859.F.1	PULLEN	2 245.000	2 276 895.80	201.300	204 159.97	8.97
RBN	South Sudan	200859.F.1	PULSPE	5 409.700	4 039 816.31	664.057	495 899.64	12.28
RBC	Syrian Arab Republic	200339.F.1	CERRIC	94 518.785	44 751 593.08	483.886	229 104.40	0.51
RBC	Syrian Arab Republic	200339.F.1	CERWHF	87 839.230	28 360 523.25	959.796	309 887.93	1.09
RBC	Syrian Arab Republic	200339.F.1	MIXHEB	3 886.799	5 589 991.76	98.539	141 718.72	2.54

## 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 (mt)	Total handled* (USD)	Post-delivery losses net (mt)	Post-delivery losses (USD)	Losses in mt as % of total handled*
RBC	Syrian Arab Republic	200339.F.1	MIXRSF	2 699.065	7 890 964.24	126.720	370 477.55	4.69
RBC	Syrian Arab Republic	200339.F.1	MSCSUG	42 878.556	24 141 127.23	223.115	125 616.35	0.52
RBC	Syrian Arab Republic	200339.F.1	OILVEG	54 353.730	72 685 203.88	118.657	158 675.55	0.22
RBC	Syrian Arab Republic	200339.F.1	PPFRTN	31 220.048	63 029 601.93	329.953	666 136.27	1.06
RBC	Syrian Arab Republic	200339.F.1	PULBEA	48 033.147	43 485 431.46	465.258	421 207.98	0.97
RBC	Syrian Arab Republic	200339.F.1	PULCKP	50 648.062	50 057 304.51	1 394.038	1 377 777.98	2.75
RBC	Syrian Arab Republic	200339.F.1	PULCPU	947.727	825 032.98	333.845	290 624.97	35.23
RBC	Syrian Arab Republic	200339.F.1	PULLEN	52 218.981	50 323 391.01	286.703	276 295.46	0.55
RBD	Chad	200713.F.1	MIXCSB	7 810.258	14 122 300.48	56.960	102 993.55	0.73
RBC	Yemen	200636.F.1	CERWHF	1 865.725	756 122.37	70.000	28 368.90	3.75
RBC	Yemen	200890.F.1	CERRIC	210.824	261 726.49	31.997	39 722.53	15.18
RBC	Yemen	200890.F.1	CERWHE	270 658.112	101 603 039.91	447.013	167 805.35	0.17
RBC	Yemen	200890.F.1	MIXHEB	1 015.574	1 764 773.10	62.413	108 455.69	6.15
RBC	Yemen	200890.F.1	MIXRSF	6 836.983	19 590 182.61	617.523	1 769 404.48	9.03
RBC	Yemen	200890.F.1	OILVEG	21 437.614	19 456 659.05	256.592	232 881.47	1.20
RBC	Yemen	200890.F.1	PULBEA	1 223.545	1 057 277.47	1 206.193	1 042 283.43	98.58
RBC	Yemen	200890.F.1	PULSPE	27 133.764	18 147 900.49	163.460	109 327.10	0.60

<sup>\*</sup> Opening stocks in the recipient country plus food received in the recipient county.

#### **ANNEX VIII**

		POST-I	DELIVERY LO	SSES 2006–2016		
Year	Total quantity handled (mt)	Quantity of losses (mt)	Losses as % of total mt handled	Total value handled (USD)	Value of losses (USD)	Losses as % of total value handled
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
2016	4 234 149	20 109	0.47	2 527 081 008	18 070 937	0.72

#### **Acronyms Used in the Document**

COMET country office tool for managing effectively LESS Logistics Execution Support System