



A DECADE OF FOOD LOSS REDUCTION

Overview of IFAD's supplementary-funded
grant portfolio on food loss reduction



Investing in rural people

A DECADE OF FOOD LOSS REDUCTION

According to recent estimates, 14 per cent of the world's food production is lost before it reaches the consumer. Food losses disproportionately affect developing countries, threatening people's livelihoods, especially those depending on agriculture. The 2030 Agenda for Sustainable Development identifies the reduction of these losses as a key driver to achieve sustainable food systems that ensures everyone is adequately fed, while the environment is protected. Sustainable Development Goal (SDG) Target 12.3, in particular, pledges "to reduce food losses along production and supply chains, including post-harvest losses" by 2030.

As a specialized agency of the United Nations dedicated to eradicating rural poverty and a member of the Champions 12.3 coalition, IFAD is fully committed to achieving this target. For IFAD, reducing food losses is a key way to improve food security and reduce hunger, especially in rural areas, while also creating income opportunities for producers and small rural businesses. Considering the large amounts of land, water, labour and inputs used to produce lost food, food loss reduction also contributes to reducing natural resource use and the environmental impact of food production.

The challenge of food loss is a complex one and requires a multifaceted response. The causes of losses vary by country context and crop, therefore it is critical to identify where and why losses occur. A common challenge is the lack of adequate technologies and knowledge to store and handle produce, at farm level and along the value chain. This challenge is exacerbated by the lack of a policy and institutional environment conducive to the dissemination and adoption of such practices, as well as the lack of appropriate financial instruments for the private sector to bring these solutions to scale.

In addition to its loan and grant programmes, since 2011 IFAD has partnered with multilateral organizations and foundations to accelerate progress towards food loss reduction. Through four initiatives targeting 10 different countries, IFAD has worked with farmers, researchers, private enterprises and governments to stimulate coordinated action to reduce food losses. Grant activities have included pilots of technologies and good practices, food loss analysis, policy engagement and private sector investment support. This publication provides an overview of key results and lessons learned.

1. FAO. 2019. *The State of Food and Agriculture 2019. Moving forward on food loss and waste reduction*. Rome. www.fao.org/state-of-food-agriculture/en/

2. For more information, visit the Champions 12.3 website: <https://champions123.org/>

3. See: IFAD. 2019. *The Food Loss Reduction Advantage: Building sustainable food systems*. Rome. www.ifad.org/documents/38714170/41335091/food_loss_advantage.pdf/373e787f-fc6f-0426-eea0-d730f79d38c3

4. For a detailed account of the causes of food loss, see: FAO. 2011. *Global Food Losses and Food Waste: Extent, causes and prevention*. Rome. www.fao.org/3/a-i2697e.pdf

IFAD grant portfolio on food loss reduction

Project	Period	Grant amount	Donor	Partners
Smallholder Post-harvest Innovations Project (SPIP)	2012-2013	US\$195 000	UK Department for International Development	IFAD
Food loss reduction through partnerships and evidence-based interventions (UNJP)	2013-2017	US\$605 537	Irish Government, Irish Aid	FAO, IFAD
Mainstreaming Food Loss Reduction Initiatives for Smallholders in Food Deficit Areas (SDC-RBA)	Phase I: 2014-2017 Phase II: 2017-2020	Phase I: US\$3 050 187 Phase II: US\$1 812 600	Swiss Agency for Development and Cooperation	FAO, IFAD, WFP
Catalysing Post-harvest Management for Food Systems Transformation (RF)	2018-2020	US\$262 500	Rockefeller Foundation	IFAD



Mango



Sorghum



Maize



Rice



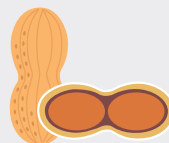
Teff



Tomato



Cowpea



Groundnut

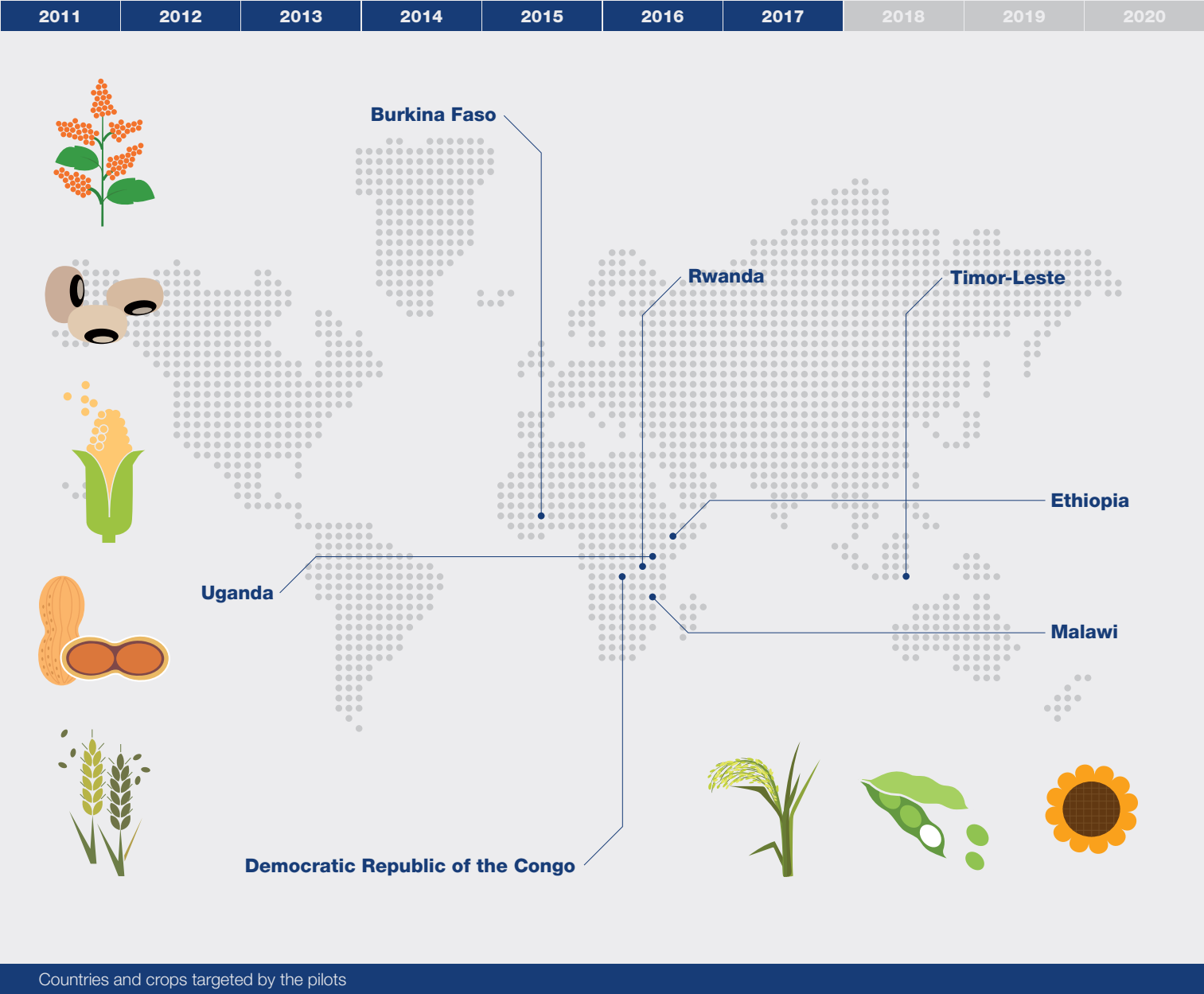


Beans



Sunflowers

PILOTING TECHNOLOGIES AND GOOD PRACTICES





The principal cause of food losses at farm level is the lack of access to appropriate technologies and knowledge. In fact, suitable solutions remain largely unknown and inaccessible to small-scale farmers in developing countries. Capacity-building and demonstrations of these solutions in local contexts are therefore key to promoting their adoption and reducing food losses.















Through three supplementary-funded grants, IFAD and its partners piloted and evaluated the use of innovative solutions in six African countries and Timor-Leste, reaching 11,000 farmer, trader and processor beneficiaries. The interventions were implemented through IFAD-funded projects in each country, ensuring they were scaled up after grant completion.

The pilots were targeted at the farm level and especially at small-scale farmers, who experience the highest levels of food loss. The technologies mainstreamed by the different projects included tarpaulins, solar driers, plastic and metal silos, hermetic storage bags, storage sheds, and diesel-powered, as well as hand-operated, shellers/threshers.

Each project also trained farmers and value chain actors on good practices for post-harvest management of grain. The SPIP, for example, trained 160 groundnut farmers on good agricultural practices for aflatoxin management in Malawi. These practices were then scaled up through the IFAD-funded Rural Livelihoods and Economic Enhancement Programme, reaching 4,290 farmers, 1,800 of whom were women.

The evaluations of the improved practices and technologies showed remarkable impact. For example, in Rwanda, farmers who used tarpaulins for drying and hermetic bags for household storage reduced maize losses from 18 to 4 per cent. This enabled them to save a yearly average of 128 kg of maize per household, which equates to two months' additional food for a family of six or US\$79 extra income.

KNOWLEDGE GENERATION FOR EVIDENCE-BASED INTERVENTIONS

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Critical Loss Points (percentage of quantitative loss)										
	Harvesting	Drying	Threshing	Storage						
	5.4	n/d	n/d	n/d						
	3.5	n/d	5.6	2.7						
	8.7	n/d	1.1	35						
	n/d	n/d	n/d	23						
	n/d	4	n/d	5						
	6.3	n/d	7.7	3.2						
	n/d	n/d	n/d	6.9						
	8	2.6	6.0	8.0						
	5.0	n/d	4.2	17.5						
	5.5	2.5	n/d	2.5						
	3.5	n/d	5.0	5.0						
	2.5	3	2.4	2						
	3.3	n/d	n/d	10						
	3.2	n/d	1	1.8						

Burkina Faso

Democratic Republic of the Congo

Ethiopia

Malawi

Timor-Leste

Uganda



A key challenge in the fight against food loss is the lack of data on where and why losses occur, which is essential to target interventions to where they are most needed. The UNJP and SDC-RBA projects, jointly implemented by IFAD, FAO and WFP, were designed to close this data gap and make knowledge on the causes and solutions available globally.

Using the FAO Food Loss Analysis (FLA) methodology,⁶ these projects conducted in-depth food loss analysis of different grain value chains in five African countries and Timor-Leste. The studies quantified the levels and causes of food losses, and identified critical loss points (CLPs) along each value chain where future interventions could be targeted.

Both projects delivered technical support and training of trainers on the FLA methodology, reaching over 100 government officials and academics from more than 20 countries. To increase the efficiency and availability of capacity-building to conduct FLA, the SDC-RBA project also developed an e-learning course in English and French on the FLA methodology.⁷

Finally, to facilitate access to relevant information and existing solutions, the SDC-RBA project established a global web-based community of practice (CoP) on food loss reduction. With over 1,200 registered members from 138 countries and an average 3,600 monthly visits, the CoP has become a leading convener of knowledge on food loss reduction.

5. Full reports can be accessed here: www.fao.org/food-loss-reduction/resources/faofoodlossanalysisreports/en/

6. FAO. 2016. *Food Loss Analysis: Causes and Solutions: Case studies in the small-scale agriculture and fisheries subsectors – Methodology*. Rome: FAO, www.fao.org/3/a-az568e.pdf

7. The e-learning course is available here: <https://elearning.fao.org/course/view.php?id=374>

SUPPORT TO PUBLIC POLICY DEVELOPMENT

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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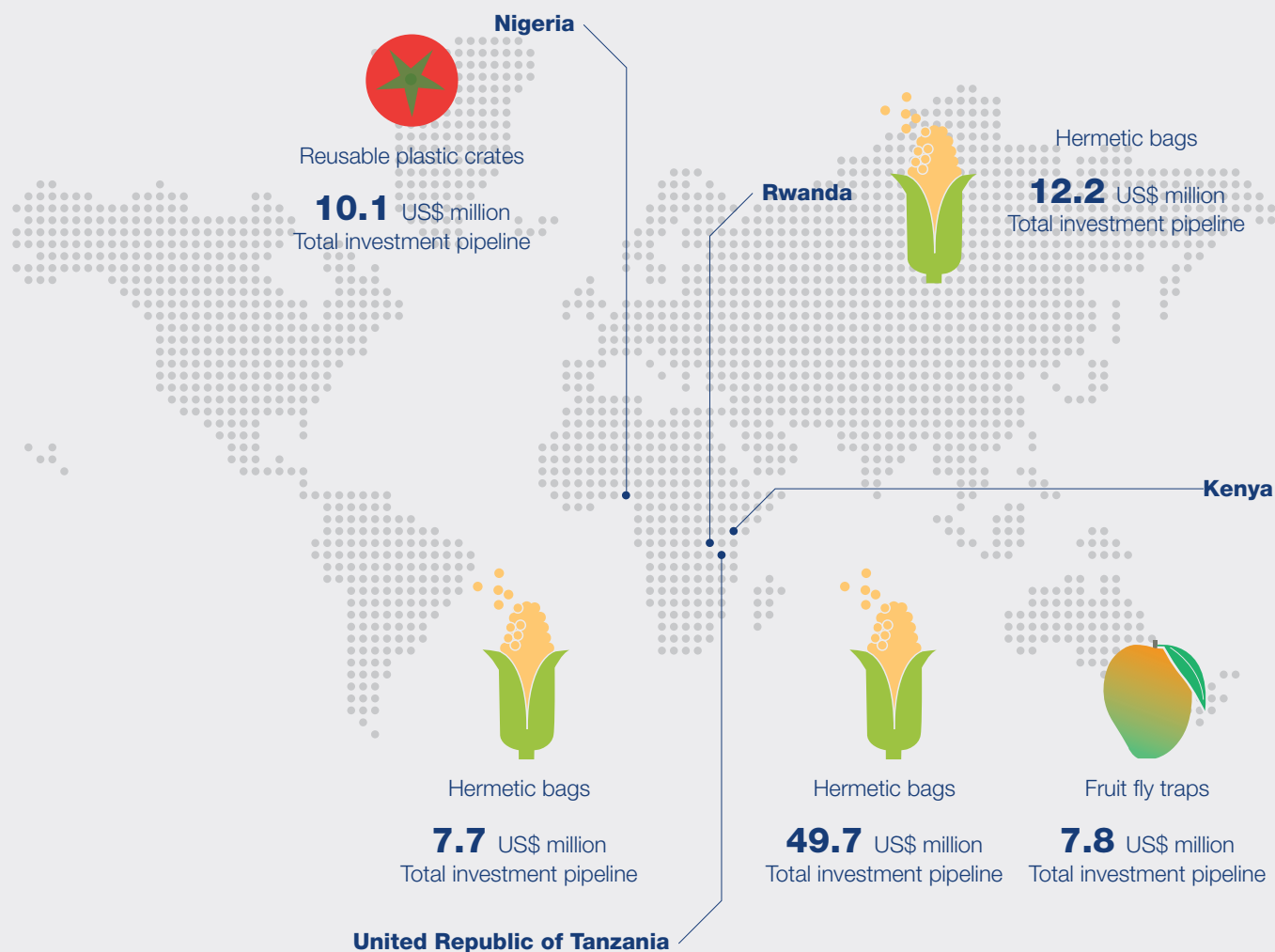
The public sector has a key role to play in creating an enabling policy and institutional environment that is conducive to the adoption of food loss reduction solutions. With the 2014 African Union (AU) Malabo Declaration on Agriculture and Postharvest Losses, the member states of the AU committed to halve food losses by 2025 as part of their efforts to end hunger on the continent. Yet most of these countries are still lacking policy frameworks that adequately address the issue and guide public investment in this area.

In its second phase, the SDC-RBA project leveraged the results of the FLA studies to engage government partners to take action against food loss in Burkina Faso, the Democratic Republic of the Congo and Uganda. In each country, a policy brief was developed through a year-long consultative process with stakeholders from farmers' organizations, academia, government and civil society. Building on this stakeholder engagement, the project supported the review and formulation of policies and strategic frameworks on food loss reduction in each of the three countries.

These policies will be used by the respective governments to inform the development of national agricultural investment programmes, ensuring that food loss reduction measures are prioritized in future plans and are allocated sufficient staff and resources. This will contribute to align beneficiary governments with the targets set by the Malabo Declaration, as well as SDG Target 12.3.

PRIVATE SECTOR INVESTMENT SUPPORT

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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Through their work, IFAD and its partners have demonstrated the effectiveness of several post-harvest technologies in a diverse range of countries and value chains. However, the affordability of these technologies remains an issue for many small-scale farmers and other rural entrepreneurs along the value chain. Appropriate financial instruments need to be put in place to support private investment in scaling up effective post-harvest solutions.

Building on the Rockefeller-supported YieldWise initiative,⁸ the IFAD/Rockefeller grant identified a pipeline of commercially bankable investment opportunities for food loss reduction technologies in Kenya, Nigeria, Rwanda and the United Republic of Tanzania. These included hermetic grain storage bags for maize, fruit fly traps for mango and reusable plastic crates for tomato. The total potential investment pipeline across all countries and value chains was estimated at US\$84.4 million.

The project evaluated eight existing loan products designed to enable different value chain actors to invest in the technologies identified. These were agrodealer credit, production or pre-harvesting financing, equipment or asset loan, warehouse receipt credit, inventory finance, leasing facility, purchase order finance and value chain agricultural production credit. The evaluation found that most of these products are available in the countries covered, but they remain largely inaccessible to potential investors due to insufficient reach of financial institutions in rural areas, as well as the high risk of borrowing money without price and insurance guarantees.

This analysis will contribute to shaping IFAD's ongoing work in increasing access to finance for the rural post-harvest sector, with a focus on farmers' groups, cooperatives and small and medium-sized enterprises managed by women and youth. Future developments include the recently launched Agri-Business Capital (ABC) Fund, a private impact investment fund that is specifically targeted at enterprises that are too big for microfinance and informal investors, and too small or too risky for banks and other financial intermediaries.

8. See: www.rockefellerfoundation.org/initiative/yieldwise/

Lessons learned and the way forward

As a sign of its continued commitment to reduce food loss, the United Nations General Assembly recently resolved to establish the International Day of Awareness of Food Loss and Waste on 29 September each year. Through the work described in this publication, IFAD and its partners have contributed to building and sustaining this momentum across their member countries.

Taken together, the four projects represent an innovative and comprehensive approach to food loss reduction that takes all stakeholders into account, from small-scale farmers to financial institutions, the private sector and government. Key lessons learned that can guide the scaling up of this approach in future interventions include:

- FLA across different countries and commodities plays a crucial role in targeting and monitoring food loss reduction interventions. The design of future projects needs to be based on detailed FLA studies, along with building local capacity to conduct these analyses.
- Mainstreaming post-harvest practices and technologies can lead to a substantial reduction in food losses for beneficiaries. Pilots should be designed with a clear and actionable scaling-up strategy in mind, for example by implementing them within broader investment programmes and advocating for the integration of pilots in programme annual workplans and budgets.
- Most developing countries lack the resources to carry out large-scale post-harvest loss reduction investments. While supporting them in developing policy frameworks is key to ensuring that these investments are prioritized, policy development should always go hand in hand with fund-raising support to ensure that they are adequately funded.
- Lack of access to affordable finance is a key constraint preventing small-scale farmers' groups and the private sector from investing in technologies that reduce food losses. In order to bring food loss reduction technologies to scale, financing instruments will need to be made available to potential investors, and financial service providers will need to be supported in reaching out to the rural post-harvest sector.

The achievements of these projects are only a small step towards global food loss reduction, and much remains to be done. IFAD will continue scaling up successful approaches through its investment portfolio, leveraging lessons learned to design new projects that invest in increasing the accessibility and affordability of options, focusing on small-scale farmers and other rural people working along the value chain.



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