



# FOOD LOSS REDUCTION STRATEGY





## IMPORTANCE OF FOOD LOSSES AND FOOD WASTE

The last decade has seen rapid growth in many developing countries together with a promising reduction of poverty levels. Although these developments have been hampered by a number of recent events, principally the soaring food prices crisis and the global economic recession, projections by FAO and others indicate that global food demand is expected to increase by 40% in the next three decades. Efforts to sustainably increase production are essential, but will not be sufficient to cope with increasing food demand. Concerted efforts are needed to reduce food losses and waste during and after harvest and subsequent downstream activities.

Although accurate estimations of the magnitude of losses and waste are still lacking, particularly in developing countries, there is no doubt that the levels of food loss and waste remain unacceptably high. Recent studies commissioned by FAO<sup>1</sup> estimated yearly global quantitative food losses and waste at roughly 30% for cereals, 40-50% for root crops, fruits and vegetables, 20% for oilseeds, meat and dairy, and 30% for fish.

Food losses and waste have repercussions on hunger, poverty alleviation, income generation and economic growth. Where a product is consumed directly by the producer, quantitative losses cause less food to be available and therefore contribute to food insecurity. Qualitative losses may cause a reduced nutritional status, whereas low quality products may also be unsafe with adverse effects on the health, wellbeing and productivity of the consumer. Food losses represent a waste of resources used in production such as land, water, energy and other inputs. Producing food that will not be consumed leads to unnecessary CO<sub>2</sub> emissions in addition to the loss of economic value of the food produced. As food commodities are internationally traded, large scale food waste in one part of the world may have an effect on food prices in other parts.



Part of the initial global production lost or wasted, at different stages of the food supply chain, for different commodity groups (Gustavsson *et al.*)

<sup>1</sup> Gustavsson *et al.* *Global food losses and food waste*. FAO 2011. Rome.



## NATURE OF FOOD LOSS AND WASTE

Food losses are indicative of poorly functioning and inefficient food systems. The causes of losses are many and varied. In developing countries, technical causes include poor post-harvest handling practices, drying techniques and moisture levels; inadequate storage; filth and contamination; and infestation by micro-organisms, insects, rodents and other pests. Other aspects include limited value-addition; lack of market-oriented infrastructure such as cold chains, transportation and intermediary marketing centres. Weak engagement with the private sector in many cases leads to post-harvest interventions that are not commercially viable and generally unsustainable.

The problem of food loss and waste is not only a developing country issue. Recent studies undertaken in industrialized countries have shown that they also encounter high levels of food waste, particularly at retailer and consumer levels. The causes of food losses and waste in industrialized countries mainly relate to consumer behaviour, quality regulations, and retail practices as well as to poor coordination between different actors in the supply chain. At the consumer level, insufficient purchase planning and expiring 'best-before-dates' also cause large amounts of waste, in combination with the careless attitude of those consumers who can afford to waste food.

**Food losses** occur in supply chains from the time of crop harvest, milk collection, animal slaughter or fish capture, to the delivery of the food to the retailer. These losses can be quantitative, causing a reduced weight of the produce, or qualitative, which implies a change in its appearance, taste or nutritional value, and subsequently its economic value. Food waste mainly occurs at retailer and consumer level, when food products fit for consumption are being thrown away or destroyed.



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## A NEW APPROACH TO FOOD LOSS REDUCTION

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FAO has long recognized the importance of concerted action on food loss reduction. FAO's systematic involvement in the reduction of food losses dates back to the late 1960s with the Freedom from Hunger Campaign. Following the first UN World Food Conference in Rome in 1974, FAO established the Action Programme for the Prevention of Food Losses (PFL) in 1978, which ran until the early 1990s. The purpose of the Programme was to assist developing countries to identify post-harvest food losses and to implement programmes for the reduction of food losses at the national level through direct action projects. More than 250 projects were implemented worldwide under this programme.

To meet the food demand challenge, new strategies and intervention approaches are needed due to a number of factors such as the growing influence of private sector led enterprise, global market integration, urbanization, growing south-south food trade, and the associated 'lengthening' of food chains.

In view of the above mentioned changes, FAO and its partners have re-aligned their intervention strategies to focus on systemic improvements of the efficiency and sustainability of food chains. This new approach is embedded within the broader concept of promoting sustainable food systems, which also encompasses sustainable food production, on the one hand, and sustainable diets and consumption (such as through the reduction of food waste), on the other.

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# FAO'S INTERVENTION STRATEGY

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FAO's new strategy for promoting action on food losses reduction comprises the following complementary initiatives:

- Support further assessments to quantify and qualify the scale and value of losses, including the identification of key constraints, risks and opportunities;
- Develop capacities of regional institutions, national government officials and development agencies in use of food loss assessment methodologies and tools, and design of policies and strategies targeting food loss reduction;
- Provide assistance for formulating and implementing country level food loss reduction projects and investment programmes.

Factors FAO considers to be crucial for the success of the food loss reduction interventions include: social and cultural suitability, attention to reducing losses and wastes all along value chains, the feasibility and profitability of required investments, adequate incentives to chain partners for reducing food losses, and provision of long-term support.

To tackle the range of interventions that need to be addressed for successful and sustainable food losses reduction, FAO recommends integrated and comprehensive programmes that address the following elements:

- Policy and strategy formulation;
- Awareness creation and information dissemination;
- Capacity development;

- Improved infrastructure and technology;
- Promotion of sustainable production and consumption;
- Support for agro-industries development;
- Strengthening of linkages along value chains;
- Improved food handling, packing and logistics; and,
- Innovative financing mechanisms.



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## SAVE FOOD 2011

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In May 2011 FAO's Agriculture and Consumer Protection Department and Interpack organized the international congress 'Save Food'. Interpack is the world's biggest industrial packaging fair, and the main international food packaging associations are among its members. The congress Save Food took place during Interpack2011 at the Düsseldorf Show Grounds (Messe Düsseldorf) in Germany. Save Food aimed at raising awareness of the extent and causes of global food losses, sharing experiences and views, and highlighting the role of improved packaging in combating the pressing global issue of large-scale food losses and waste.

[www.save-food.org](http://www.save-food.org)



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## EXAMPLE OF FOOD STORAGE

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The elements of specific food loss reduction programmes are strongly interrelated. For instance, investing in storage and cold chain infrastructure alone is not enough to be effective. It should go together with improvement of road networks, transportation, electricity supplies and communication, as well as post-harvest handling of drying, cleaning, grading, packing or otherwise conditioning of the products to be stored.

Further, investment in the storage structures should be accompanied by provision of advice and training on the design, ownership and proper management. In addition capacity building should be carried out targeting farmers, traders and other stakeholders in the chain to create a working knowledge and understanding of the technical factors that impact on the safety, quality and value of the food products stored as well as on their marketing. Food storage has to operate on a commercial basis.

Also, the political enabling environment and institutional framework should be conducive for the establishment and operation of food storage, for example with regard to taxation, quality regulations, incentives, location and target groups for food storage.

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## RECENT INITIATIVES WITH FAO PARTNERS

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### **COLLABORATION WITH THE AFRICAN DEVELOPMENT BANK (AfDB) ON AN INITIATIVE TO REDUCE POST-HARVEST LOSSES IN AFRICA, 2009–2011**

The collaboration is organized around two pillars: (i) screening of AfDB's agricultural portfolio in order to identify opportunities for introducing post-harvest losses reduction and related value addition and marketing activities in ongoing and planned operations; and (ii) preparation of a programme framework document on post-harvest losses reduction in Africa to guide AfDB's investment decisions.

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### **FAO/WORLD BANK WORKSHOP ON REDUCING POST-HARVEST LOSSES IN GRAIN SUPPLY CHAINS IN AFRICA, ROME, MARCH 2009**

The meeting brought together experts to discuss the significance of post-harvest losses past experiences in their reduction and future interventions in Sub-Saharan Africa.

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### **SEMINAR ON FOOD LOSSES/WASTE AND FOOD PACKAGING, WITH ANDINA-PACK, COLOMBIA NOVEMBER 2011**

ANDINA-PACK is the largest market place for packaging technology in the Andean Region, Central America and the Caribbean.

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### **TRAINING ON HORTICULTURAL SUPPLY CHAIN MANAGEMENT TO REDUCE LOSSES, NEW DELHI, AUGUST 2011**

In partnership with the Asian Productivity Organisation, 24 trainers from 13 Asian countries have received this training.

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### **INPhO, THE INFORMATION NETWORK ON POST-HARVEST OPERATIONS**

The principal objectives of INPhO are to promote best practices in post-harvest activities for agricultural products and to assist in the expansion of agribusiness by providing easy access to technical data and information.

[www.fao.org/inpho](http://www.fao.org/inpho)



## HOW YOU CAN CONTRIBUTE

FAO is seeking partners to collaborate on food loss prevention initiatives. Short term priority action areas include:

1. Detailed food loss assessments and solution finding.
2. Awareness creation and information dissemination.
3. Improved government and industry strategies to reduce losses.

For additional information on supporting this work area contact:

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