



GLOBAL INITIATIVE ON FOOD LOSSES AND WASTE REDUCTION



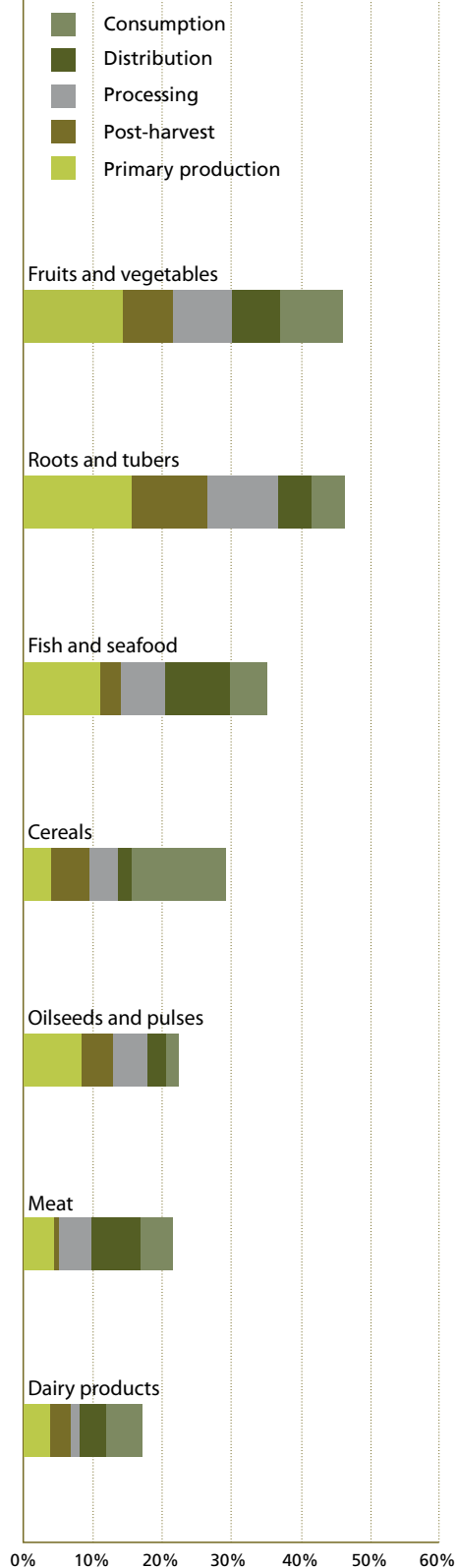
FAO'S ACTION ON FOOD LOSS REDUCTION GOES BACK OVER 40 YEARS

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 in 1978, which ran until the early 1990s. The purpose of the programme was to assist developing countries 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.

FOOD WASTE IS OF GROWING CONCERN NEXT TO FOOD LOSSES

Food losses refer to the decrease in edible food mass available for human consumption throughout the different segments of the supply chain. In addition to quantitative losses, food products can also face a deterioration of quality, leading to a loss of economic and nutritional value. Food waste refers to food losses resulting from decisions to discard food that still has value. Food waste is most often associated with the behaviour of retailers, the food service sector and consumers, but food waste and losses take place all along food supply chains.

Accurate estimations of the magnitude of losses and waste are still lacking, particularly in developing countries. Nevertheless, there is no doubt that the levels of food loss and waste remain unacceptably high. Recent studies commissioned by FAO 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.



Part of the initial global production lost or wasted, at different stages of the food supply chain, for different commodity groups. (FAO. 2011. *Global food losses and food waste - Extent, causes and prevention*. Rome)

THE IMPACTS OF FOOD LOSSES AND WASTE ARE MULTIFACETED

Food losses and waste have repercussions on hunger and poverty alleviation, nutrition, income generation and economic growth. Food losses are indicative of poorly functioning and inefficient value chains and food systems, and as such they represent a loss of economic value for the actors in these chains. Where a product is consumed directly by the producer, quantitative losses cause less food to be available and therefore contribute to food insecurity. Food supply chains of today are more and more globalized. Certain food items are produced, processed and consumed in very different parts of the world. Food commodities traded at international markets and wasted in one part of the world could affect food availability and prices in other parts. Qualitative losses may cause a reduced nutritional status, while low quality products may also be unsafe with adverse effects on the health, well-being and productivity of the consumer.

IMPACT ON THE ENVIRONMENT AND CLIMATE

Food losses and waste have negative environmental impacts because of the energy, biodiversity, greenhouse gases, water, soil and other resources embedded in food that no one consumes. The higher the level of processing, refining and caloric content the food products have, and the later in the food supply chain the food is lost or wasted, the heavier these impacts will be.

More efficient food supply systems that reduce losses or waste would likely result in additional reduction of greenhouse gas emissions. This would be in part directly, because waste typically generates methane emissions during food disposal, as well as indirectly, given that reducing waste may lead to critical redesign of supply chains and retail models, which may result in less energy use along the food chain, and thus associated greenhouse gas emissions. Generally, less wastage is associated with more efficiency and eventually more effective recycling of resources, less storage needs and less transport across long distances. However, solutions to reduce losses will often lead to an increased use of energy, especially for preservation of food products. Obviously the environmental cost of reducing food loss should not be higher than the benefits.





THE CAUSES OF FOOD LOSS AND WASTE DEPEND ON SPECIFIC CONDITIONS

Food losses and waste are very much dependent on the specific conditions and local situations in a given country. In broad terms, food losses and waste are influenced by production and processing choices, patterns and technologies, internal infrastructure and capacity, marketing chains and channels for distribution, consumer purchasing and food use practices.

Food losses and waste in low-income countries result from wide-ranging managerial and technical limitations in harvesting techniques, storage, transportation, processing, cooling facilities (in difficult climatic conditions), infrastructure, packaging and marketing systems. The main sectors of concern are small- and medium-scale fisheries, agricultural production and processing. The actors in these sectors also face the problem of market access for their products. If markets are not accessible or market prices are too low, farmers and fishers may let good products go to waste.

The causes of food losses and waste in medium- and high-income countries mainly relate to consumer behaviour as well as to policies and regulations put in place to address other sectoral priorities. For example, agricultural subsidies may contribute to surplus quantities of farm crops being produced, with at least a proportion being lost or wasted. Food regulations can be applied in ways that remove food that is still safe for human consumption from the food supply chain. At the consumer level, insufficient purchase planning and failure to use food before expiry dates also lead to avoidable food waste.

STRATEGIES FOR FOOD LOSS AND WASTE REDUCTION ARE BEING ADJUSTED

New strategies and intervention approaches are needed to reduce food losses and waste because of a number of factors, such as the increasing influence of the 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.

Partnerships. FAO recognizes the need to undertake action in partnership with other regional and international organizations, and with the food chain actors ranging from herders, farmers and fishers to global companies. Partnerships are equally important to mobilize the required resources for action.

Viable business case. Food loss and waste reduction measures will only be implemented by the supply chain actors if they are economically at least cost-effective and preferably profitable. In addition to the economic cost, it is equally important that the costs for the environment, food security and nutrition are being recovered. This means that the positive impacts of food loss reduction interventions on profit, environment, food security and nutrition should be higher than the negative impacts of the food losses.

INTERVENTIONS BY FOOD CHAIN ACTORS REQUIRED TO REDUCE FOOD LOSSES AND WASTE:

- Improving production planning, aligned with markets;
- Promoting resource-efficient production and processing practices;
- Improving preservation and packing technologies;
- Improving transportation and logistics management.

PUBLIC ACTIONS REQUIRED TO SUPPORT SUPPLY CHAIN INTERVENTIONS:

- Creating a policy and institutional enabling environment;
- Awareness raising and advocacy;
- Building partnerships and alliances;
- Supporting product and process innovation;
- Developing the capacity of small- and medium-scale food chain operators;
- Developing the capacity of regional institutions, national government officials and development agencies.





THE NEW STRATEGY: EXAMPLE OF FOOD STORAGE

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, drying, cleaning, grading, packing or otherwise conditioning of the products to be stored. Furthermore, investment in the storage structures should be accompanied by 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 be operated on a commercial basis. Also, the political enabling environment and institutional framework should be conducive to the establishment and operation of food storage, for example, with regard to taxation, quality regulations, incentives, location and target groups for food storage.

FAO LEADS THE GLOBAL INITIATIVE ON FOOD LOSSES AND WASTE REDUCTION

FAO is collaborating with donors, bi- and multi-lateral agencies and financial institutions (UNIDO, African Development Bank, World Bank, IFAD, EU) and private sector partners (the food packaging industry) to develop and implement the Save Food Initiative on food losses and waste reduction. The start-up plan for this global initiative rests on four main pillars:

1. *Collaboration among the Rome-based UN agencies and key partners.* This involves mobilizing resources as well as conceiving and implementing activities under the initiative;
2. *The SAVE FOOD campaign,* which aims to promote networking among stakeholders in the food industry

(including the packaging industry, policy makers and researchers) with a view towards developing solutions to reduce food losses and waste along food supply chains. An important component is a worldwide media campaign that is aimed at increasing awareness of food losses and food waste at global level.

3. *Evidence-based policy and investment support.* A series of field surveys will be conducted on a regional basis, combining a food chain approach to loss assessments with cost-benefit analyses in order to determine which food loss reduction interventions provide the best returns on investment. The programme will focus on the core subsectors where losses are known to be a serious issue: food grains, fruits and vegetables, roots and tubers, milk, meat and fish. The field surveys will result in investment programmes and projects to implement the food loss reduction actions.
4. *Regional Save Food Congresses.* The regional dimensions of food losses and waste will be studied. Appropriate solutions will be presented and discussed at regional congresses involving a broad range of stakeholders, with a view towards raising interest and mobilizing funding for the implementation of regional food loss and waste reduction programmes.

FAO welcomes partners – private or public – to join the Save Food Initiative and support its programme.

For more information check on:

www.save-food.org
www.fao.org/save-food



RECENT INITIATIVES WITH FAO PARTNERS

- *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 Interpack 2011 at the Düsseldorf exhibition centre (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.
- *Collaboration with the African Development Bank (AfDB) on an initiative to reduce post-harvest losses (PHL) in Africa, 2009–2011.* The collaboration was organized around two pillars: i) screening of AfDB's agricultural portfolio in order to identify opportunities for introducing PHL reduction activities in ongoing and planned operations; and ii) preparation of a programme framework document on PHL reduction in Africa to guide AfDB's investment decisions.
- *FAO/World Bank workshop on Reducing Post-Harvest Losses (PHL) in Grain Supply Chains in Africa, Rome, March 2009.* The meeting brought together experts to discuss the significance of PHL, past experiences in their reduction and future interventions in sub-Saharan Africa.
- *Seminar on Food Losses/Waste and Food Packaging, with ANDINA-PACK, Colombia, November 2011.* ANDINA-PACK is the largest marketplace for packaging technology in the Andean Region, Central America and the Caribbean.
- *Training on Horticultural Supply Chain Management to Reduce Losses, New Delhi, August 2011.* In partnership with the Asian Productivity Organization, 24 trainers from 13 Asian countries received this training.
- *FAO/UNEP Sustainable food systems programme.* The programme is implemented in partnership with other UN agencies and programmes, governments, civil society and the private sector through the Agri-Food Task Force on Sustainable Consumption and Production. It aims to promote and develop sustainable consumption and production, including reduction of food losses and waste.

For additional information on this work area contact:

Divine Njie

Rural Infrastructure and Agro-Industries Division

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

www.fao.org/ag/ags | Divine.Njie@fao.org

© FAO 2012

Cover photo: ©A.Termignone

Other photos:

Produce to be composted – ©J.Bloom

Ears of maize – ©FAO/S.Goodbody

Tomato vendors – ©FAO/G.Napolitano;

Grain silos – flickr/B. Emery

Small-scale factory – ©FAO/R.Faidutti

Potato – flickr/Dr Craig

