
Welcome!

PRESENTATION ON

"FOOD LOSSES AND FOOD WASTE"

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Introduction

- According to FAO, almost one-third of food produced for human consumption – approximately 1.3 billion tonnes per year, is either lost or wasted globally.

- The issue of food losses is of high importance in the efforts to combat hunger, raise income and improve food security in the world's poorest countries.

- Food losses have an impact on food security for poor people, on food quality and safety, on economic development and on the environment.

- The exact causes of food losses vary throughout the world and are very much dependent on the specific conditions and local situation in a given country.

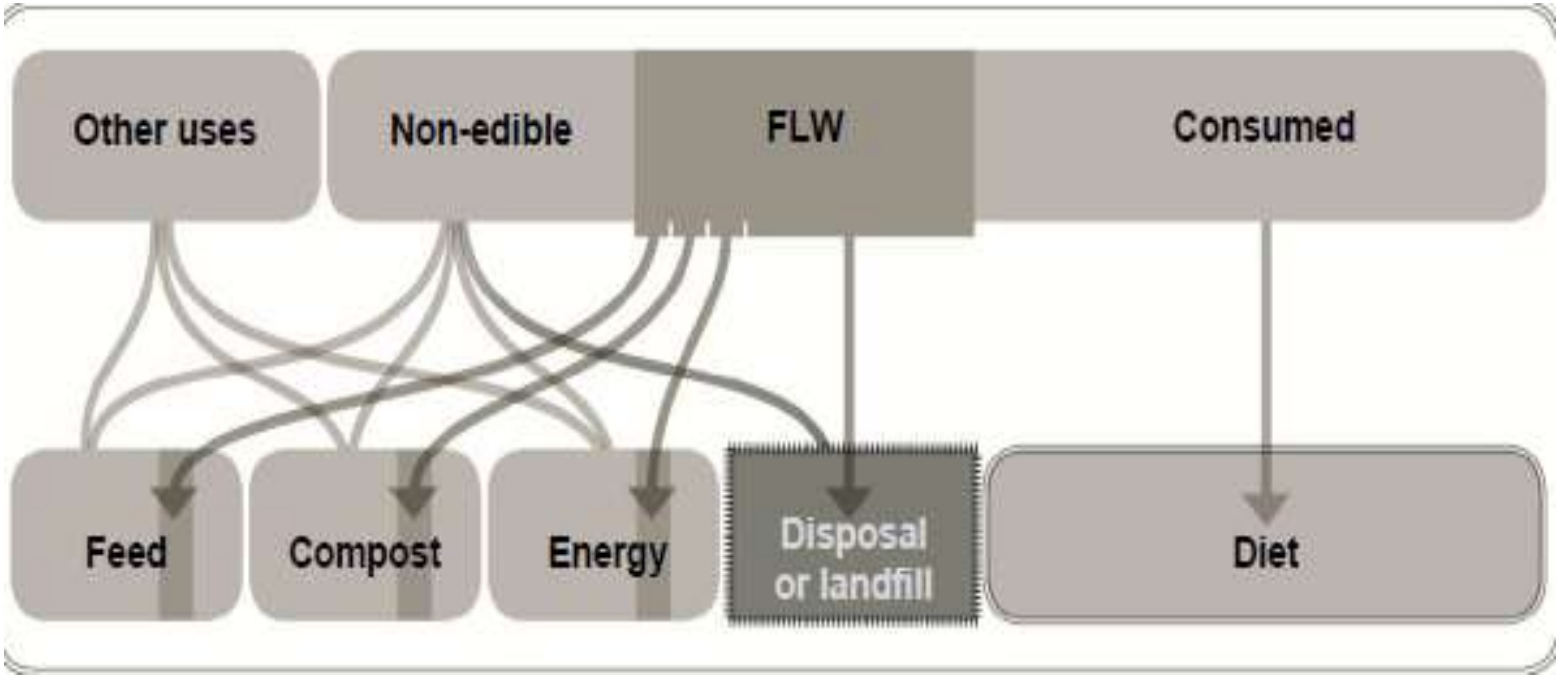
What is Food Loss and Food Waste ?

Food loss is defined as “the decrease in quantity or quality of food” and are the agricultural or fisheries products intended for human consumption that are ultimately not eaten by people or that have incurred a reduction in quality reflected in their nutritional value, economic value or food safety.

Food waste, which refers to the discarding or alternative use of food that was fit for human consumption – by choice or after the food has been left to spoil or expire as a result of negligence.

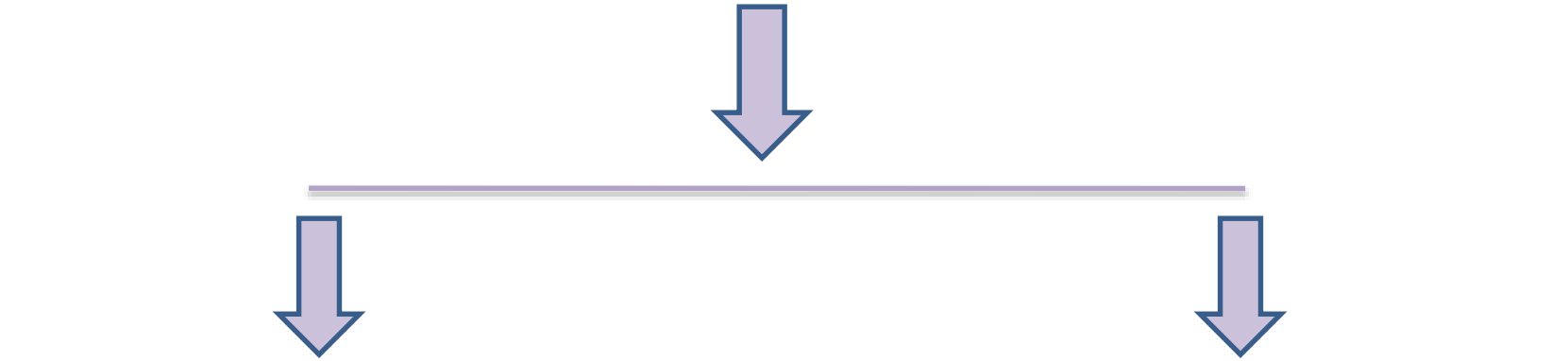
Schematic Representation of agricultural production and its distribution

Production



Distribution

TYPES OF FOOD LOSSES / WASTE



Vegetable commodities and products

- Agricultural production
- Post– harvest handling and storage
- Processing
- Distribution
- Consumption

Animal commodities and products

- Agricultural production
- Post– harvest handling and storage
- Processing
- Distribution
- Consumption

Types of Food Losses / Waste

➢Vegetable commodities and products:

• **Agricultural production:** losses due to mechanical damage and/or spillage during harvest operation.

• **Post-harvest handling and storage:** including losses due to spillage and degradation during handling, storage and transportation between farm and distribution.

• **Processing:** including losses due to spillage and degradation during industrial or domestic processing.

• **Distribution:** including losses and waste in the market system.

• **Consumption:** including losses and waste during consumption at the household level.

➢Animal commodities and products:

•**Agricultural production:** for bovine, pork and poultry meat, losses refer to animal death during breeding. For fish, losses refer to discards during fishing. For milk, losses refer to decreased milk production due to dairy cow sickness.

•**Post-harvest handling and storage:** losses refer to death during transport to slaughter and condemnation at slaughterhouse. For fish, spillage and degradation during icing, packaging, storage and transportation after landing. For milk, spillage and degradation during transportation between farm and distribution.

•**Processing:** for bovine, pork and poultry meat, losses refer to trimming spillage during slaughtering and additional industrial processing, e.g. sausage production. For fish, losses refer to industrial processing such as canning. For milk, losses refer to spillage during industrial milk treatment and milk processing to, e.g., cheese and yoghurt.

•**Distribution:** includes losses and waste in the market system.

•**Consumption:** includes losses and waste at the household level.

Extent of Food Losses and Waste

- Roughly one-third of the edible parts of food produced for human consumption, gets lost or wasted globally, which is about 1.3 billion ton per year.

- Studies commissioned by FAO estimated yearly global food loss and waste by quantity at roughly 30 percent of cereals, 40 –50 percent of root crops, fruits and vegetables, 20 percent of oilseeds, meat and dairy products, and 35 percent of fish.

- In **medium- and high-income** countries food is to a great extent wasted, meaning that it is thrown away even if it is still suitable for human consumption.

➢In **low-income countries** food is mainly lost during the early and middle stages of the food supply chain; much less food is wasted at the consumer level.

➢Food losses in industrialized countries are as high as in developing countries, but in developing countries more than 40% of the food losses occur at post-harvest and processing levels, while in industrialized countries, more than 40% of the food losses occur at retail and consumer levels.

Factors responsible for Food Losses and Food Waste

Specific conditions and local situation in a given country or culture are:

➢ In **low-income countries** food loss results from wide-ranging managerial and technical limitations in :

- Harvesting techniques
- Storage
- Transportation
- Processing
- Cooling facilities
- Infrastructure
- Packaging
- Marketing systems

➢The main sectors of concern are small- and medium-scale fisheries, agricultural production and processing.

➢Social and cultural conditions

• In rural settings, while women are often the main actors in agriculture, post-harvest handling and marketing, social barriers may block their involvement in other stages of the chain.

• The difficulties that women face in obtaining access to and benefits from resources, services, jobs and income-generating activities affect their productivity and efficiency in food production and can lead to food loss.

➢The causes of food waste in **medium- and high-income countries** relate mainly to :-

•Consumer behaviour

•Policies and regulations

For example,

• Agricultural subsidies may contribute to the production of surplus quantities of farm crops, of which at least a proportion is lost or wasted.

•Food safety and quality standards can be applied in ways that remove food that is still safe for human consumption from the food supply chain.

•At the consumer level, inadequate planning of purchases and failure to use food before its expiry date also lead to avoidable food waste.

Impacts of Food Losses and Food Waste

➢Negative environmental impacts :

•Because of the water, land, energy and other natural resources used to produce food that no one consumes.

•The size of the impact increases with the level of processing and refining of the food products.

•Generally, lower losses are associated with higher efficiency in the food supply, and eventually with more effective recycling of resources, lower storage needs, shorter transport distances, and less energy use.

➢Food insecurity:

•The non-productive use of natural resources such as land and water that results from food loss and waste has repercussions on hunger and poverty alleviation, nutrition, income generation and economic growth.

•In the subsistence farming systems of poor smallholder producers, quantitative losses result directly in less food being available.

•Women farmers and young children in many developing countries are particularly likely to suffer this impact, as they often have less access than other groups to appropriate technologies, infrastructure, storage facilities and markets.

➢ Reduced nutritional status:

• Qualitative food loss may cause reduced nutritional status, while low-quality products may also be unsafe because of their adverse effects on the health, well-being and productivity of consumers.

➢ Loss of economic value:

• Food loss represents a loss of economic value for actors in the food production and supply chains.

➢ Affect food availability and prices:

• Food commodities traded on international markets and wasted in one part of the world could affect food availability and prices in other parts.

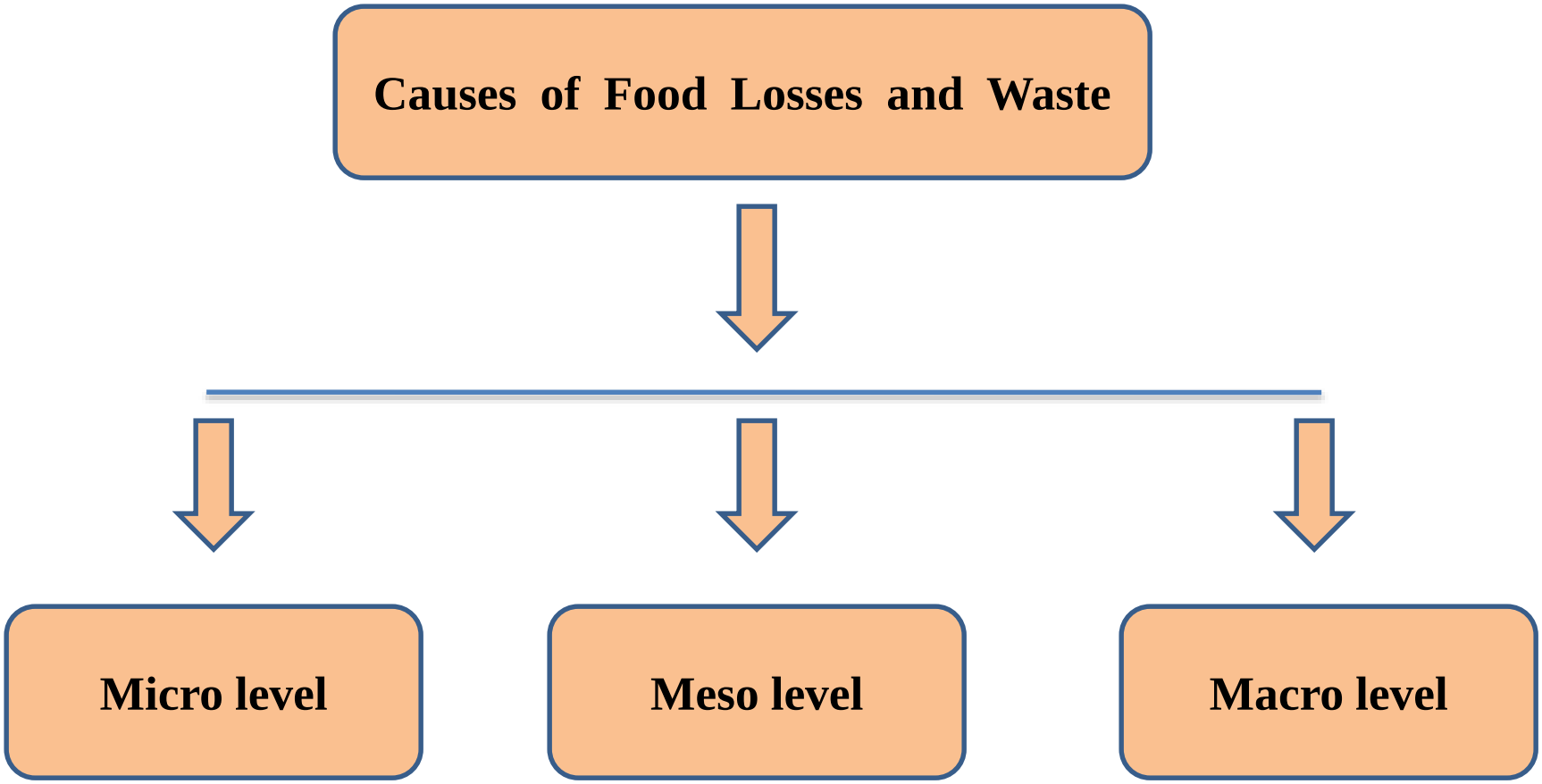
➢**Sustainability of food systems:** The sustainability of food systems is a condition for them to ensure food security now and on the long term .

FLW also impact the sustainability of food systems in all the three dimensions:

•**Economic:** They induce economic losses and reduce return on investments.

• **Social:** They impede development and hinder social progress.

•**Environmental:** The superfluous use of resources used to produce the food lost and wasted. The local and global environmental impacts of putting food waste at disposal in landfills.


Causes of Food Losses and Waste
Micro level
Meso level
Macro level

Micro Level Causes of Food Losses and Waste

Micro-level causes can be found all along the food chain, and are the direct, immediate reasons for FLW taking place at a certain point of the chain:

- Poor harvest scheduling and timing, and rough, careless handling of the produce.
- Inadequate or lack of storage conditions for perishable products, poor temperature management.
- Transport: Time span between production and consumption for fresh products bring additional risks of mechanical and heat injury.
- Processing and packaging.

➢Conditions within the retail outlet and handling practices have an effect on quality, shelf-life and acceptability of the product.

➢Consumer behaviour:

•Habits of food buying, preparation and consumption, as well as time planning and coordination.

•They are influenced by marketing techniques which encourage consumers to buy more than they need.

Meso Level Causes of Food Losses and Waste

- Lack of support to actors for investments and good practices
- Lack of private and public infrastructure for well-functioning food chains
- Poor transport infrastructure
- Lack of integrated food chain approaches and management
- Confusion around food date labelling.

Macro Level Causes of Food Losses and Waste

➢ **Impact of policies, laws and regulations on FLW:**

•Food safety schemes

•Agricultural investment policies, including training and extension

•Animal feed regulations

•Waste disposal policies

➢ **Systemic causes :**

•It includes the absence of a good, enabling environment to support coordination between actors, investment and improvement of practices.

•Inadequate information and bad anticipation of market conditions.

Strategies for Reducing Food Losses and Waste

➢ Micro solutions to reduce food losses and waste:

• At harvest and post-harvest stages involve improved practices, adoption of technical innovations, investments, or a combination of these.

• Improve storage conditions.

• Modifying consumers' behaviour.

• Requires the support and cooperation of the food industry and retailing to ensure that an appropriate range of pack or portion sizes is available to meet the needs of different households.

• Private investments in production, postharvest, businesses and food services.

➢ Meso- level solutions

•Adopt a food chain approach to FLW reduction actions.

•Investment in food processing infrastructure.

•Invest in adapted cold chain developments.

•Develop food processing.

•Ensure proper capacity building, education, training and extension services.

•Unleash the crucial role of women to reduce FLW.

•Allow a role for corporate social responsibility.

•Promote consumer behaviour change.

•Valorize by-products, side streams and non-used food.

➢**Macro-level solutions**

•Solutions at micro or meso-level can be enabled, supported and enhanced by action at macro-level.

•This includes specific policies against FLW.

•Improving infrastructures, particularly transport, energy and market facilities.

•Requires government action, with often involvement of local authorities and also of the private sector.

•Raising awareness among the consumers

•Support to financial mechanisms, infrastructure and proper incentives.

The Role of Producer Organizations in Reducing Food Losses and Waste

FAO has been working closely with various forms of producer organizations. The role of producer organizations in reducing food loss and waste

- Sustained dialogue with buyers
- Coordination of supply to the market
- Coordination of financial service provision to avoid premature harvesting
- Organizational innovations for low-cost value addition
- Improved storage facilities, infrastructure and cold chains
- Capacity building in food standards

Conclusion

The attention given to the above topic is driven by two main categories of concerns.

➢A concern related to food insecurity and hunger:

•The extent of FLW while more than 800 million people still suffer from hunger seems to indicate that something is wrong, that food systems do not function as they should.

•This perception includes a moral dimension, with various estimates of the number of people who could be fed with what is lost, discarded or wasted – although there is no proven direct link between the incidence of global FLW and the extent of global food insecurity.

- A concern related to the impact of FLW on natural resources and the environment.

- Food-related waste, as part of urban total waste, has a significant greenhouse gas footprint.

- People should be made aware about the level of food losses and its consequences.

- Food which is wasted can be directed for making compost and other purposes.

- Government should take measures to supply extra food to poor and needy.


Thank You