



# Agribusiness, best practices from the supply chain to prevent food waste

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Food and Agriculture  
Organization of the  
United Nations

SUSTAINABLE  
DEVELOPMENT  
GOALS

# How Much Food is **Lost** or **Wasted** Globally?

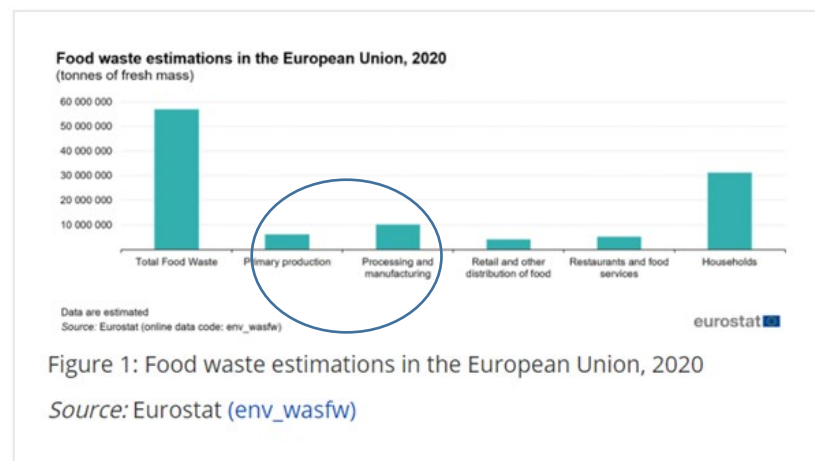


An estimated **17% of total global food supply is wasted** (11% in households, 5% in food service and 2% in retail).  
(*UNEP, 2021*)

- Food waste is largely a behavioural issue
- A majority of food waste takes place in households

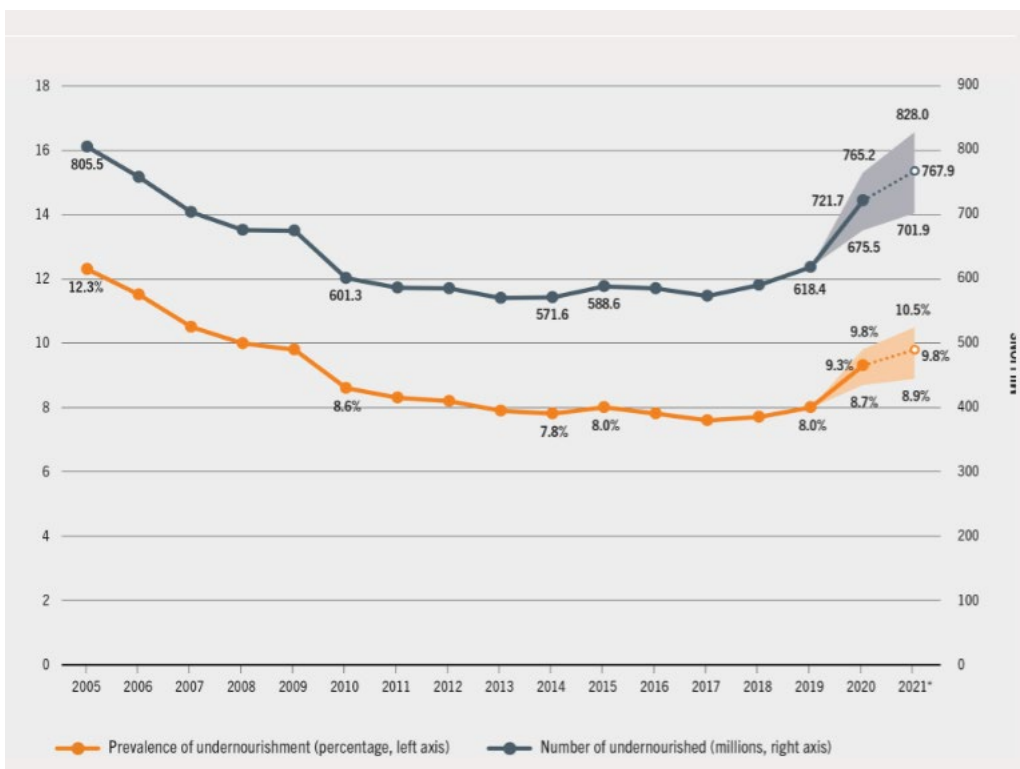
Almost **14% of total food production** is lost globally prior to reaching the retail stage.

- According to Eurostat, primary production losses are comparable to and processing losses are higher than waste of the food service sector



# The Global Context: Hunger and Food prices keep rising

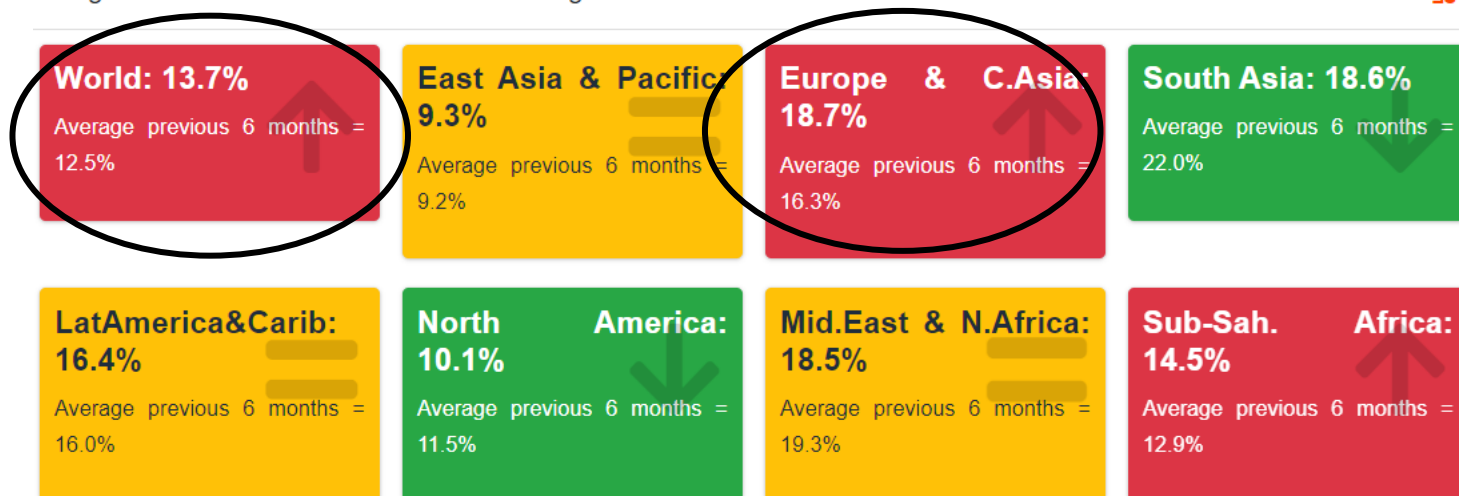
## Prevalence and number of undernourished



Source: State of Food Insecurity 2022

## Food CPI by region – annual trends and nowcast in January 2023

### Regional Food Consumer Price Index average variations



Source: Food prices monitoring & nowcasting, , FAO Data Lab, 8 January-2023

# The **Global Context:** Climate Change is affecting Food systems through Production, Supply and Prices

**Changes in agro-ecological conditions** are giving rise to:

- New pests and diseases that reduce crop yields, contribute to field level losses and potentially to nutrient losses.
- Increased infestations in stored crops with potential impacts on human health.
- Poor quality food with lower consumer acceptance, resulting in food waste.



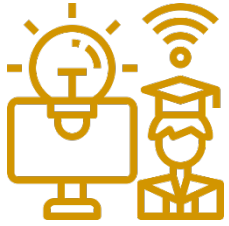
*Maize damaged by the fall armyworm.*



## **Extreme weather events:**

- Affect delivery, resulting in food loss due to spoilage.
- Reduce food availability and affordability





# Building Resilience in Agrifood Systems

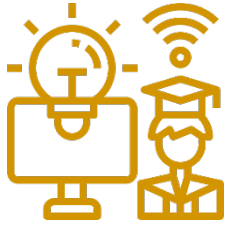
In a world where

- FLW affect the three dimensions of sustainability and all the stages of a food chain
- the issue can only be addressed through **transforming agri-food systems** to improve their efficiency, sustainability, resilience and inclusiveness



**Climate-friendly strategies to reducing FLW can include:**

- Circular models and strategies - e.g. food redistribution, improved waste management, ..
- Climate-friendly technologies and innovations - e.g. apps that enhance supply chain efficiency;
- Coordination among supply chain stakeholders is key



# Upcycling of unavoidable food waste to food products: An economic case for FW Reduction

## Financial Benefit

- The food processing industry benefits through value creation

## Societal Benefit

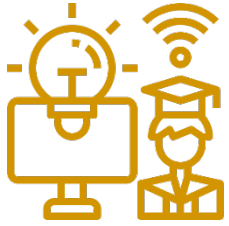
- New products for the food and health sectors, produced from unavoidable organic waste streams.

## Environmental Benefit

- Cleaner environment

Dietary fiber and novel protein ingredients are two areas where upcycling has created environmentally friendly and nutritious ingredients.

<https://www.ift.org/news-and-publications/food-technology-magazine/issues/2022/november/columns/nutraceuticals-less-waste-more-health>



# Digital Innovations for agri-food systems

Modern Supply Chains  
& Export

## Technology

## Purpose

Food-sensing  
technologies

Improve food safety, quality,  
traceability

Blockchain

Enhance traceability

Internet of Things

Add real-time transparency and  
traceability

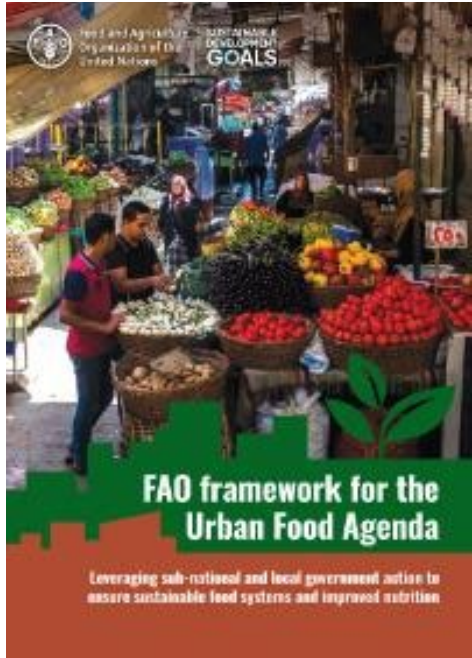
Mobile service delivery

Reduce food loss



Traditional Supply  
Chains

# Building Resilience in Agrifood Systems



In world where 70 % of the population will live in cities by 2050 a radical re-thinking of food systems is necessary



FAO developed a framework for a new **Urban Food Agenda**

- How food is produced, processed, packaged, transported, marketed and consumed
- How food waste is handled and recycled

**City to City** exchange of knowledge and experiences to:

Integrate Food Waste management within Nairobi and Kigali food strategies

- Improve capacities of public and private actors at city level on food waste reduction, and management (e.g. training market operators and Kenya's Environmental Authorities)
  - Pilot food waste composting within market areas
  - Pilot actions for food waste recovery and redistribution from markets



City to city exchange Kigali- Nairobi- Milan



# Awareness Raising is Critical in tackling FLW in urban contexts

Promoting awareness about FLW, the causes, impacts and actions that can be taken to reduce FLW are critical in helping to stem the problem

