

## Food Loss and Waste (FLW)

### Why in News?

The United Nations has designated September 29 as the International Day of Awareness of Food Loss and Waste (FLW).

#### Status of Food loss and waste (FLW) at Global

- Food loss and waste (FLW), amounts to about 30 % of the global production.
  - **13.2 %** of global food production is lost between harvest and retail.
  - **17 %** of food is wasted between retail and feeding people.

#### Status of Food loss and waste (FLW) at India

- All-India post-harvest loss survey by NABCONS, 2022.
- **Highest percentage of food losses**
  - Fruits - 8.1%
  - Vegetables - 7.27%
  - Plantation crops - 7.18%
- **Other Crops**
  - Livestock produce - 1.29%
  - Cereals - 4.44%
  - Oilseeds - 5.66%
  - Eggs - 6.03%
  - Pulses - 6.36%

### What are the Causes of Food Loss and Waste (FLW)?

- Food loss largely occurs during harvesting, threshing, drying and storage stages, predominantly due to low levels of mechanisation and inadequate logistics infrastructure.
- **Inadequate Cold Chain Infrastructure** - Around 49.9 MMT of horticultural crops are lost annually due to poor cold chain infrastructure.
- **Inadequate Storage Infrastructure** - Post-harvest losses account for approximately 10 % of total food grain production due to poor and inadequate storage infrastructure.
- **Drawbacks of Jute bag** - Jute is water and labour-intensive crop, and its use leads to frequent rodent attacks and pilferage in tropical climates.

*The Jute Packaging Material Act (JPMA, 1987) mandates using jute bags for packaging 100% foodgrains and 20% of sugar.*

- **Low Mechanization** - Only 4.4 % of cultivator households in India owned tractors, and a mere 5.3 % owned either power tillers, combine harvesters, or threshers.
- **High Cost of Machines** - Small and marginal farmers often cannot afford to buy costly machines.

*Small and marginal farmers constitute over 86 % of Indian agricultural households.*

- **Regional Inequality** - 97 % of paddy-producing households use combine harvesters in Punjab, whereas It is only 10 % in Bihar.
- **Ineffective Traditional Methods** - Traditional sun drying methods are fraught with risks, like addition of foreign matters, uneven drying, and exposure to moisture, which can lead to mycotoxin contamination.
- **Cultural Factors** - Most of the Indian Socio and Religious events are associated with food feast with high food wastes.

### **What are Impacts of Food Loss and Waste?**

- **Affects Global Food Systems** - Food loss and waste Threatens the sustainability of our food systems.
- **Disturbs Food Security** - Food loss and waste negatively affect food security by reducing the availability of fresh produce.
- **Affects Health**- Reduced availability and Increased cost makes the vulnerable people to reduce their consumption and take low quality less nutritional food.
- **Increases food cost** - Reduction in food availability increases the cost of food.
- **Wastage of Resources** - When food is wasted, all the resources that were used to produce this food – including water, land, energy, labour and capital – go to waste.
- Agriculture consumes nearly 70%of the world’s freshwater, and when food is lost, so are critical water resources.
- **GHG Emission** - Disposal of food loss and waste in landfills leads to greenhouse gas emissions, contributing to climate change.
- Food loss alone accounts for 6% of global emissions.
- **Economic Loss** - The total monetary value of food lost is close to ₹1.52 lakh crore (\$18.41 billion), which is about 3.7% of the gross value added (Agri GVA) to the agricultural sector in the country.
- **Reduces Farmers Income** - Loss of quality results in lower price for produce and wastage of produce is loss of income potential for farmers.

### **What are the benefits of reducing food wastes?**

- **Reduced greenhouse gas emissions** - Reducing FLW by at least 50 %, help reduce at least 8 to 10 % of the world’s greenhouse gas (GHG) emissions
- **Conserved resources** - By reducing waste, we conserve valuable resources like water, land, and energy.
  - Reducing FLW by at least 50 %, help reduce 38 % of total energy usage.
- **Waste Management** - By reducing food waste, the amount of waste that ends up in landfills can be decreased to improve our environment and public health.
- **Preserved biodiversity** - Reducing waste can help protect ecosystems and species.
- **Cost savings** - Households, businesses, and communities can save money by reducing food waste.
- **Increased food security** - Reducing the food wastage will benefit the 700 million people suffering from hunger and reduce the cost of food.

- **Enhanced agricultural profitability** - By reducing waste, farmers and food producers can improve their profitability and financial stability.
- **Achieving SDG 12** - Reducing food waste helps in achieving UN Sustainable Development Goal (SDG) targets 12.3.1 (halving food loss) and 12.3.2 (halving food waste).

*Sustainable Development Goal 12 is Responsible consumption and production.*

- **Improved health** - Reducing food waste can lead to healthier diets as people have access to a wider variety of fresh, nutritious foods.

### **What are the measures taken by the Government?**

- Government has taken measures for the modernization of Agri systems thorough out the supply chain.
- **Improving Storage** - Government of India has launched a major grain storage plan to expand the storage capacity by 70 MMT over the next five years.
- If implemented properly, it holds the potential to reduce post-harvest losses at the storage level.
- **Improving logistics and cold chain infrastructure** - Pradhan Mantri Kisan Sampada Yojana (PMKSY) provides subsidies for the transportation/storage of eligible crops.
- Integrated Cold Chain and Value Addition Infrastructure scheme promotes cold chain facilities without any break from the farm gate to the consumer.
- **Enhancing Rural Infrastructure** - Rural Godown Scheme specifically focuses on improvement in storage infrastructure in rural and remote areas to reduce storage losses.
- **Conducting Studies** - FAO in collaboration with the National Institute of Food Technology, Entrepreneurship and Management (NIFTEM), is undertaking a study to enhance India's agrifood resilience.
- It will identify points of loss within the food supply chain, quantifying the losses, and evaluating the greenhouse gas (GHG) emissions resulting from food loss.

### **What lies ahead?**

- Enhancing technological interventions across the value-chain to prevent food loss between harvest and retail.
- Use combined harvesters to reduce paddy losses compared to those relying on traditional manual methods.

*Overall loss in paddy drops to just 2.84 per cent if mechanisation in harvesting and drying is adopted at the farm.*

- Encourage Farmer Producer Organisations (FPOs) and Custom Hiring Centres (CHCs) to promote farm mechanisation through group leasing arrangements.

- Enhance the availability of proper drying , storage infrastructure, solar dryers and dehydrators to reduce losses and extend the shelf-life for perishables.
- Re-visit the Jute Packaging Material Act (JPMA, 1987) to allow the use of airtight bags to lower the storage and transit losses.
- Encourage community led initiatives like Zero food wastage initiative of Dana Committee by Dawoodi Bohras in Pune.

## References

1. [The Indian Express | What India can do to reduce food wastage](#)
2. [The Indian Express | Dana Committees](#)
3. [The Hindu | India must put the lid on colossal food loss and waste](#)

