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