UNIDO/UNEP Global Network for
Resource Efficient and Cleaner Production

SDG 12.3 and the Food Waste Index
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by
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FOOD LOSS & WASTE

- One third of food produced for human consumption
- 1.3 billion tonnes per year
- Valued at USD 990 billion
- While 821 million people are undernourished

Producing food that is lost/wasted requires: water, land, energy, labor and capital, uses inputs such as fertilizers and pesticides, and generates **8% of global greenhouse gas emissions.**

Curbing food loss and waste can help deliver multiple SDGs...

SDG 1 No Poverty / SDG 2 Zero Hunger: Reducing losses means that farmers have more food available for market and to feed themselves.

SDG 2 Zero Hunger: Improved storage and handling facilities help smooth seasonal shortfalls and preserve nutritional quality, thereby stabilizing food supplies.

SDG 15 Life on Land: Reducing food loss and waste reduces the need to convert more natural ecosystems into cropland or grazing pastures.

SDG 3 Good Health: Reducing quality losses means that food retains more nutritional value. Some food loss reduction practices, such as drying crops on tarps, can reduce the risk of contamination from aflatoxins.

SDG 14 Life under Water: Reducing food losses at sea means reducing bycatch. Wasted food uses significant amounts of fertilizers, which contribute to eutrophication caused by agricultural run-off.

SDG 3 Good Health/SDG 4 Quality Education/SDG 5 Gender Equality: Reducing food waste could reduce unnecessary household spending on food and free up money for health, education, and other household benefits.

SDG 13 Climate Action: Reducing food loss and waste reduces the amount of greenhouse gas emissions associated with clearing land, growing, processing, and disposing of food that is not eaten.

SDG 6 Clean Water and Sanitation: Better utilizing food already grown reduces pressure on freshwater consumption by agriculture and increases efficiency of water use.

SDG 12 Sustainable Consumption and Production: Meeting the food loss and waste reduction target would improve the sustainability of food consumption and production.

SDG 8 Decent Work and Economic Growth: Farmer income and prosperity can be increased when they reduce on-farm losses and thereby sell more food.

SDG 11 Sustainable Cities and Communities: Reducing food waste in landfills can reduce landfill disposal fees for households and local authorities. It also can enable cities to meet waste, sustainability, and hunger goals.

Source: WRI, 2019

…And raise ambition in the 2020 NDC revision

Article 4.2 "**Each Party** shall **prepare, communicate and maintain successive nationally determined contributions** that it intends to achieve. Parties shall **pursue domestic mitigation measures**, with the aim of achieving the objectives of such contributions."

Only 11 countries have Food Loss in their NDCs None mention Food Waste

Belize
Reduce **postharvest** losses and improve crop and livestock husbandry practices.

Ghana
Promote innovations in postharvest storage and food processing and forest products in 43 (out of 216) administrative districts.

Honduras
Improve storage, processing, and preservation systems of agricultural production.

Chad
Develop storage and conservation units to limit high postharvest losses as a cross-cutting priority to adapt to climate change.

Côte d'Ivoire
Develop efficient mechanization of agriculture and improvement of packaging, harvesting, and conservation infrastructure. Develop storage and conservation units to limit high postharvest losses.

Egypt
Establish logistics centers for grain trade and storage to help achieve food security.

Ethiopia
Improve traditional methods that prevent deterioration of food and feed in storage facilities in order to ensure a secure food supply in case of extreme weather events.

Bhutan
Promote climate-resilient agriculture and achieve food and nutrition security through establishing, among other things, cold-storage facilities at the subnational level.

Burkina Faso
Improve food processing and preservation methods.

Maldives
Establish food storage facilities and distribution centers to increase accessibility and reduce the risk of food shortages during extreme events.

Uganda
Expand postharvest handling and storage facilities and access to markets.

Sources: NDCs of the above countries (2016, 2017) accessed via Climate Watch (2019)

Food Loss and Waste in Climate Strategies

Generating 4.4 Gt CO2e (8% of GHG), food loss and waste has an important role to play in national and business climate strategies.

UNEP's new report with WWF, *Enhancing NDCs for Food Systems*, provides recommendations on how to raise climate ambition in the 2020 NDC revisions with FLW indicators, policies and interventions.

New UN Environment Assembly Resolution on Food Loss and Waste
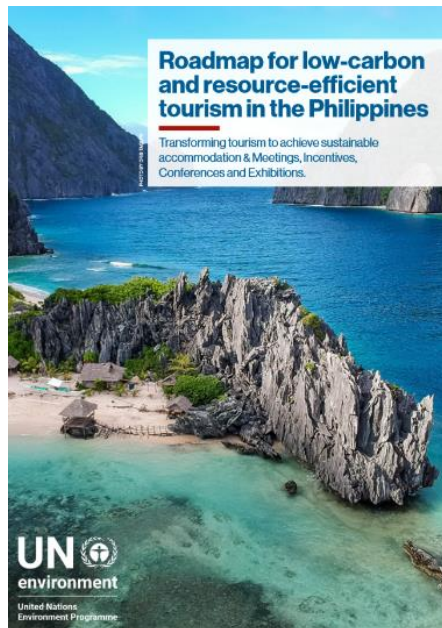

Urges governments & stakeholders to:

• Set national strategies to reduce FLW in line with SDG 12.3.

• Establish mechanisms for measurement

• Take action through policy, education & awareness-raising

• Promote dialogue & cooperation between private and public sectors across the value chain

• Promote research, best practice sharing and industry engagement around sustainable cooling and cold chain solutions

Snapshot of UNEP action on Food Loss & Waste

UNEP mandate: 2 UNEA Resolutions & custodian of food waste indicator for SDG Target 12.3

- Think Eat Save awareness campaign launched 2013
- Food waste prevention guidance for Countries & Companies published 2014, with FAO
- Founding member of high level coalition Champions 12.3, delivering SDG 12.3.
- Developing Food Waste Index

Roadmap for low-carbon and resource-efficient tourism in the Philippines

Transforming tourism to achieve sustainable accommodation & Meetings, Incentives, Conferences and Exhibitions.

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Prevention and reduction of food and drink waste in businesses and households

Guidance for governments, local authorities, businesses and other organisations
Version 1.0

- Regional capacity building workshops on FLW (Tokyo 2019, Riyadh, 2020)

- New Regional Working Groups on Food Waste Measurement

- New Sustainable Food City Partnership to be developed in Rio de Janeiro

- Modelling global cold chain capacity and needs

- Roadmaps for tourism sector/hotels to address food waste & plastics together

CHAMPIONS 12.3
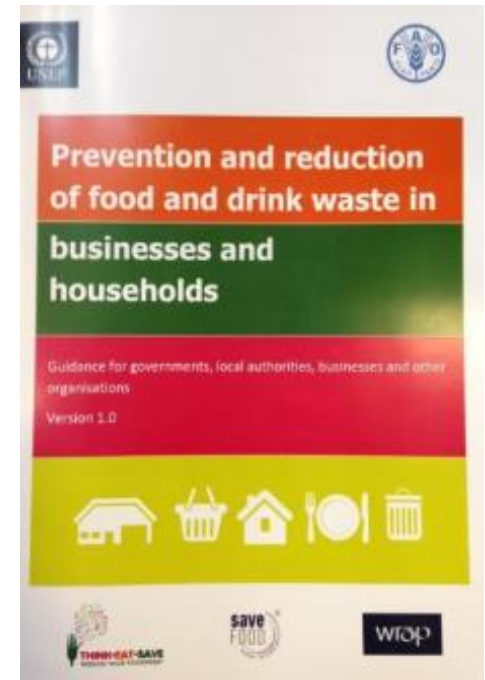
International Day of Awareness on Food Loss and Waste

"One of my fondest memories will stay those passed in the kitchen with **my grandmother Ancella.** That is where I learnt to look at ingredients with different eyes. The challenge is to think about, for example, an apple or a banana beyond the bruises: they can still be **tasty recipes made with leftover ingredients.** Passatelli is one that anyone can easily replicaate at home. **Passatelli is a traditional Modenese pasta made from breadcrumbs** that my grandmother Ancella used to make for my family. I learned from her and now I love making it for my family" – **Massimo Bottura, Italian Chef and owner of Osteria Francescana, Founder of Food for Soul**

Check **#KitchenMemories** for more tips and recipes

Introducing UNEP new Goodwill Ambassador and the Kitchen Memories campaign. Chef Massimo Bottura

Resource Efficiency policies applied on food systems can save $252 billion in land use by 2030.

#FLWDay

REDUCING FOOD WASTE AND LOSS IS GOOD FOR

Climate   Ecosystems   Biodiversity

#FLWDay

STOP FOOD WASTE

#FLWDay

Tracking Progress on SDG 12.3

Custodians of 12.3 indicators: FAO & UNEP

Food Loss Index- focus on supply

12.3.1 **Food Loss**

"By 2030, ...

12.3

"...reduce food losses along production and supply chains, including post-harvest losses."
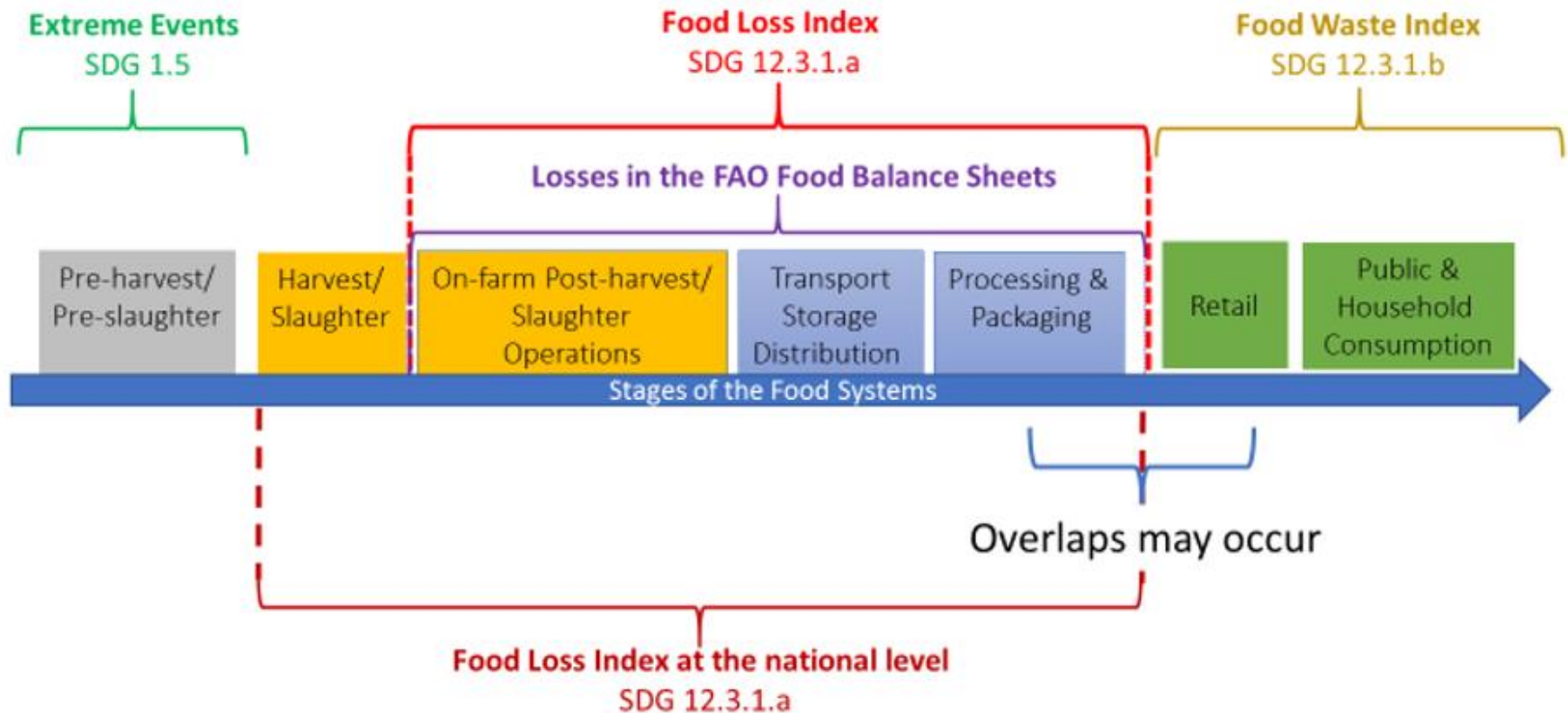
12.3.2 **Food Waste**

Food Waste Index- focus on demand

"...halve per capita global food waste at the retail and consumer levels."

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Interactions between SDG 12.3.1.a and 12.3.1.b

Extreme Events SDG 1.5

Food Loss Index SDG 12.3.1.a

Food Waste Index SDG 12.3.1.b

Losses in the FAO Food Balance Sheets

Pre-harvest/ Pre-slaughter | Harvest/ Slaughter | On-farm Post-harvest/ Slaughter Operations | Transport Storage Distribution | Processing & Packaging | Retail | Public & Household Consumption

Stages of the Food Systems

Overlaps may occur

Food Loss Index at the national level SDG 12.3.1.a

Scope

Lifecycle stage: retail and household
Countries can also report manufacturing, food service, & out-of-home consumer food waste
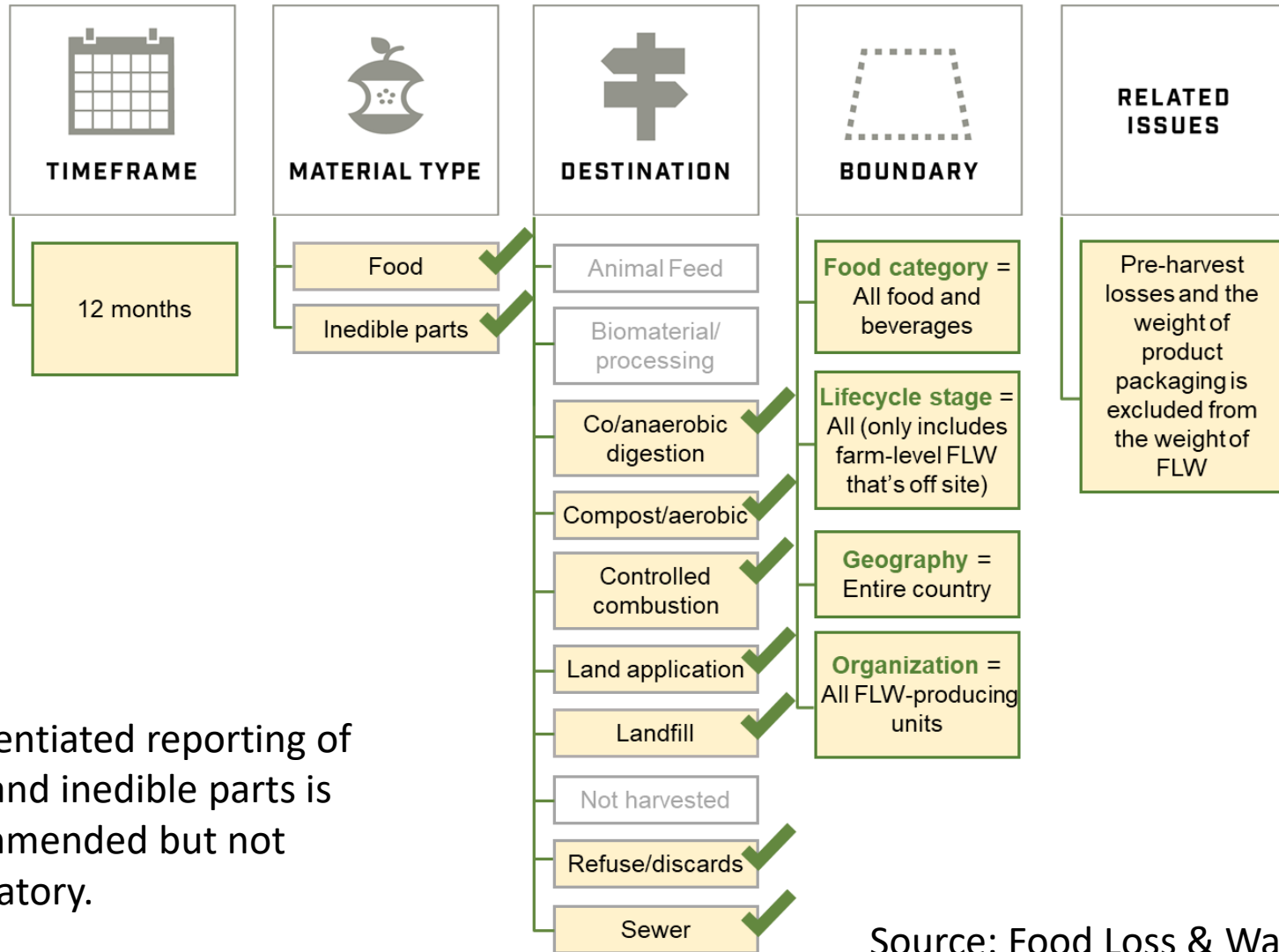
Differentiated reporting of food and inedible parts is recommended but not mandatory.

Source: Food Loss & Waste Protocol

Food Waste Index

The Food Waste Index has a three-level methodology, increasing in accuracy and usefulness of data, but also increasing in the resources required.

- Level 1 is a modelling approach, undertaken by UNEP, that will provide approximate estimates of food waste using best available data and regional extrapolation, providing insight into the scale of food waste at country level, but insufficiently accurate to track food waste over time.
- **Level 2 is the recommended approach for countries**. It involves measurement of food waste levels in the relevant sectors, with sufficient accuracy to evaluate progress towards SDG target 12.3. Methods for each sector are provided, alongside guidance and examples.
- Level 3 is the advanced option. It enables countries to report disaggregated information (by destination) and include destinations not included in Level 2 (sewer, home composting, animal feed and biochemical processing).

There is a significant lack of food waste data in developing and emerging economies

But emerging insights suggest per capita household food waste is comparable in developed and developing countries.

UNEP is currently modelling national food waste estimates for the first Food Waste Index report. We are aware of food waste data in Mexico, Brazil and Colombia.

2.5?   1.7   0.3   0.9   7.3

>10 million tonnes per year

Sample baseline
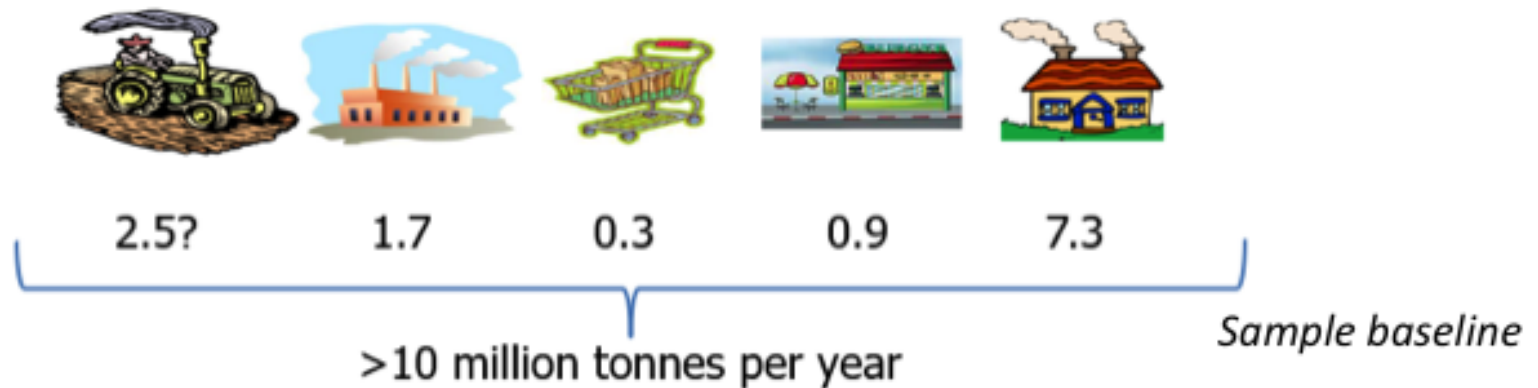
Please get in touch if your country has food waste data that we might have missed.

Thank you