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POLLUTION CONTROL DEPARTMENT

"Thai Strategy on Food Waste"

International Workshop on Food Loss and Waste Prevention targeting the Southeast and East Asian Region

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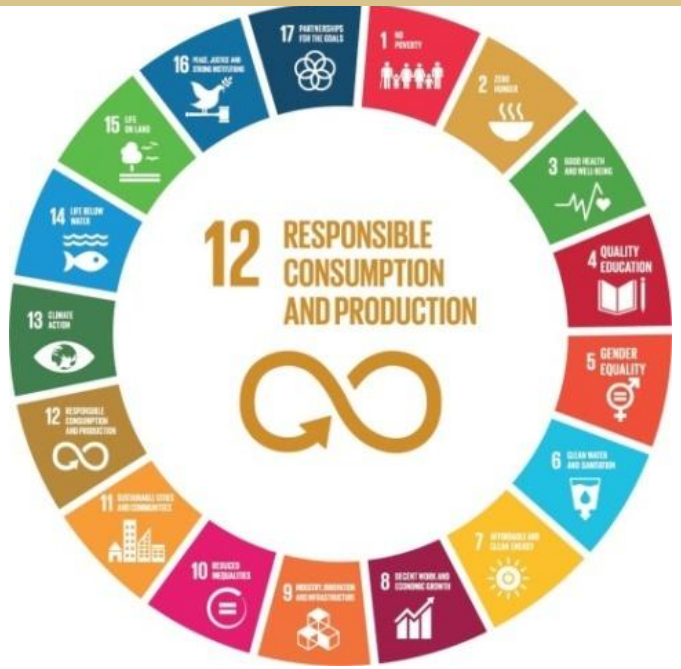
Anuda Tawatsin
Pollution Control Department, Ministry of Natural Resources and Environment
Thailand

Sustainable Development Goal 12.3

calls countries and companies to action:

*By 2030, halve per capita global food waste at the **retail and consumer level**s and reduce food losses along production and supply chains, including post-harvest losses.*



Food Supply Chain

World Resources Institute 2015

Food Loss	Food Waste
52 % (Global average)	46.7% (Global average)

12.3.1 Food Loss Index (FAO)	12.3.2 Food Waste (UN Environment)

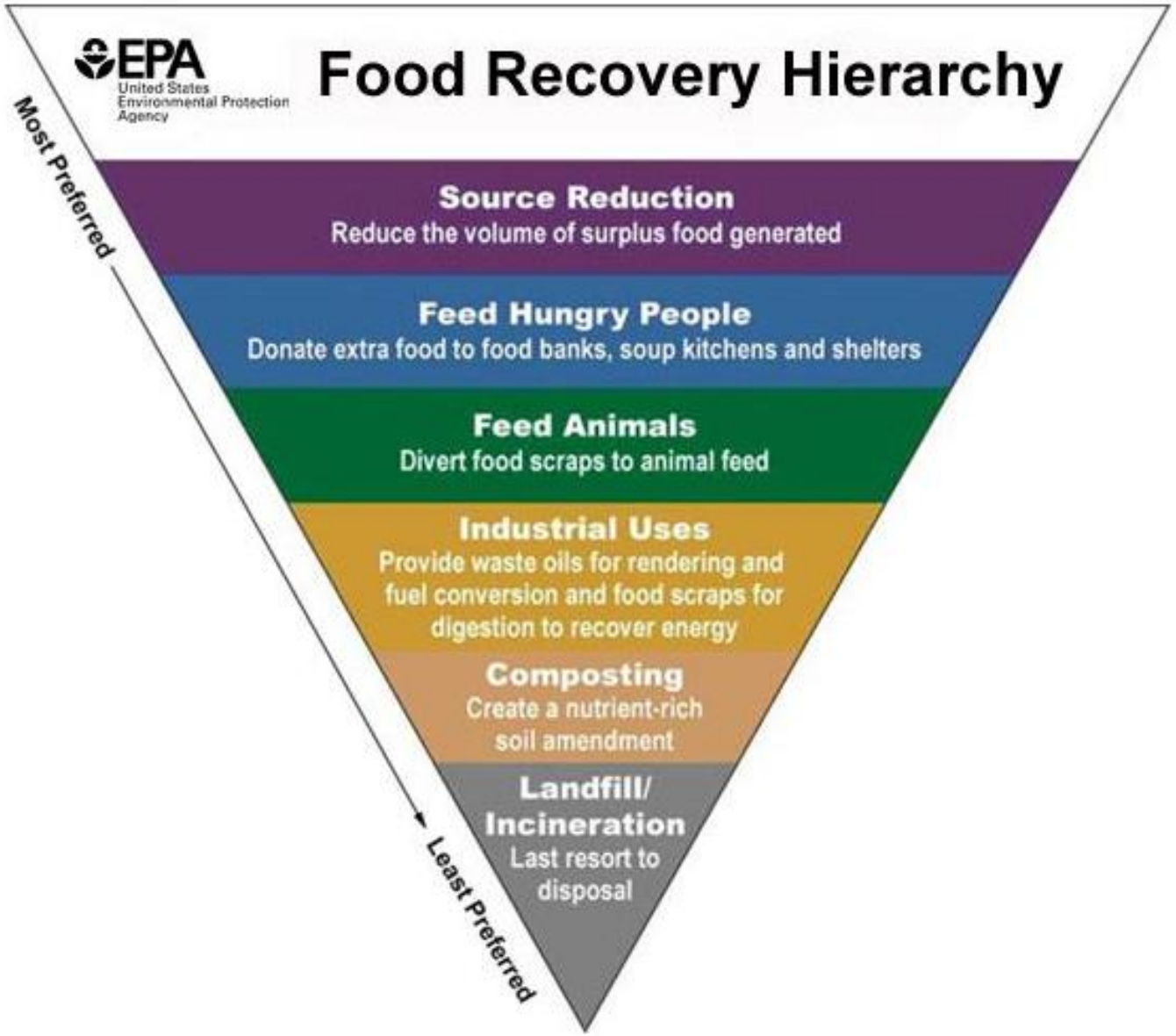
Scope for Food Waste Reduction in Thailand

Food Retail – Markets, Department stores, Supermarkets, Convenience stores

Food Service Providers – Hotels, Restaurants, Food courts, Canteens in various institutions

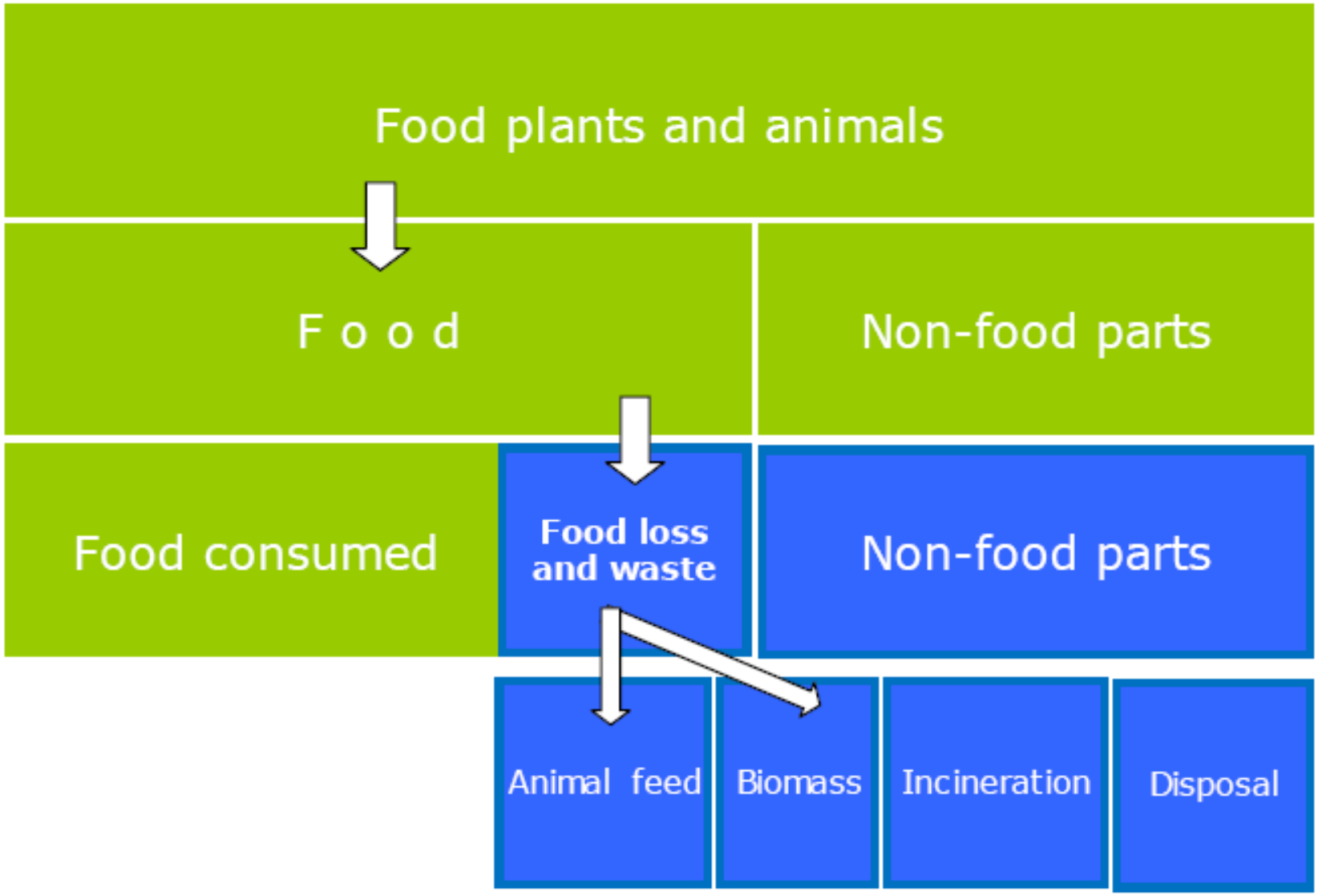
Consumers- Households and Temples

Food Recovery Hierarchy



US EPA, 2019

What is Food Waste?



FAO, 2014 and Food Loss and Waste Protocol 2016

Waste Management Situation in Thailand 2018

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Total Municipal Solid Waste

27.93 million tonnes/ year

35%

9.76 million tonnes/year Waste Utilisation

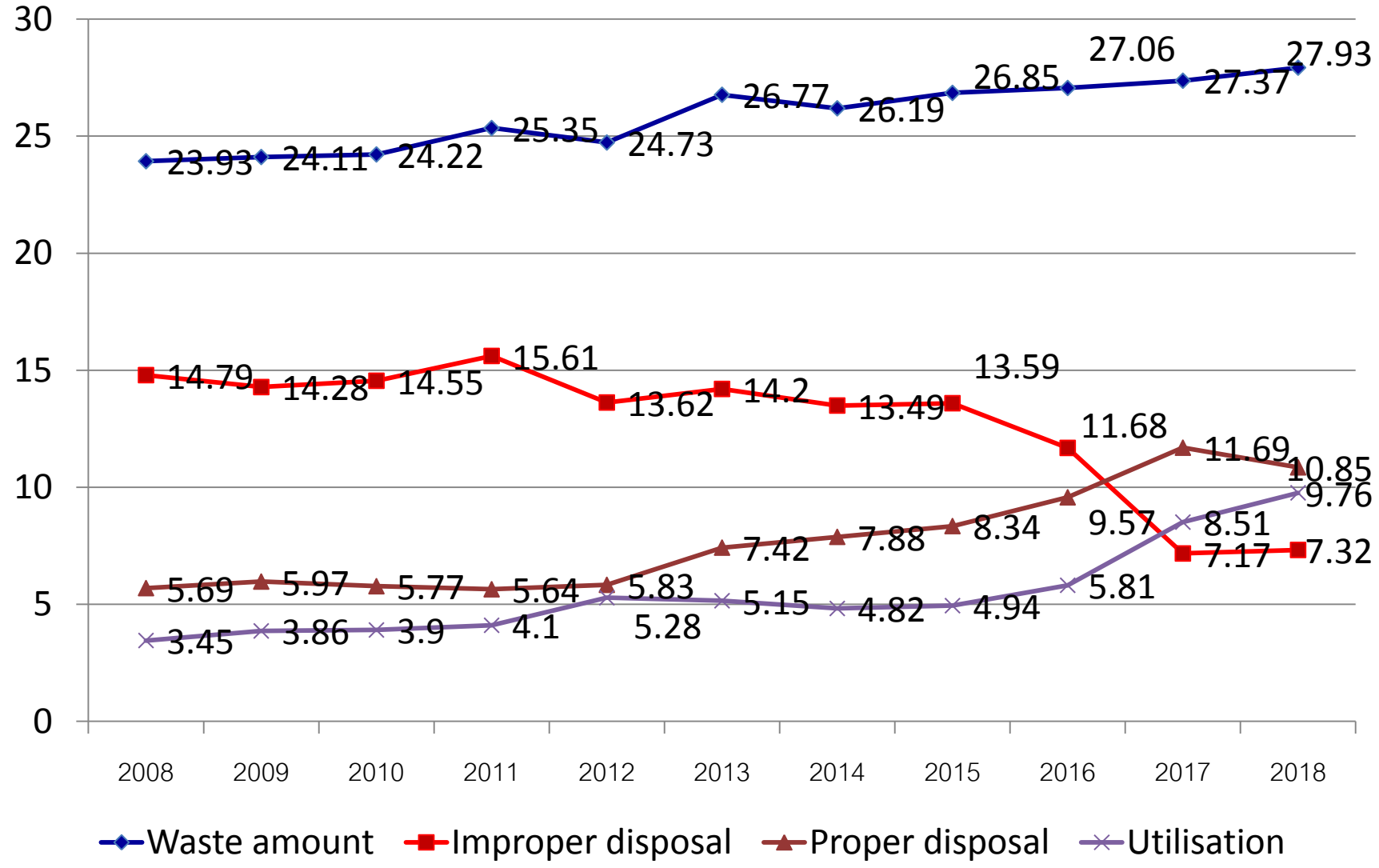
39%

10.85 million tonnes/year Disposed Properly

26%

7.32 million tonnes/year Disposed Improperly

Thailand MSW amount: 2008 – 2017 (million tonnes)



Waste Composition

Plastic 17%

Paper 8%

Glass 3%

Metal and aluminum 2%

Recyclable waste 30 % ---

Other 3 % ------

Household Hazardous waste 3 % -----

Organic Waste 64 % -

- **Garden Waste – leaves, grass, flowers, plant trimmings,…**
- **Kitchen Waste – Fruit/Veg peelings, egg shells, bones etc.**
- **Food Waste – Food for human consumption but discarded**

4 major cities in Thailand: Food waste and parts associated with food 33-50 %

TEI,2019

National Solid Waste Management Master Plan 2016- 2021

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Framework

- 3Rs concept (Reduce, Reuse, Recycle)

- Proper disposal methods, centralized facilities
  - waste utilization
  - waste to energy

- Participation from all sectors

Strategy

1. Source Reduction

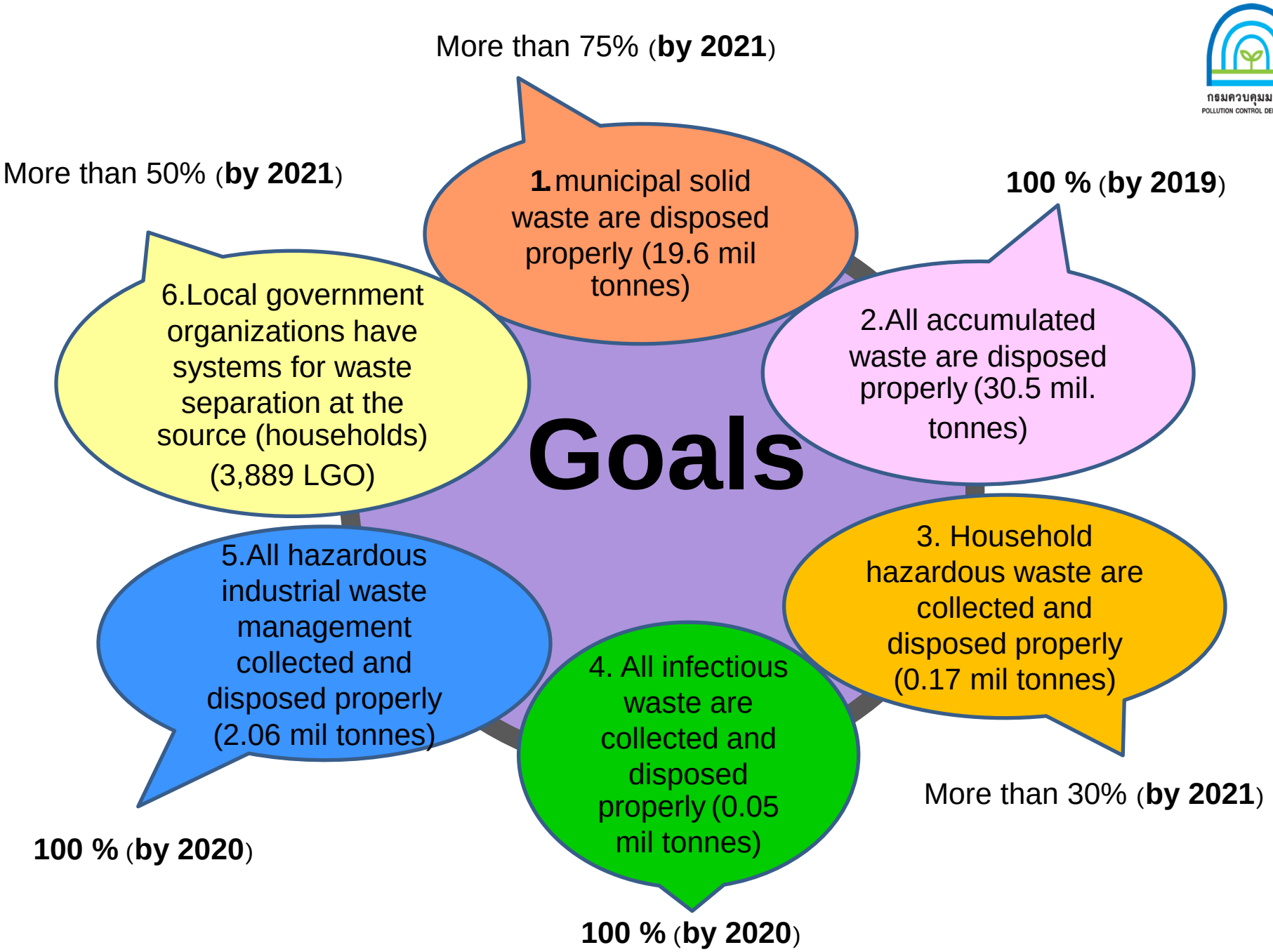
- Reuse and Recycling
- Sustainable Consumption and Production

2. Increase Capability

- Collection, Transportation, Treatment
- Centralized Facilities
- Law development and enforcement

3. Support Management

- Raise awareness and Instill Discipline
- Develop Knowledge
- Technology
- Data management
- Incentives
- Social and Economic Instruments


More than 75% (by 2021)
More than 50% (by 2021)
1. municipal solid waste are disposed properly (19.6 mil tonnes)
100 % (by 2019)
6.Local government organizations have systems for waste separation at the source (households) (3,889 LGO)
2.All accumulated waste are disposed properly (30.5 mil. tonnes)
Goals
5.All hazardous industrial waste management collected and disposed properly (2.06 mil tonnes)
3. Household hazardous waste are collected and disposed properly (0.17 mil tonnes)
4. All infectious waste are collected and disposed properly (0.05 mil tonnes)
More than 30% (by 2021)
100 % (by 2020)
100 % (by 2020)

Related Plans and Policies

Sustainable Consumption and Production Plan 2017-2038

17. Food Waste Reduction

Target 5% per year 2021-2030

Greenhouse Gas Reduction Action Plan for Municipal Waste Sector 2021-2030 (Strategy 2)

1.2 Organic Waste Reduction
2.2 Utilization of Organic Waste

Target 25% by 2025 and 50% by 2030

National Food Management Strategic Plan (II) 2018-2037

Target Reduce the amount of Food Loss and Waste

KPI - Food Waste data / Sub-Committee on Food Waste Reduction

Approaches to Food Waste Management

Food Waste

Prevention and Reduction

❖ **Most important**

Utilization

- Animal Feed
- Vermi-compost
- Compost
- Liquid Bio Compost
- Anaerobic Digestion

Treatment and Disposal

- MBT
- Compost
- Landfill
- Landfill gas

Food Retail

One leading supermarket with others following.

Implementation measures include

- Seasonal planning with food producers
- Ugly produce
- Transportation improvements
- Setting goals within the company
- Price reduction for prepared food in the evenings
- Food Surplus Sharing with SOS
- Composting
- Animal Feed
- Public Campaigns and Outreach
- Wholesale: call on regular customers

Food Service Providers

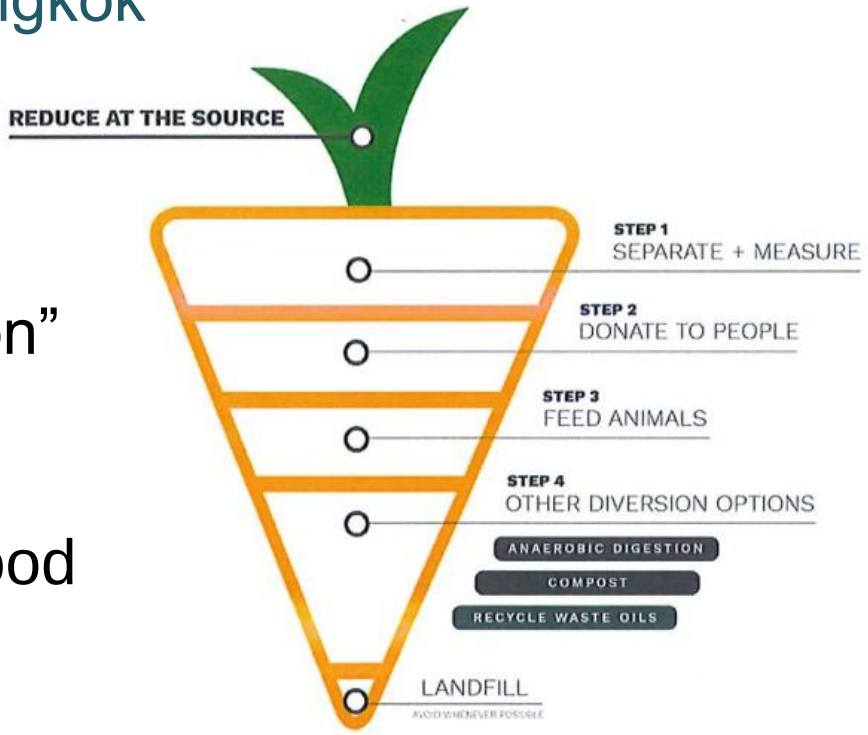
Many Hotels have started.

Average FW: 98.51 g/customer
Breakfast Buffet: 135 g/customer
Thailand Research Fund, 2018

Sampran Riverside
Centara Grand at Central World
Marriott Marquis Queen's Park Bangkok

Implementation measures include;

- Sustainable Policy
- Setting goals and targets
- "Pledge on Food Waste Certification"
- Staff Training
- Measurement and monitoring
- Creative use of food surplus and food waste
- Customer and Public Outreach



Thailand Convention and Exhibition Bureau –TCEB
Pacific Asia Travel Association - PATA

Canteens

ESCAP

- 2017 Week Random FW sampling 58 g/customer

Pollution Control Department PCD

- 2018 Week Random FW sampling 54 g/customer
- 2019 Week Random FW sampling 36 g/customer

Food Surplus Sharing

Scholars of Sustenance Foundation – SOS

- Matches Donors to Receivers- Logistics
- Donors include Hotels, Restaurants and Supermarkets
- Shares 880 kg Food Surplus everyday or 115,033 meals
- Donates 500 kg Food Waste to farmers for animal feed and composting everyday
- Food Safety Training
- Public Outreach

Working Issues

- Policy/Action Plans and Target setting
- Data measurement and monitoring
- Technical Guidelines
- Laws and Regulations

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anuda@hotmail.com