From food waste to food potential

Addressing food waste as a way to balance food demand

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What is food waste?

FOOD LOSS
- Agriculture production & harvest
- Processing

FOOD WASTE
- Distribution & retail
- Restaurants & catering
- Domestic consumption
Imagine if 1/3 of goods never made it to customers

This is a reality of our food supply. We lose one-third of the food produced globally.

Food loss and waste happens all along the pathway to the plate.

1.3 billion tons of food wasted could feed 1.6 billion people.

Source: www.rockefellerfoundation.org/YieldWise
Environmental impacts of food waste

Food loss and waste also amount to a major squandering of resources, including:

- water
- land
- energy
- labour and capital

and needlessly produce GREENHOUSE GAS EMISSIONS, contributing to GLOBAL WARMING and CLIMATE CHANGE.

Food waste generated yearly in Swedish households yields emissions equal to those of 360000 cars

Source: fao.org
Carbon footprint of what you eat

Calculations of greenhouse gas emissions from the production, processing and transportation of specific food items

- Main chart compares 110g of food against a journey in a midsized car
- Number shows kg of carbon dioxide equivalent produced per 1kg of food

Lentils: 0.9
Milk: 1.9
Tofu: 2.0
Yogurt: 2.2
Peanut butter: 2.5
Potatoes: 2.9
Tuna: 6.1
Turkey: 10.9
Pork: 12.1
Beef: 27.0
Tomato: 1.1
Beans: 2.0
Broccoli: 2.0
Nuts: 2.3
Rice: 2.7
Eggs: 4.8
Chicken: 6.9
Salmon: 11.9
Cheese: 13.5
Lamb: 39.2

Source: EnvironmentalWorkingGroup
WATER FOOTPRINT

Virtual water embedded in products

- Barley: 650 litres of water for one pound (500 g)
- Wheat: 650 litres of water for one pound (500 g)
- Sorghum: 1400 litres of water for one pound (500 g)
- Millet: 2500 litres of water for one pound (500 g)
- Toast: 650 litres of water for one package (200 g)
- Cane Sugar: 750 litres of water for one package (300 g)
- Tea: 90 litres of water for one pot (750 ml)
- Coffee: 840 litres of water for one pot (750 ml)
- Burger: 2500 litres of water for one burger (175 g beef)
- Beef: 4650 litres of water for one steak (300 g)
- Milk: 1000 litres of water for one litre
- Cheese: 2500 litres of water for one big piece (200 g)

The water footprint of a product is the volume of freshwater used to produce the product. All figures shown in this poster are based on exemplary calculations and may vary depending on the origin and production process of the product.
Land footprint of what you eat

Land use per 100 kilocalories by food and production type

Average land use per 100 kilocalories of food production, by food type and production system measured in metres squared (m²) per 100 kilocalories. Average values are based on a meta-analysis of studies across 742 agricultural systems and over 90 unique foods.

- Mutton & Goat Meat (non-organic): 20.98 m²
- Beef (organic, grass-fed): 13.55 m²
- Beef (non-organic, grain-fed): 8.27 m²
- Mutton & Goat Meat (organic): 4.64 m²
- Beef (non-organic, grass-fed): 3.01 m²
- Pork (non-organic): 1.17 m²
- Poultry (organic): 1.12 m²
- Pork (organic): 1.06 m²
- Eggs (organic): 0.52 m²
- Milk (organic): 0.45 m²
- Poultry (non-organic): 0.41 m²
- Eggs (non-organic): 0.34 m²
- Barley (non-organic): 0.27 m²
- Milk (non-organic): 0.23 m²
- Wheat (non-organic): 0.17 m²
- Soybean (non-organic): 0.08 m²
- Potatoes (organic): 0.08 m²
- Tomatoes (non-greenhouse): 0.07 m²
- Wheat (organic): 0.07 m²
- Rice (non-organic): 0.05 m²
- Rice (organic): 0.05 m²
- Potatoes (non-organic): 0.04 m²
- Maize (non-organic): 0.04 m²
- Tomatoes (greenhouse): 0.03 m²

Source: Clark & Tilman (2017)
Large costs - Substantial savings

Avarage family in Sweden can save as much as 4000 kr if the food waste is reduced by half.

Source: still of youtube clip: foodwaste = money waste
Food waste in the production phase

Common reasons to food loss:

- Quality issues
- Aesthetical issues (ugly food)
- Excessive production
- Losses in production and storage
- Fractions that are never used

Source: slowfood.com
Food waste in the consumption phase

Common reasons to food waste:

• Excessive purchasing
• Storage
• Management of best-before dates
• Excessive cooking
• Lack of routines for left-overs

Source: thepacker.com
Food waste in Sweden

Food waste 2016, kg/person

- Household: 97 kg/person
- Primary production: 10 kg/person
- Food industry: 5 kg/person
- Large scale kitchen: 7 kg/person
- Restaurants: 7 kg/person
- Food retail: 3 kg/person
- Sum: 129 kg/person
Global problem- local solutions?

Agenda 2030: goal 12

Food target: By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.
Regional Action Plan for environmental objectives and Climate and Energy Strategy
Food waste – regional focus in Skåne

Partnership discussions with public and private players

Food waste festival to engage various actors on the individual level

Food Waste Call for Action (goal: by 2030 reducing food waste in Skåne by half); opening conference 28 Nov 2018

Network for reducing the food waste

Planning open challenge for two neighbouring regions
Food waste – local focus in Skåne

Preschool Hattstugan, reduction of food waste (%):
- Plate left-overs: 13%
- Beverages: 80%
- Food serving: 20%
- Food preparation: 50%

Elderly home Linegården, reduction of food waste (%):
- Total: 24%
- Food: 15%
- Beverages: 46%
- Coffee: 35%

Reduction of coffee waste equals to savings of ca 15 800 kr per year (ca 350 coffee packages or ... ca 17 500 cups of coffee!!!)
Conclusions

Holistic approach to food demand and supply is needed

Spectrum of approaches of value:

• Trimming food waste
• Reduction of meat consumption
• Limiting environmental degradation
• New sources of food supply
Thank you!

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