

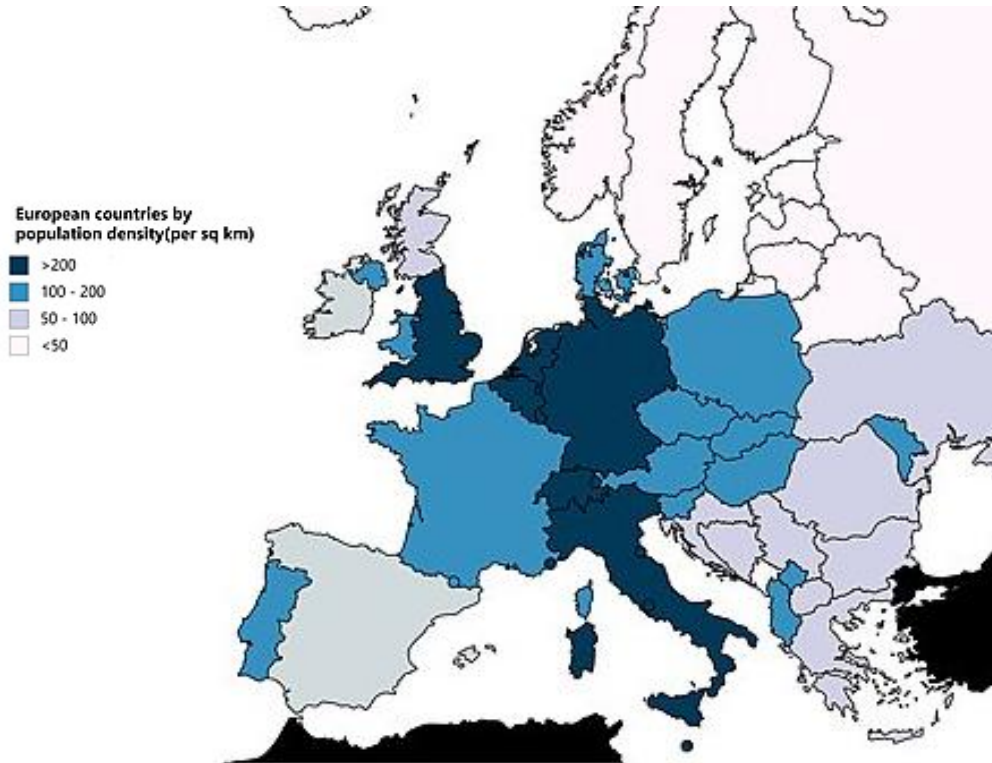
Dutch national Monitor on Food Waste – progress on measurement in different stages of food supply chain

Webinar of food waste measurement, DG Health and Food Safety

June 26th 2020, Martijntje Vollebregt



The Dutch context



England: 424 p/km²

NL: 416 p/km²

BE: 374 p/km²

DE: 232 p/km²

The Dutch context



Agri & food sector comprises 22% of total exports

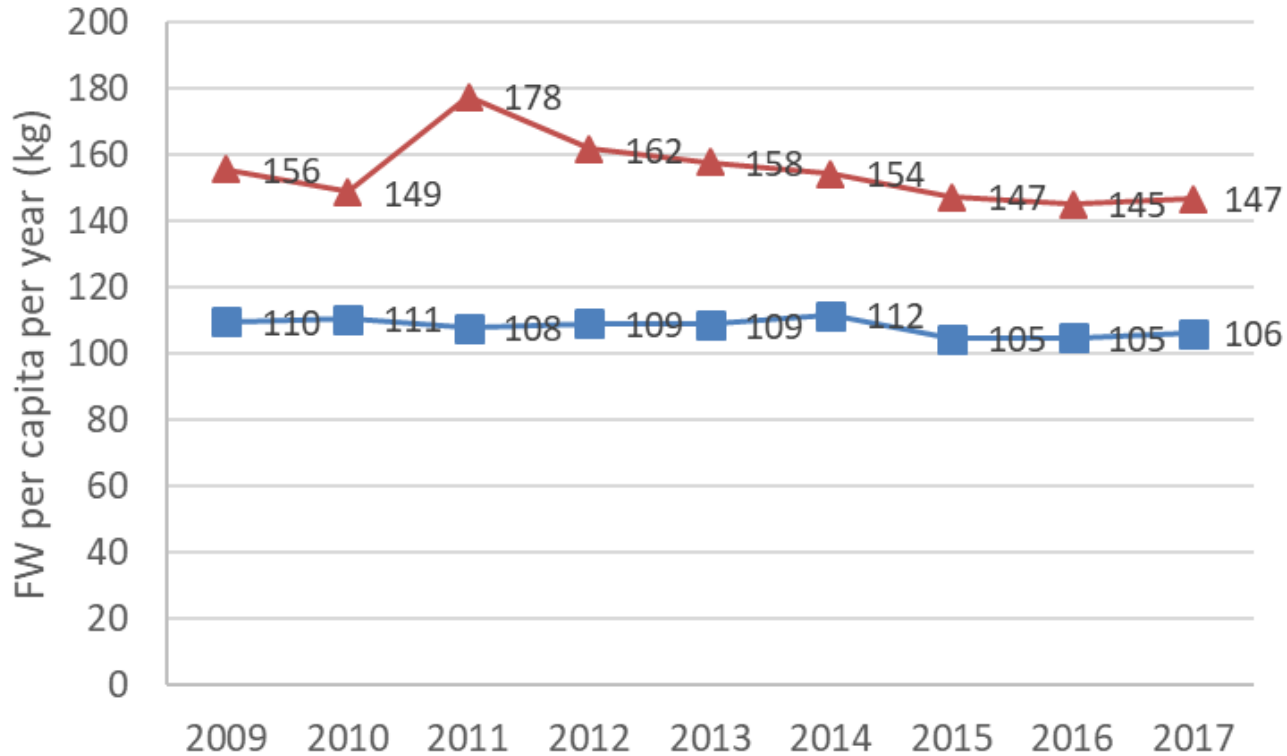
Dutch Monitor Voedselverspilling (MVV)

- Amount (kg) of food loss and waste in NL
- Entire food chain from farm to fork
- Destinations: food banks, animal feed, biogas, composting, incineration, landfill
- Food waste: animal feed – landfill
- Split into
 - Avoidable (edible)
 - Potentially avoidable (no by-product, edible, but removed from food chain for economic, technologic, legislative or product intrinsic reasons)

Dutch Monitor Voedselverspilling (MVV)

- Data: publicly available statistics on waste and animal feed
- Data processing:
 - Application of food % to waste
 - Split to unavoidable and avoidable
 - Split into destinations
 - FW definition for reporting
- Yearly updates with new statistics and possibly update parameters

Dutch Monitor Voedselverspilling (MVV)



Food Waste Free United ecosystem

WHY JOIN FORCES TO COMBAT FOOD WASTE?



1/3

A third of the world's food is lost or wasted every year.¹



Food waste in Europe causes **6%** of all greenhouse gases emitted through human activity.²



Wasting less food = helping to achieve climate goals and ensuring there is enough valuable food for the growing global population.

That is equal to **105-152 KG** per capita annually in the Netherlands.³

The focus of the Taskforce

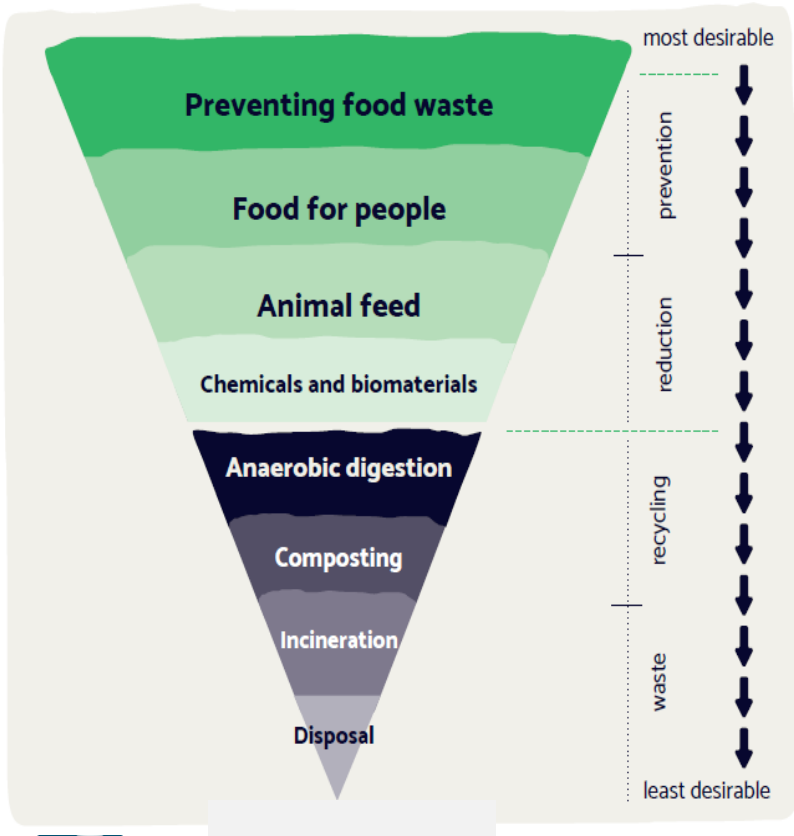
The Taskforce focuses on reducing food waste throughout the entire food chain. We will accomplish this by preventing and reducing as much food waste as possible and creating value from side flows according to the "Moerman Food Use Hierarchy"

**2015 - 2030
50%
reduction**

OUR OBJECTIVES

In a joint effort, we aim to make the Netherlands one of the first countries to cut food waste in half. We will make the Netherlands a leader and a global role model in terms of realizing Sustainable Development Goal 12.3.

Food Waste Free United ecosystem



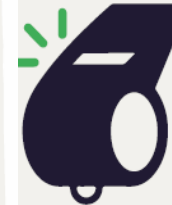
1. Monitoring progress and impact: United Against Food Waste measures the effects of its individual and joint approach.



2. Joining forces to combat food waste across the food supply chain: Stakeholders and leaders combine their strengths, networks and knowledge to develop innovative solutions.



3. Joining forces to combat food waste by consumers: United Against Food Waste aims to achieve sustainable changes in behaviour through campaigns, interventions and living labs.



4. Changing the rules: United Against Food Waste promotes the legislation and instruments needed to create a circular economy.

Food Waste Free United - stakeholders



Dutch MVV -> EU delegated act



- ✓ MVV amount in kilograms
- ✓ MVV has split in destinations
 - No split in chain links
 - (Potentially) (un)avoidable, instead of (in)edible
 - Use of primary data and certain measurement methods

FLW in chain links



- Households FW: sorting analysis
- Other chain links: not possible from publicly available data
 - Not enough detail in animal feed data
 - Not enough information on food part of waste in national waste statistics

FLW quantification, start 2018 to ... envisioned data in Dutch food supply and consumption chain

Chain link	FLW registrations	Envisioned data
Primary production	No registrations; destinations known	% by farmers (FADN); upscaling production areas and volumes; conversion to (in)edible; validation with on-farm measurements
Manufacturing	Side and waste stream registration (kg); destinations known	(Sub)sector specific conversions of waste streams to (in)edible; upscaling on (sub)sector size
Retail and distribution	Distribution: see manufacturing Supermarkets: registrations of losses (€), destinations known Specialty shops: no registrations, destinations less known	Distribution: see Manufacturing Supermarkets: conversion to kg; upscaling on market size Specialty shops: measurements based on sampling methods; upscaling on market sizes

FLW quantification, start 2018 to ... envisioned data in Dutch food supply and consumption chain

Chain link	FLW registrations	Envisioned data
Out-of-home	Many types ..., often no registration; partial registrations in €; destinations often not known	Cover major OOH sectors; conversions to kg; upscaling on market sizes
Consumer	Waste sorting analysis, sufficient data	

Ex. Manufacturing – FLW matrix and story

	Manufacturing	
Destinations	Edible	Non-edible
Food banks		
Convertible humane		
Animal feed		
Composting		
Biogas		
Incineration		
Land fill		

EU
FLW

Manufacturing: FLW in The Netherlands

- Size of operations: total, main sectors
- Markets: domestic size and export size
- FLW: absolute volume and relative volume of production
- Short description of FLW quantification method

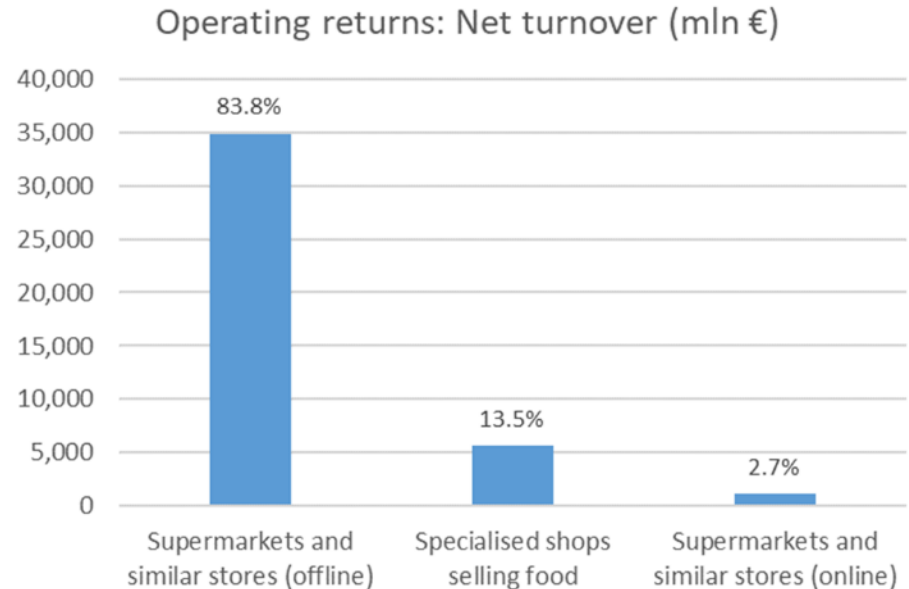
Retail in The Netherlands

■ CBS SBI 2018 codes (Food retail related):

CBS food retail related SBI codes:

471 Retail sale in non-specialised stores
4711 Supermarkets, department stores and similar non-specialised stores
472 Specialised shops selling food and beverages
4721 Shops selling potatoes, fruit and vegetables
4722 Shops selling meat and meat products, game and poultry
47221 Shops selling meat and meat products
47222 Shops selling game and poultry
4723 Shops selling fish
4724 Shops selling bread, pastry, chocolate and sugar confectionery
47241 Shops selling bread and pastry
47242 Shops selling chocolate and sugar confectionery
4725 Shops selling beverages
4729 Other specialised shops selling food
47291 Shops selling cheese
47292 Shops selling natural and health food
47293 Shops selling foreign food
47299 Specialised shops selling other food n.e.c.*
478 Market sale
4781 Retail sale of food and beverages via markets
47811 Retail sale of potatoes, vegetables and fruit via markets
47819 Retail sale of other food via markets
479 Retail sale not via stores and markets
4791 Retail sale via mail order and internet
47911 Retail sale via internet of food and medical goods

■ Net turnovers of food retail-related sectors in 2018



Way of working and data



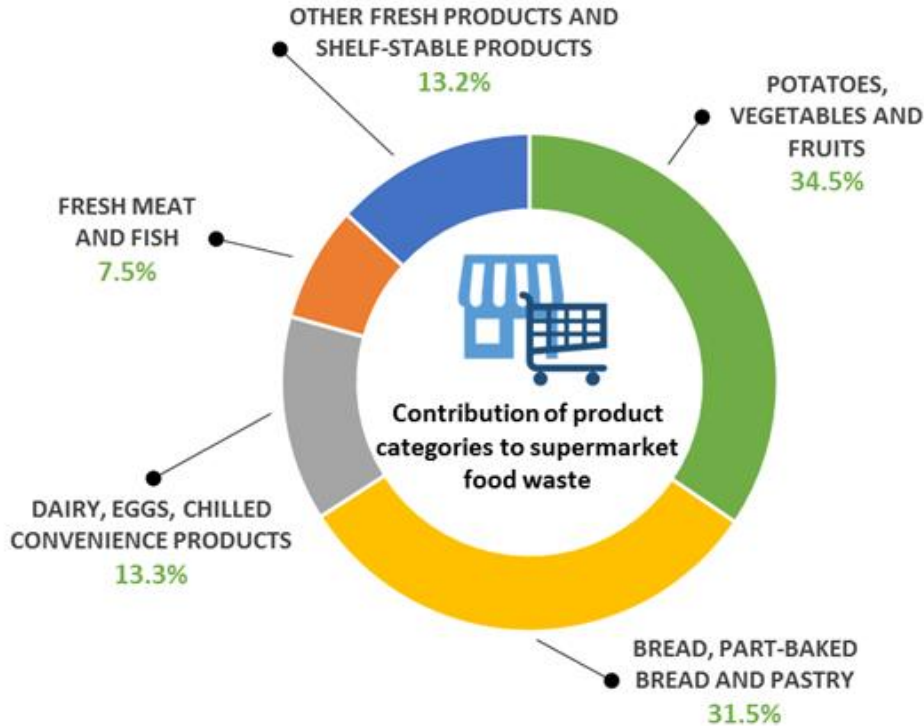
■ Data confidentiality:

- Data transfer agreement between company and WFBR
- Data and analysis result exchanged: secured website
- Work @WFBR: secured network location

■ Data:

- Call for participation by branch organisation CBL
- FW and sold amount (kg) per product group (25-40 groups) in kg
- Destinations

Results FW from Dutch supermarkets



- Amount of FW and product groups:
 - FW = 1.7% of sold amount
 - Potatoes, fruits and vegetables + bread / bake-off = 50-75% of FW
 - 5-10 product groups > 80-90% FW
 - ~90% if meat, dairy, sandwich meat are added
- Biogas, composting, animal feed
- Data quality: good
- Efficiency differences (FW/purchased)
- Providing detailed data -> follow-ups with sustainability managers

Out-of-home in The Netherlands

<u>Sub-sector</u>	<u>Revenue</u>	<u>Sub-sub sector and food and beverage revenue</u>							
Hospitality and food service	11.865 62%	Logies sector	1815 15.3%	Restaurant sector	5548 46.8%	Beverage industry	1894 15.4%	Fast service sector	2608 22.0%
Leisure	1.311 6.8%	Foodservice at sport	685 52.3%	Foodservice at recreation	627 47.8%				
Catering	3.268 17.2%	Companies	1611 49.3%	Institutions	1167 35.7%	Education	250 7.6%	Transport	241 7.4%
On-the-way	2.605 13.7%	Fuel stations	1667 64.0%	Transport, facility catering	422 16.2%	Retail, facility catering	517 19.8%		
Total	19.049								

Green = priority sector with sufficient activities, orange = priority sector, more activities needed. Others: no priority. Green = 47% of total OOH turnover, green + orange = 76%.

Note: total OOH includes Beverage industry (10% of total). Source revenue: *Foodstep (2017)*

Out-of-home FW studies in NL



- Institutions (care/ cure): recent studies in hospitals and prisons with measurements in kitchens and of returns
- (Hotel)restaurants: food waste challenge
 - 0-measurement (1 week); selected intervention; 1-measurement
 - Cooperation with Rabobank, Wastewatchers, Hotelschool The Hague
 - Presentation results at the national trade fair
 - Next edition in progress
- Event catering food waste challenge planned
- Company catering: display waste ~ kitchen waste

Food Waste Challenge

Meer resultaat door minder verspilling in de horeca

Zo belangrijk is de horeca

Zoveel kunnen we besparen

Zoveel leverde de Food Waste Challenge

de deelnemers op in 6 weken:

21% minder voedselverspilling, dit is
een besparing van 75.240 kg voedsel,
ofwel € 757.775,-
en 150.480 kg CO₂.



Groot:

1,8%

van
het
BBP

Waardevol:

€28

miljard omzet

Werkgelegenheid:

448.000
banen

Groei in 10 jaar:

+ 5.000 bedrijven
+ 28% banen

In totaal
46.000
bedrijven (18.000
restaurants)

€582 miljoen
61 miljoen kilo voedsel
121.000 ton CO₂



-50%

Het grote doel voor 2030

voedselverspilling

De Nederlandse
horeca als
voortrekkker.

291 miljoen
Euro kosten
bespaard

30,5 miljoen
kg minder
voedsel gebruikt

60.500 ton
CO₂ minder
uitstoot

Top 5 tips:

best werkende acties

1 Commitment

Iedere medewerker tekent persoonlijk voor zijn of haar betrokkenheid. Deal!

2 Sociale norm

Laat zien dat er al heel veel andere chefs ook meedoen.

3 Smiley's

Een rode, verdrietige smiley op de vuilnisbak. En een blijde groene op de koelkast. Zulke subtiele aanwijzingen werken echt!

4 Boegbeeld

Laat zien dat de chef (of een ander intern boegbeeld) zich echt in zet om voedselverspilling te voorkomen.

5 Doggy Bag

Laat op de menukaart zien dat het normaal is om een doggy bag te vragen.

Meer informatie:

rabobank.nl/foodwastechallenge

SAMEN TEGEN
VOEDSELVERSPLLING

Grocery
a better world
together.
Rabobank

Other chain links FLW quantification activities

- Primary production: questionnaire as part of FADN; on-farm measurement proposal for funding in 2021
- Trade and distribution: questionnaire fruit and vegetable trade with branch organisation
- Industry: sector specific templates with 1-2 companies, review by multiple companies, call for data

- Next to updates of Food Waste Free United stakeholders over 2019

Challenges to progress with chain links

- Obtaining representative data for each (sub)chain link
 - Voluntary company participation
 - + Motivate stakeholders to stimulate chain partners
 - + Presentation of (sub)chain link results
 - + Translation towards other metrics (e.g. CO₂)

- Measurements in case kg data is unavailable

Thank you for your attention!

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Join our event on FLW monitoring end 2020

<https://www.wur.nl/en/Research-Results/Research-Institutes/food-biobased-research/Research-in-the-spotlight/Reducing-food-waste.htm>

<https://weblog.wur.eu/openscience/data-food-loss-waste/>

