

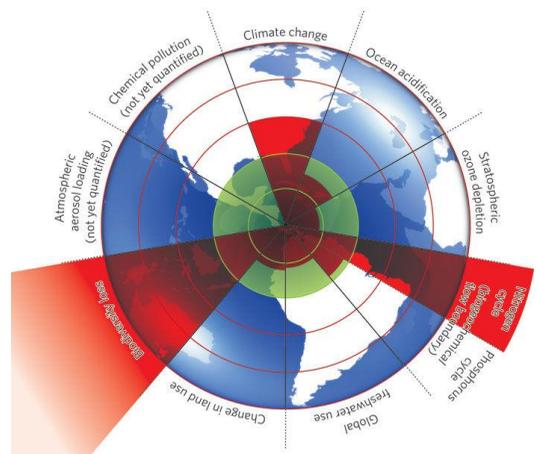
Towards a circular economy in food; The role of public-private partnerships

Toine Timmermans

Vilnius, High-level Political Forum 24 May 2018



Drivers for change



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Food waste – latest estimate EU-28

**EU-28
PRODUCES**



**88 MILLION
TONNES**
of food waste per year

amounting to an estimated
**143 BILLION
EUROS**

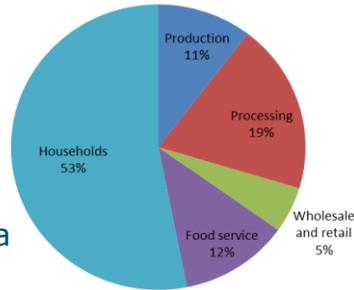


For more information on data and quantification, access the March 2016 FUSIONS reports "Estimates of European Food Waste" & "Food Waste Quantification Manual to monitor Food Waste Amounts and Progression"



**173 kg pro-capita
food waste**

- Equivalent of **20%** of all produced food in EU
- **143 billion euros**
- ~ **304 Mt CO2 eq** (6% of total emissions of GHG in EU28%)



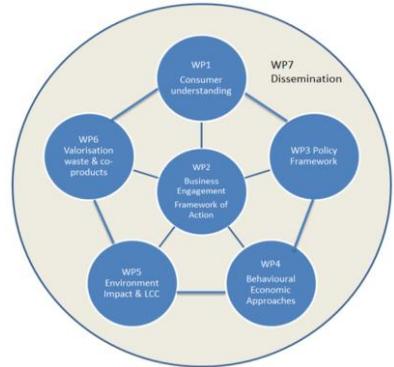
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Resource Efficient Food and dRink for the Entire Supply cHain (2015 – 2019)

26 partners, 12 countries

Multi stakeholder platforms: the Netherlands, Germany, Spain, Hungary, China



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The REFRESH Project

A central ambition of the REFRESH project is to develop a 'Framework for Action' model that is based on strategic agreements across all stages of the supply chain (backed by Governments), delivered through collaborative working and supported by evidence-based tools to allow targeted, cost effective interventions.



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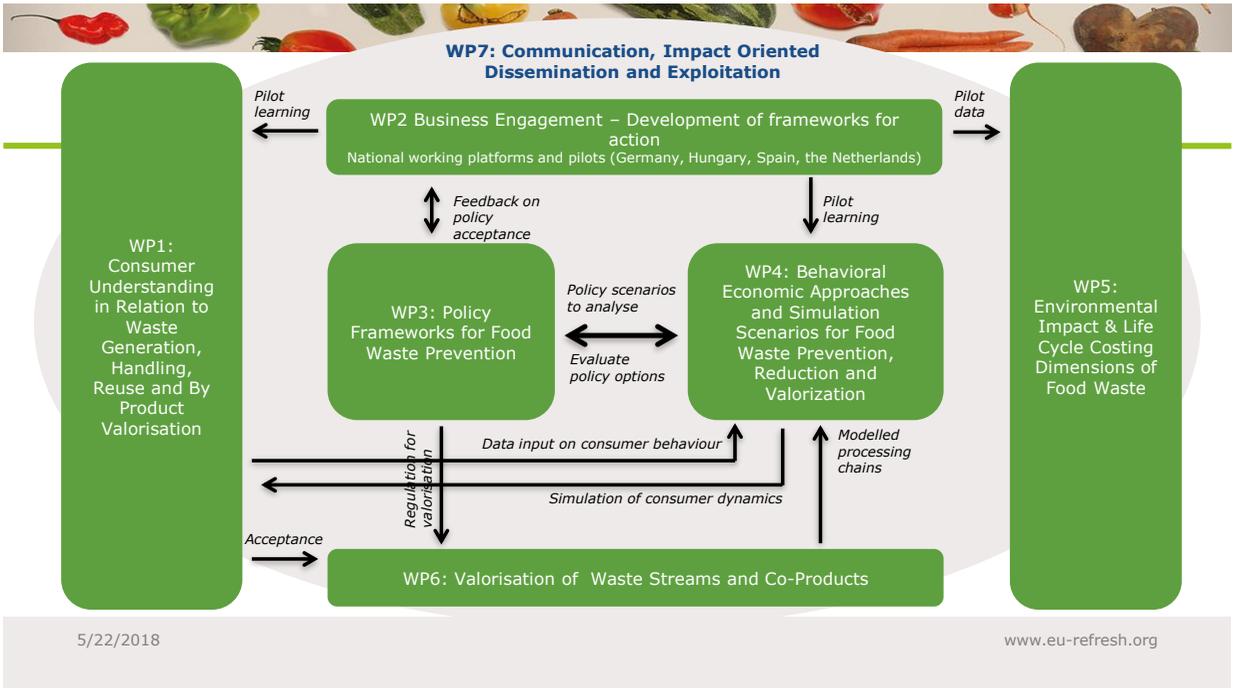
The REFRESH Project consortium



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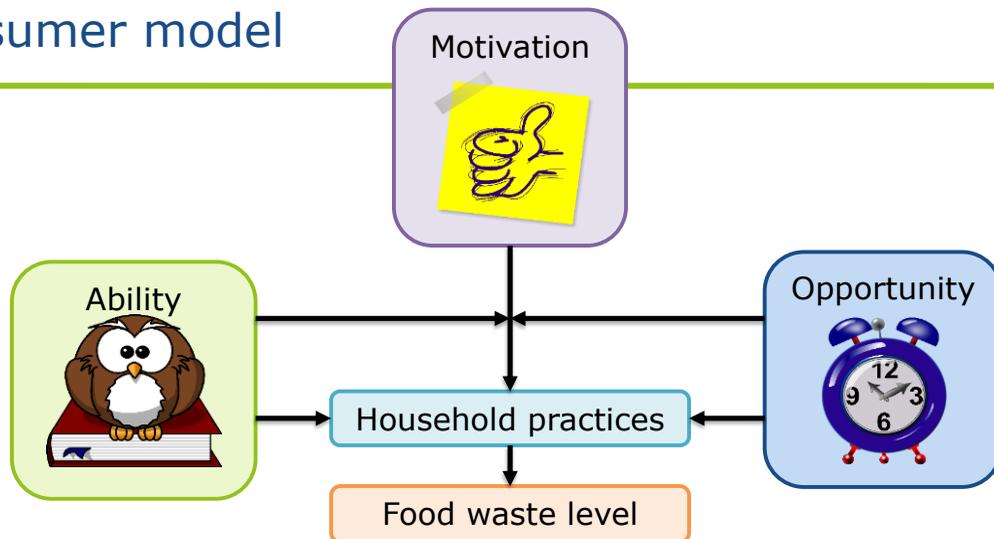
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REFRESH: impact oriented dissemination



Consumer model



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Policy review and action plan

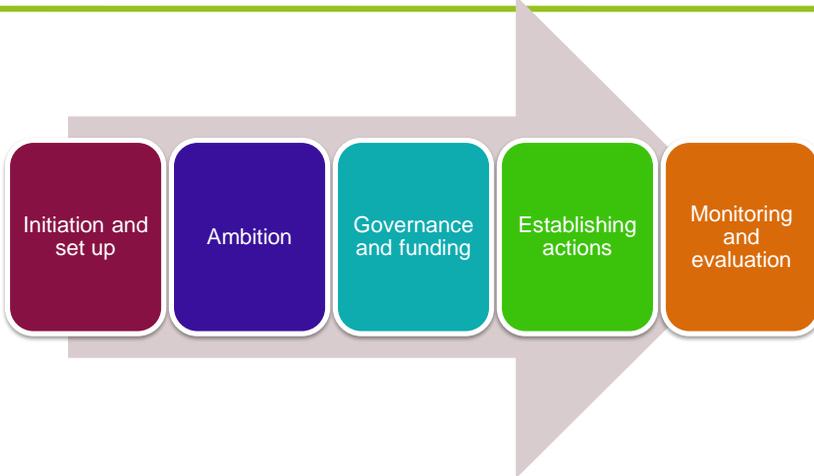
- ◆ **Mapping food waste drivers across the food supply chain**
 - 👉 identifies drivers of food waste and resulting waste streams across the supply chain in five food categories
- ◆ **EU policy review**
 - 👉 Identifies the impact of EU policy areas on food waste generation and/or prevention and discusses opportunities for improvement
- ◆ **Policy workshops**
 - 👉 2 Upcoming workshops in 2018-2019:
 - National approaches and voluntary agreements (19 June 2018, Amsterdam)
 - Consumer behaviour
 - Animal feed
 - Synthesis workshop: implications of REFRESH results for policy
- ◆ Propose an **Action Plan** for policy change

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Framework for Actions 'Blueprint'



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Germany

Coordinating Partner CSCP

Priorities

- Grocery/retail sector
- Out-of-Home
- Consumer
- Supply chain/ production



Business

- Aldi Nord
- Aldi Sud
- Metro
- Nestle
- Penny
- Sodexo
- Associations (food & retail)

Academic

- Professor Dr. Guido Ritter (FH Munster)

NGOs

- WWF
- Foodsharing
- Consumer organisations
- Die Tafeln

Government / Public Organization

- Federal Ministry of Food and Agriculture
- Environment Ministry NRW
- Bavarian State Ministry for Food, Agriculture and Forestry
- German Council for Sust. Dvlpmt

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Hungary

Coordinating Partner
Hungarian Food Bank Association

Priorities

- Quantification of food waste
- Supply chain / retail
- Consumer
- Hospitality



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Business

- Wholesale Market
- HORECA Marketing Club
- Budapest
- TESCO

Academic

- Agricultural Research Institute

Government / Public Organization

- Ministry of Human Resources

NGOs

- ÉFOSZ (Alliance of Hungarian Food Manufacturers)

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Spain

Coordinating Partner
Creda

Priorities

- Consumers
- Hospitality
- Primary production



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Business

- ACES
- AECOC (GS1)
- ASEDAS
- COAG
- FCAC
- Espigoladors
- Gastrofira
- Mercabarna
- PACKNET

Academic

Government / Public Organization

- Waste Agency of Catalonia
- Metropolitan Area of Barcelona

NGOs

- Barcelona Food Bank
- HISPACOOZ
- Plataforma Aprovechemos los Alimentos
- PROSALUS
- Nutrición Sin Fronteras

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China

Coordinating Partner
IVLC

A multi-stakeholder conference was held in Beijing November 2016 to launch **REFRESH in China**. It attracted **100 participants** from Governments, research institutions, NGOs, public (youth)



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Netherlands

Coordinating Partner
Wageningen Research

Priorities

- Actions, solutions & business case development
- Supply chain collaboration & transparency
- Valorisation
- Integrated consumer action



- Business**
- Albert Heijn
- CBL
- Hutten Catering
- LWM
- McDonalds
- Rabobank
- Unilever
- Protix
- Sligro Food Group
- MVO-NL
- Foodtech Brainport
- Academic**
- Wageningen University

- Government / Public Organization**
- Ministry of Agriculture, Nature & Food Quality
- NGOs**
- Natuur & Milieu
- Youth Food Movement
- Kids University

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The Netherlands, Cooperation with industry

- Cooperation between industry (sector organisations) and government since 2009
- Joint agenda on reduction food waste
- 2014 year against food waste



Rijksoverheid

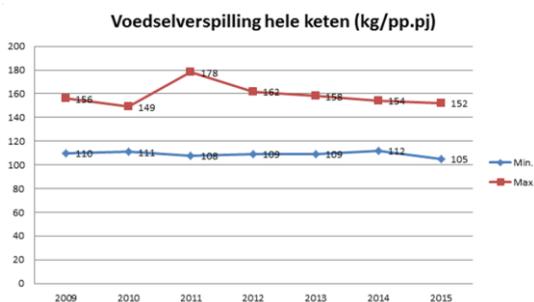
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The Netherlands, time for a next step (2016)



- Food waste losses on political en business agenda
- Awareness
- Lots of individual actions (research, campains, new businessmodels)
- But: no 20% reduction
- New phase

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Dutch Taskforce Circular Economy in Food

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UNITED AGAINST FOOD WASTE

WHAT IS THE TASKFORCE?

Prevention and reduction of food waste is a crucial part of achieving a circular economy. All partners in the Taskforce Circular Economy in Food will collaborate and accelerate to minimize food waste, both across the food chain and by consumers, and to contribute in a transparent manner to this aim.

WHY JOIN FORCES TO COMBAT FOOD WASTE?

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

1/3

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.

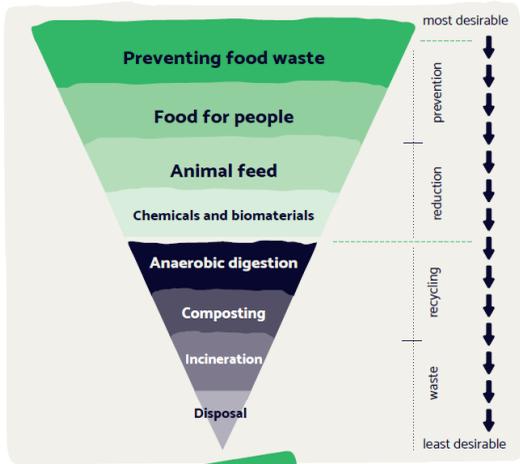
That is equal to **105-152 KG** per capita annually in the Netherlands.³

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.

2015 - 2030
50% reduction

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".



WOULD YOU LIKE TO PARTICIPATE?
Join the Taskforce!

SAMEN TEGEN VOEDSELSPILLING.NL

1. Monitoring progress and impact: The Taskforce measures the effects of its individual and joint approach.

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

The Taskforce acts in four distinct ways:

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

4. Changing the rules: The Taskforce promotes the legislation and instruments needed to create a circular economy.

¹FAO, Global Food Losses and Food Waste—Extent, Causes, and Prevention, 2011.
²FUSIONS, Criteria for and baseline assessment of environmental and socio-economic impacts of food waste, 2016.
³Wageningen Food & Biobased Research, 2017, Monitor Voedselverspilling, update 2009-2015, rapport nummer 1747.



Dutch Taskforce Circular Economy in Food



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Ecosystem for implementation & action



Subgroup meeting EU FL&FW platform at Three-Sixty, week of 1 October 2018 (tbc)



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Business pilots on Surplus Food concepts



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Circular systems & novel products



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Use of food stuff for animal feed



Expert panel on the risk management of using treated surplus food in pig feed (www.eu-refresh.org)

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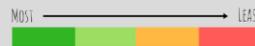
ENVIRONMENTAL IMPACT OF FOOD WASTE RECYCLING

	Pig feed (wet)	Pig feed (dry)	Biogas	Compost
Damage to the ozone layer	Green	Green	Yellow	Red
Carcinogens	Green	Green	Yellow	Red
Non-carcinogenic toxins eg heavy metals	Green	Green	Yellow	Red
Ionizing radiation	Green	Green	Yellow	Red
Photochemical oxidant formation	Green	Green	Yellow	Red
Global Warming Potential *	Green	Green	Yellow	Red
Freshwater eutrophication	Green	Green	Yellow	Red
Marine eutrophication	Green	Green	Yellow	Red
Terrestrial eutrophication	Green	Green	Yellow	Red
Eco-toxicity	Green	Green	Yellow	Red
Fossil fuel depletion *	Green	Green	Yellow	Red
Depletion of other non-renewable resources	Green	Green	Yellow	Red
Acidification	Green	Green	Yellow	Red
Particulate matter emissions	Green	Green	Yellow	Red



* The Global Warming Potential and fossil fuel depletion calculations use the current UK energy mix. If renewable energy were to be used for the processing of the feed, feed would score better on these aspects.

ENVIRONMENTAL BENEFITS





Frameworks for action, some systemic aspects

- **Transparency** (Target, Measure, Act), Actions & Monitoring progress
- Supply chain **collaboration** (forecasting, utilisation & circular business models), value chains & **responsibility**
- **Externalities** & balance in economic, ecologic & social-economic impacts
- **Policy coherence** (prevention should come first)
- **Economic & legal frameworks** (food -> feed)
- Commitment for a collective **consumer driven** action program (building on harmonised consumer insights research)

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Food & Biobased
Research



Knowledge and Best
Practice on Food
Waste Prevention

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