



Good practices on Food Waste Prevention

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Presentation structure

- **Definitions**
- **Scale of the problem**
- **Causes of food waste generation**
- **Best practices**
- **Conclusions**





Food waste is
*“composed of raw or cooked food materials
and includes food loss, before, during or after meal
preparation in the household,
as well as food discarded in the process of manufacturing,
distribution, retail and food service activities”*
(European Commission 2011)

Food waste is generated throughout the food chain

Source: www.designweek.co.uk





Since significant resources are required for food production, manufacturing, transportation, storage, retailing and preparation, food waste is a waste of valuable resources with obvious economic and environmental implications.

Moreover, food waste brings up a moral issue: reduction of the amount of food wasted may play an important role in combating global hunger.





About 1/3 (≈ 1.3 billion tonnes per year) of the food for human consumption is wasted globally (FAO)

In Europe about **90 million tonnes** of food waste are generated annually
(agricultural food waste + fish discards are excluded)



Source: Love food Hate waste



Source: www.nrdc.org



Scale of the problem



(*) “Household Food and Drink Waste in the UK”, WRAP, 2009





Developing countries generate as much food waste
as industrialised ones. However:

- in developing countries, over 40% of food losses happen
after harvest and during processing
- in industrialized countries, over 40% occurs at retail and
consumer level.



Food Waste

Food waste at consumer level in industrialized countries 2012 million tons is around as high as the total net food production in sub-Saharan Africa (230 million tons)

At least one-third of food produced for human consumption is lost or wasted globally, which amounts to about 1.3 billion tons per year

12%

of food losses happen during the harvesting phase in developed countries

25%

of food losses happen during the post-harvest and processing phases



Poverty and lack of access to food that humans take from the planet goes into food that nobody eats

FARMING

TRANSPORTATION

10%

of the total U.S. energy footprint is spent getting food from farm to fork

PRODUCTION

10%



5%



4%



10% of all grain products, 20% of all non-perishable and 10% of all meat products are lost at the processing and packaging stage



Globally it is estimated that approximately one-third of all fresh fruit and vegetables produced is not before it reaches consumers

40% of food losses in developing countries are a result of inadequate storage

25%

the percentage loss of crops in those countries commonly ranges from 10-20%

PACKAGING

40%

of losses in transportation occur after retail and consumer level

RETAIL & CONSUMERS

3%

of food waste is currently recycled

40%

of food waste is currently landfilled

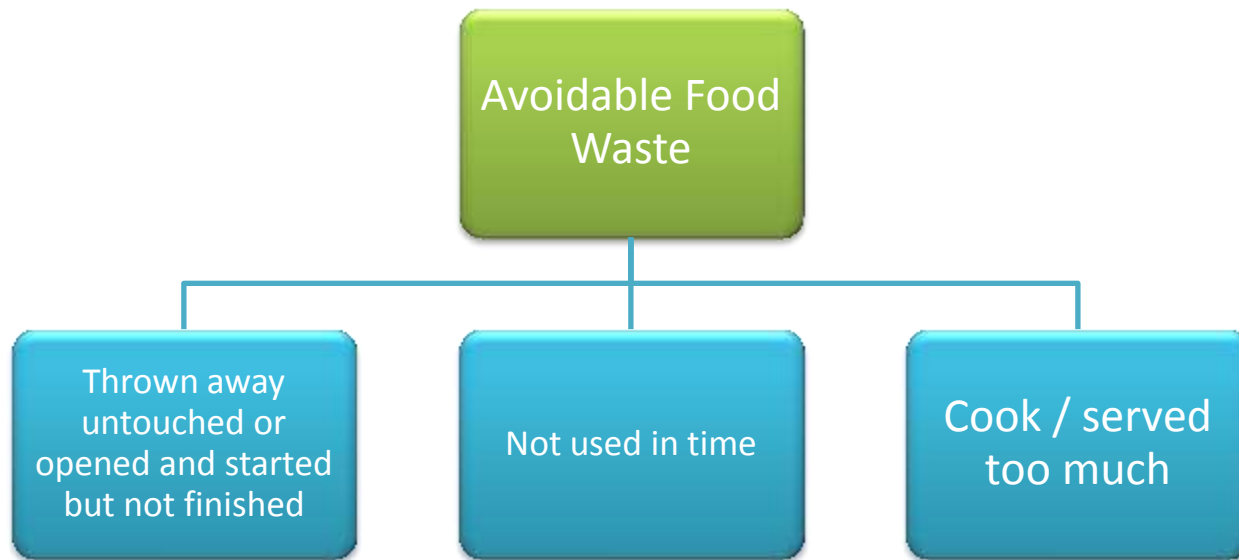
Causes of food waste

The reasons for food wastage are diverse and sector* specific

(*) farms, food industries, retailers, caterers, consumers



Causes of food waste – Consumers





The main reasons are:

- Lack of shopping planning
 - Shopping list
 - Cupboards checking
- Lack of meal planning
- Lack of awareness
- Misunderstanding of date labels
 - Best before
 - Use by





The study within the WASP Tool project

- To account for the attitudes & behaviours of households in Greece towards food waste generation and prevention
- To quantify food waste generated in Greek households

Structured questionnaire
15-day diaries

- To identify the attitudes of the respondents regarding food waste and food waste reduction.
- To identify certain consumer behaviour practices that can contribute to the reduction of food that is thrown away
- To explore the effect that the sociodemographic variables have on the attitudes and the behaviour of the households on the generation as well as the prevention of food waste





“Tool”: a structured questionnaire and a food waste diary

- Study area: the greater Athens area, Chania and Heraklio (Spring 2012 - Autumn & Winter 2013)
- Information gathered: type & frequency of behaviours and habits that result in wasted food, reasons for those habits and information about interrelated conditions (level of employment, age of household members) and behaviour (buying, cooking and diet habits).





“Compare the current amount of uneaten food that is thrown away to the respective amount 12 months ago”

- Decreased a lot: 45.3%
- Decreased a little: 20.9%
- Remained the same: 32.6%





“Which was the driving force behind the actions described in the previous question?”

Financial recession (>60%)

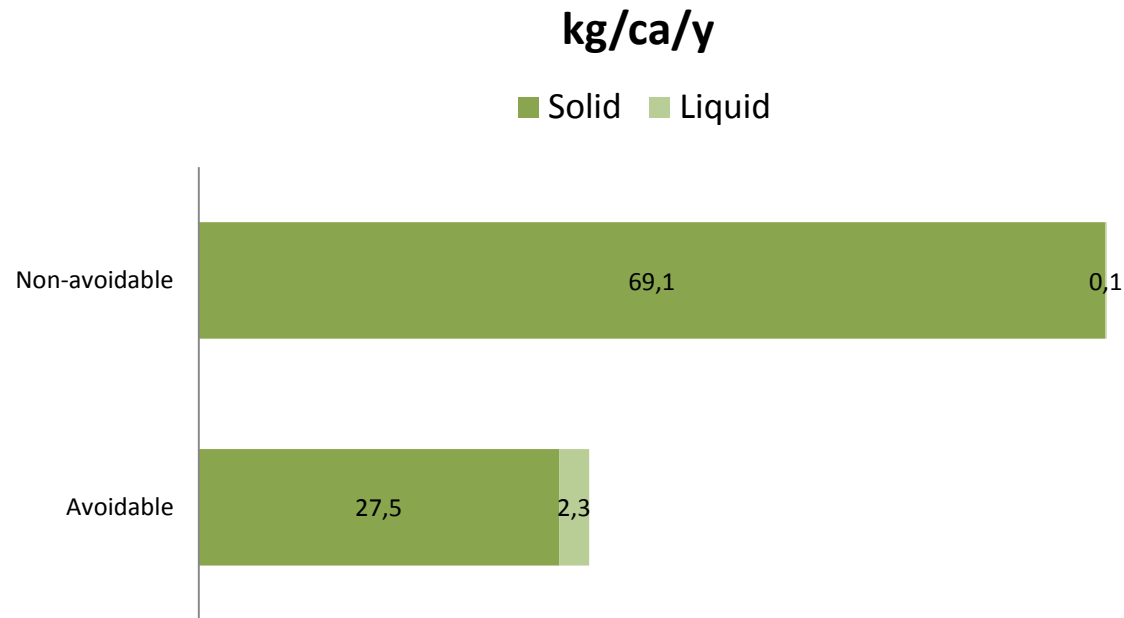
Change in the consumer patterns

Change towards a more environmentally friendly lifestyle



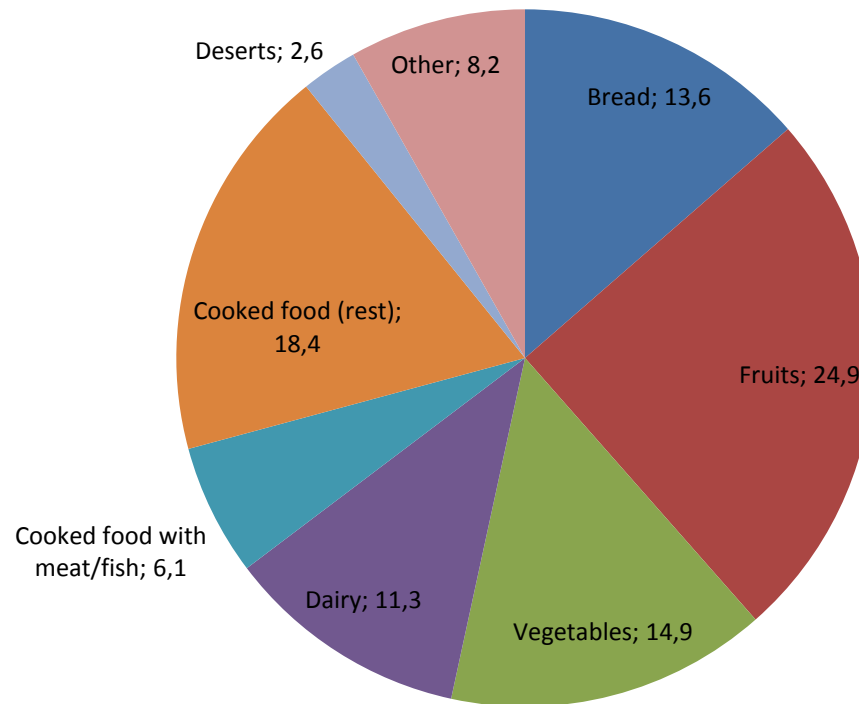


Unavoidable vs avoidable food waste in Greek households



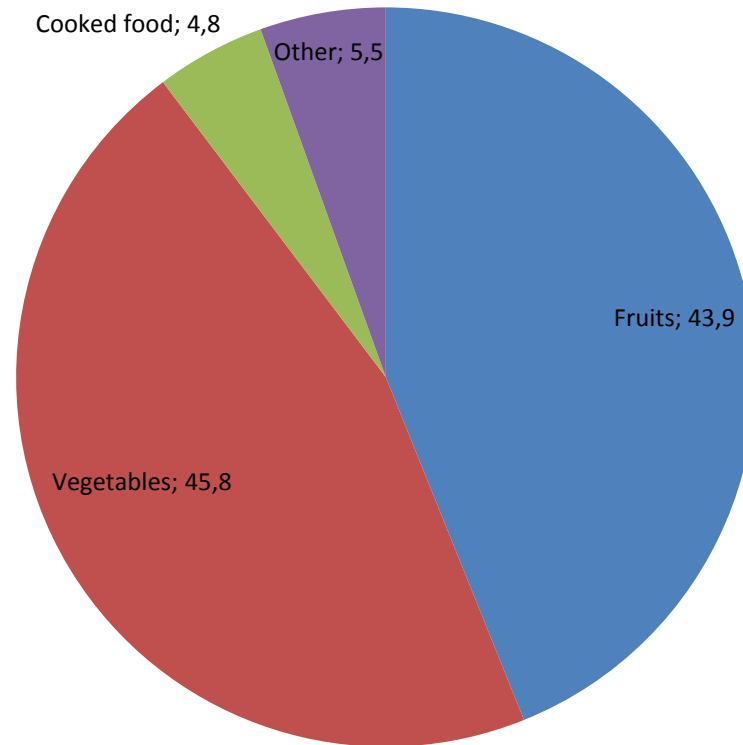


Composition of avoidable food waste in Greek households





Composition of unavoidable food waste in Greek households





Causes of food waste – Consumers

The main reasons are:

- Storage conditions (protection/packaging, fridge temperature, freezing, location)
- Large portions (pre-packed food, takeaway, traditional serving)
- Discarding of left-overs
- Discount offers

Star Rating	Temperature	Storage Time	
		Frozen Food	Ice Cream
*	-6°C	1 week	1 day
**	-12°C	4 weeks	1 week
***	-18°C	3 months	1 month
****	-18°C	Will freeze a specified quantity of fresh food from +25°C to -18°C in 24hrs without affecting the frozen food already stored	





According to WRAP (2009):

- 84% of us believe we throw none or hardly any food away
- The truth is we all produce food waste
- Single person households waste proportionally more per person than bigger households





Measures for food waste reduction

Donations: Retailers and food industries can donate food that otherwise would be discarded due to unprofitable prices, surpluses and weakness to cover the marketable criteria.

Development of synergies: By establishing industrial symbioses and eco-industrial parks, one's firms waste can serve as resources to the others. One farm's food waste can be used as animal food.





Measures for food waste reduction

Updating the production chain:

By adopting more efficient energy & material technologies, the production chain gets improved and generates less food waste.

Appropriate storage conditions:

Ensuring optimal storage conditions, the edible life of a product can be prolonged.





Measures for food waste reduction

Awareness campaigns:

The importance of food waste prevention must be spread to all. Consumers should be “trained” on smart shopping, good food preservation and using leftovers.

Clarification of current food data labels:

A research on date labeling showed that 45-49% of consumers in UK misunderstand the meaning of the date labels “best before” and “use by”. Similar results were found in Greece (40%).



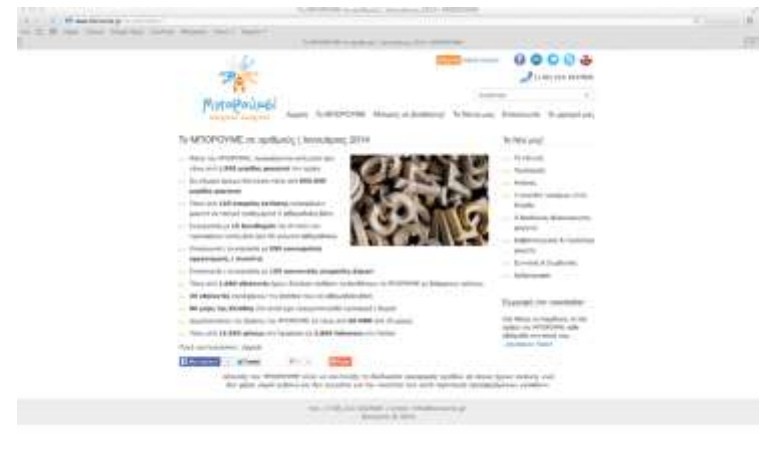
Love Food Hate Waste (WRAP, 2007)

- Aims at raising awareness of the need to reduce food waste and help consumers take action
- Was brought to us by WRAP, a not-for-profit organisation
- Over the first two years of its application in the UK, it contributed to the prevention of approximately **137,000 tonnes** of food waste.
- The focus of the campaign is to provide simple, easily adoptable solutions, which will cause small changes in consumers' daily routine and lead to food waste prevention



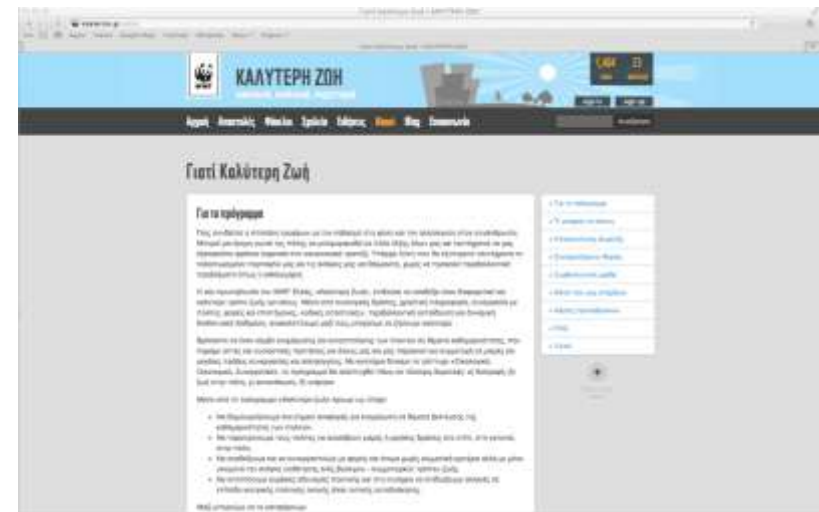
Μπορούμε! (WE CAN!, 2012)

- A non-for-profit organisation that reduces food waste by organising the distribution of surplus food for charity throughout Greece
- Since its launch, it offers on average more than 1.500 portions of food per day through its network.



Καλύτερη ζωή (Better life, 2013)

- An initiative of WWF Hellas, aiming at the rise of a better (environmentally friendly) day-life.
- The project evolves in four directions:
1: nutrition, 2: urban living,
3: consumption, 4: energy.



Food waste reduction intervention (WASP Tool project, 2011-2014)

Aims at raising awareness on food waste prevention in the three participating municipalities, Chania (GR), Heraklio (GR) and Paralimni (CY).

- Leaflets
- Recipe book (cooking with leftovers)
- Open days – Campaigns of information and dissemination – Workshops on date labels, savvy storage, cooking methods
- Demonstration at schools – cooking with left-overs

Good practices



Buon Samaritano (2005)

- Launched in 2005 by the municipality of Torino and Amiat.
- It is a food redistribution programme, which ensures that uneaten but still edible meals from school canteens and super markets are collected and distributed to charity organisations.
- It is estimated that approximately 150 kg of bread and 50 kg of fruit are recovered every day from school canteens. In 2008, the project is said to have recovered over 81,000 kg of food.



Réduisons nos déchets (ADEME, 2005)

- The awareness campaign “Réduisons nos Déchets” (Reducing our Waste) was developed by the ADEME, the French Environmental and Energy Management Agency, in order to provide information to households about waste generation and prevention. This campaign also participates and promotes the European Week for Waste Reduction initiative.

Good practices



Feeding the 5000)

- A campaign aiming to “empower and inspire the global community to enact positive solutions to the global issue of food waste”.
- Feeding the 5000 is also the name of the campaign’s flagship event where 5000 members of the public are given a delicious free lunch using only ingredients that otherwise would have been wasted.
- See more at:
<http://www.feeding5k.org/about.php#sthash.DOfb3Gye.dpuf>

Good practices





Thank you
for your
attention!



Harokopio
University

