Household food waste generation and composition in Greece as assessed by self-reporting diaries

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Structure of the presentation

• Definitions
• Why it matters/Scale of the problem
• Methodology
• Results
• What can be done – Best practices
• Conclusions
Food wastage

Food loss

Food waste

Agricultural production
Harvest
Processing
Distribution and Retail
Restaurants and Catering
Households

**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
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.
Food waste hierarchy

Source: Food Drink Europe (Food Wastage Toolkit), based on existing food waste hierarchies
About \( \frac{1}{3} \) (\( \approx 1.3 \) billion tonnes per year) of the food for human consumption is wasted globally (FAO, 2011)

In Europe about 90 million tonnes of food waste are generated annually
(annual food waste + fish discards are excluded)
The contribution of each sector differs substantially due to a range of reasons dependent on the socio-economic conditions of each country.

Developing countries generate as much food waste as industrialized ones.

- 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
8.3 million tonnes*

Avoidable
5.3 million tonnes

Possibly avoidable
1.5 million tonnes

Unavoidable
1.5 million tonnes

("Edible" waste)

("kitchen" waste)

(*) “Household Food and Drink Waste in the UK”, WRAP, 2009
The reasons for food wastage are diverse and sector* specific

(*) farms, food industries, retailers, caterers, consumers
Avoidable Food Waste

- Thrown away untouched or opened and started but not finished
- Not used in time
- Cook / served too much

Causes of food waste – 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
Aim of research

To estimate food waste generation in Greece

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

Structured questionnaire & 15-day diary

• 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
• Study area: the greater Athens area
  Number of participants: 250 (randomly selected)
• 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).
Food waste generation in Greece (kg/y) per inhabitant

Total: 98.9

Avoidable 29.8
Non-avoidable 69.2
% distribution of the avoidable food fraction in Greece
“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
Understanding the labels

Expiration date
- Correct: 70%
- Wrong: 30%

"Best used before" date
- Correct: 50%
- Wrong: 50%
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 be served 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, using leftovers.

**Clarification of current food data labels:**
Aimed at raising awareness on food waste prevention in the three participating municipalities, namely Chania (GR), Heraklio (GR) and Paralimni (CY).

- Leaflet
- 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 leftovers
Thank you for your attention!

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http://wasptool.hua.gr