



Leonardo Da Vinci

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## FoRWaRD Regional Report

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**Authors:**

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## **DOCUMENT HISTORY**

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# 1. INTRODUCTION TO THE COUNTRY

## 1.1. Basic information as macroeconomic data, geography, population, etc.



### NETHERLANDS IN SHORT

#### Geography

Area: 41,528 km<sup>2</sup> (18,4 % water)

Density of population: 488 inhabitants / km<sup>2</sup>

Cities: Capital Amsterdam (inhabitants 799.400), Rotterdam (616.500), Utrecht (321.500), Den Haag (500.000)

Climate: Temperate climate with mild winters, cool summers and precipitation throughout the year. Average temperature in July: 17.4 °C and in Januari

#### People

Nationality: Dutch

Population: More than 16,7 million (2012)

Population growth rate:

Ethnic groups: Primarily Dutch (80 %), people from Turkey, Suriname, Maroc, Aruba and Netherlands Antills.

Religion: Roman Catholic and protestant

Language: Dutch

Education: Years compulsory: 4-16. Literacy 92 %

Health: 8,39 deaths/1.000 inhabitants, Life expectancy for men: 78,8, for women: 82,7

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Work: Labour force: 7,4 million, Services: 73 %; industry and commerce 23 %; agriculture: 4 %, Unemployment rate is 7,5 %

**Government**

Type: Monarchy

Constitution: Complete revision 1983

Branches: Council of Ministers (cabinet), headed by the president of the council (prime minister). Legislative power: bicameral parliament; 150 members Chamber of deputies, 75 members senate. Judicial: independent constitutional court and lower magistracy

Subdivision: 13 provinces

Suffrage: Vote for government, province and municipality over 18

## 2. FINDINGS OF NATIONAL/REGIONAL INVESTIGATION OF FOOD WASTE AND FOOD RECOVERY

Data, figures and statistics of the waste generated (if data are available) and of existing practices for recovery by your own investigation on national level, for example by desktop research, from internet and from publications, from official statistics and so on.

Everyday consumers throw away food that is still edible. In the Netherlands is a food waste of 50 kg per person per year. These are costs about 155 €/person and ca. 8 till 11 % of the food which the consumer buys are thrown away.

The Top 3 products that thrown away

- Rice: 40 %
- Pasta: 25 %
- Bread: 20 %

The economic value of food is big. For the food industry (incl. supplier) means this sales about 42 mrd. €/year.

In addition to transport and living is food waste the biggest environmental impact. The vast bulk of food lost in production (10 – 20 %), industry (2 – 10 %) and retail (3 – 6 %). In case are round about 75 – 90 % fresh products.

However a possible cause where little research has been done is the role of promotions of food in the supermarket. The ministry of EZ (Economische Zaken/Economic Business) follows the goal to reduce the food waste about 20 % until 2015 in the Netherlands. They are going to do this in three steps:

- Supply chain efficiency (to agree the elements better on each other)
- Re-use the food which is thrown away
- Avoid that the consumer and the supply chain members thrown food away e.g. due to a longer shelf life

Source: <http://www.milieucentraal.nl/themas/milieubewust-eten/voorkomvoedselverspilling>

<http://www.voedselverspilling.com/FactsheetVoedselverspilling.aspx>

Food packaging plays an important role in carrying food and drink from production sites to the consumers, and environmental aspects of this packaging receive considerable attention. As the functions of packaging are derived from the actual food requirements, environmental aspects of packaging should be compared with those of the food for a balanced optimization of environmental impact. The outcome of such combined analysis is illustrated with a macroscale analysis of the actual food supply situation in The Netherlands. An 'overall' survey of this system is used to indicate important interrelations between the subsystems and to

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estimate the order of magnitude of the environmental impact of each part of the system. The major environmental effects of the total food supply system and both impact and influence of the packaging subsystem are quantified in mass and energy terms. It is concluded that more attention should be given to matching the actual and varied demand of different size consumption groups, and suggestions are given for effective incorporation of environmental constraints into product development and packaging design.

Source: <http://onlinelibrary.wiley.com/doi/10.1002/pts.2770070302/abstract>

The objective of this study is to examine a possible relation between promotions of food and food waste. In addition, a number of sub-questions are examined. Firstly it is examined what the relation is between frequently purchasing promotions at the supermarket, impulse buying tendency and food waste. Also it is examined if impulse buying tendency moderates the relation between purchasing promotions and food waste. Thirdly it is examined if there is a relation between the personality traits extraversion, conscientiousness and openness to experience regarding food waste. Lastly it is examined if impulse buying tendency moderates the relation between personality traits and food waste. This study is exploratory. To answer the research questions an online-survey was used. The online-survey generated a response of 80 percent (N=336) and consisted of consumers in the age of 20 up to and including 55 years. The consumers are families with at least one child living at home and are responsible for the majority of food purchase for their own household. For the sample a panel of CentERdata was used. The main finding of this study is that no unequivocal evidence was found that there is a relation between unplanned purchasing promotions of food and the degree of food waste. However, it appeared that consumers who purchased one or more additional products because of a temporary price reduction, waste more food in general. Consumers indicated as reason “the product was on promotion” as the reason for their unplanned food purchase. There is a consistent but weak correlation between the amount of unplanned purchases and food waste. When more consumers purchase unplanned products, the degree of food waste appears to increase. Besides when the impulse buying tendency increases, the waste of food also increases. Unplanned purchases especially increase the degree of food waste among consumers with a high impulse buying tendency. Approximately one third of the waste behavior was explained by socio-demographics, purchase-related behaviors and impulse buying tendency. It is concluded that there is no convincing evidence that there is a relation between promotions of food and food waste, also waste behavior is difficult to explain. Despite the lack of a direct relation, it can be

suggested that promotions play an important role in waste behavior. Although the relationships found in this study are very weak, unplanned purchases appear to be a cause of food waste. And consumers with a high impulse buying tendency waste more food. Further research at the other two thirds of unexplainable possible causes is necessary to explain waste behavior.

Source: <http://essay.utwente.nl/62444/>

### 3. EXISTING MATERIALS IN YOUR COUNTRY

There is a federation of food banks in the Netherlands called “Voedselbank Nederland” which connects five food banks in the Netherlands.

Apart from this announcement are some campaigns which depends on the participation of all of us: consumers, families, schools, kids etc. Therefore the Netherlands react to food waste by organize some campaigns:

#### **No Waste Network:**

There works the government together with the companies for less food waste. Via a network is there the possibility to ask e.g. the industries, supermarkets or farmers to get information for each other.

#### **Eten is om te eten:**

This campaign shows how you less food waste generate. A food Centrum gives information about food waste and point out how you better can buy the food and how you feed a perfect storage at your home.

#### **GreenBrains:**

GreenBrains brings knowledge from different universities/partners together. The ambition is to help entrepreneurs and find possibilities for knowledge and innovative questions. They share knowledge about food wastage, re-evaluation, food banks etc of a website: [www.groenkennisnet.nl](http://www.groenkennisnet.nl)

#### **Hoofdstad van de smaak:**

This year is Regio Venlo the capital city of taste. The whole year should taste-activities be organized and every month are other regional products interesting. Entrepreneurs should be initiative and participate the whole year. Apart from that are 10 films coming on TV and therefore should also the kids learn a lot.

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## 4. PRELIMINARY FINDINGS OF NEEDS ANALYSIS

### Charities

#### 4.1. Methodology

- 4.1.1. What was your research methodology in getting data from charities? Please describe in detail (eg. where you got the list of charities from, how did you contact them, how did they provide data etc.)

We did an online research where the charities in the Netherlands are and had personal knowledge. We list them in an Excelsheet and formulate a letter. After that we contact them by mail or telephone and send them the link for the questionnaire with the request to fill it in. Apart from that we had one interview with a food bank and the others provided the data by mail and the online questionnaire.

- 4.1.2. How easy was it to get information?

The person we did the interview with was very friendly, open and wants to help us and the whole project so he gives us a lot of information and this was easy. The response from the questionnaire was quick because it reflects their own field of work and therefore the high interest.

- 4.2. What is your general impression: what are the major fields where they need development, learning?

After the evaluation and the interview we saw that there is a lack of trust and the information where and how to give the donation. So the major fields where they need development is the possibility to approach the food retailers and co-work with them. The personal interview shows that they are very interested in the programme and wants to learn more and therefore advance/improve the environment.

- 4.2.1. What are those they are really interested in, keen on learning about?

Customer Service Relationship and co-work with the retailers.

- 4.2.2. What are those that they already know very well and do not need to learn about?

How to organize efficient transport of food donations

### Companies

#### 4.3. Methodology

- 4.3.1. What was your research methodology in getting data from companies? Please describe in detail (eg. where you got the list of companies from, how did you contact them, how did they provide data etc.)

We did an online research where the companies in the Netherlands are and had personal knowledge. We list them in an Excelsheet and formulate a letter. After that we contact them by mail or telephone and send them the link for the questionnaire with the request to fill it in. Apart from that we had two interviews with companies and the others provided the data by mail and the online questionnaire. After first unsuccessful attempt we try it again and get the response.

#### 4.3.2. How easy was it to get information?

The persons we did the interview with were very friendly, open and wants to help us and the whole project so they give us a lot of information and this was easy. The response from the questionnaire was not so quick like this from the charities because it is a sensitive topic and the companies are not open to configure their donation. They don't want to have a bad image.

#### 4.4. What is your general impression:

They have systems to track the quantity and know exactly who is responsible for food waste.

##### 4.4.1. What are the major reasons for producing food waste?

The main reasons are in the own production. In the primary processes the process losses.

##### 4.4.2. What are the major obstacles for getting food waste to people in need?

Major obstacles are the transportation closed to the refrigeration and the communication and coordination because you don't know how and why food waste is generated and how much it really is.

##### 4.4.3. What are those they are really interested in, keen on learning about?

Food safety and security in food donation: tips and best practices  
Information about charity organizations/food banks

##### 4.4.4. What are those that they already know very well and do not need to learn about?

Focussing on the decrease of food waste with a better communication through the charities so that they get the food but anonymous!

We did one interview with a food bank and one interview with a retailer. So we get a lot of personal information, both positive and negative. Positive was that they are willing to reduce the food waste and give the edible food to people in need. Negative was e.g. that the companies are afraid that the charities know their name. They don't want to be named in addition that the others know that they have 'overproduction'. Apart from that they are doubt about if they have to use an e-learning program, because they can't imagine who this works. They don't want to do something formally, like the e-learning. They are thinking it's better to use the contacts and be informal.

Our experiences of good practices are that in our neighborhood the products from ZON Fresh Park and auctions in the Veiling Venlo are given to food banks in the region. An important aspect is the relation between each other. For example live the workers in another village than they are working. But they explain the contacts and do it on a social/informal way where they don't need their own company of food bank. They do it on their own and the companies allows it. This shows that they are interested in the food waste and the social agreement, but they believe in an informal organization and structure.

We get 21 answers to the questionnaire (16 suppliers and 5 food banks/charities) and it was conspicuous that they are similar. For example are the biggest food distribution

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charities in the Netherlands the food banks. This means that the companies who answered our questionnaire are willing to spend the edible food. Apart from that the salvation army and the red cross are important, too. It's remarkable that they don't know which conditions they receive for tax reduction. Maybe is this a reason why food waste is so high. Furthermore they have a social attitude in relation to the developing of food waste treatment activities. They want to find more charities of organizations to which they can donate the food but they are don't know how to contact them.

The companies and food banks have a trustful relation to each other. This means that the companies don't monitor the charity where the food is given. This was the vast bulk of answers, too. But one said that they check the food safety circumstances. Summarized shows this that the cleanness is important, too. They think about the consumers and that the food also in this step of 'sale' must be edible and don't be ridden by germs.

Remarkable was that some companies deliver the food to the charities. This also shows a social streak. This gives positive reaction in addition to the company and the Maatschappelijk Verantwoord Ondernemen (MVO = Social Business Liability). The [Organisatie voor Economische Samenwerking en Ontwikkeling](#) (OESO = Organisation for Economic Cooperation and Development OECD) has given possibilities for social business liability. These are directives for companies about working which are conducted in 2010 in ISO 26000.

Considered to one of the last questions fluctuate the quantity of edible food waste per week. It goes from 1 kg – 500 kg. The questionnaires don't show the dimension of the companies. But it is important to do more research for the further deepness. In general it is important for the companies to get tips and best practices and they are willing to try an e-learning program.