

A young woman with curly hair and freckles is looking into an open refrigerator. The refrigerator is filled with various food items, including a bowl of red tomatoes and a tray of cookies. The lighting is warm and focused on the woman's face.

LET'S NOT WASTE FOOD



Nordic Council
of Ministers

LET'S NOT WASTE FOOD

Youth outlook on household food waste

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INTRODUCTION

Food waste represents a multifaceted challenge that entails financial cost, severe environmental impact, risks to food security, and deepening social inequality. Throughout the region, young people are concerned about these challenges but at the same time waste a significant amount of food in their home. This shows an important attitude-behaviour gap influenced not only by young people, but also by the food system around them.

To address this, the Nordic Council of Ministers office in Lithuania and the Kaunas University of Technology Food Institute partnered with Anthropos, Copenhagen Business School, and Natural Resources Institute Finland to implement the [Let's Not Waste Food project](#).

The aim of the project was to team up with young people (aged 18-26) and identify situations and areas where food waste is generated, and to find ways for all stakeholders to help young households waste less food. In 2021-2022, a literature review on youth food waste habits and behaviour change was carried out. It included both scholarly articles on topics such as behavioural or food safety science as well as existing recommendations, such as ones published by the EU, national institutions or by NGOs. The review was soon followed by nine focus group interviews with young people who live on their own across three Nordic and Baltic countries (Denmark, Finland, Lithuania). This allowed to analyse situations where young people waste food, crystalize priorities and highlight specific recommendations that young people would see as most helpful.

The following guidelines are the summarised results of the analysis and can be seen as a guide for young people who want to reduce food waste. The structure follows the challenges presented by the young people and includes suggestions for action or further research for all stakeholders, including the retail sector, policymakers, NGOs, educational institutions and others. The opinions of the research participants are presented as direct and unedited citations that were collected during the focus group meetings. The solutions were developed by identifying the young people's needs, and by taking their opinions and suggestions into account. In cases where the young people did not suggest a solution and only discussed a problem, the information was supplemented by suggestions from academics and other stakeholders (food system actors, governmental and non-governmental organisations). At the end of each section, there is a range of best practice examples for young people and the involved stakeholders who want to take an extra step toward reducing food waste.

While our project partners are continuing their academic work and hope to present more in-depth findings to the stakeholders and the scientific community soon, more work is needed by all the stakeholders to address the current challenges. This paper is an invitation from the project team and from young people to act more urgently to address the problem of food waste.



Photo: iStock

MEASURING HOUSEHOLD FOOD WASTE

One way to change young people's attitudes and behaviour is to show them how much and what kind of food waste is generated in their households. As one of the possible solutions, ways to measure food waste (such as apps) could help young people evaluate the amount of food being wasted and how much it costs, which in turn would encourage them to find ways to reduce food waste and save money. When measuring food waste, young people should also be able to compare their own food waste (amount, components and monetary value) to that of other households.

YOUNG PEOPLE SAY

"...when my girlfriend and I moved in together, she noticed that I was throwing a lot more food in the garbage than she was. She suggested that every time I throw food out, I put money in a bowl and see how much it comes to. The bowl is full now. Then I started thinking that I had to do something..."

– Finnish participant

"...anyway, it all started when I moved ... to live alone. At first you buy products that seem cheaper if you buy a bigger package ... which you end up not using all of, and it turns out... that so much money is wasted..."

– Lithuanian participant

CO-CREATED SOLUTIONS FOR:

RESEARCHERS:

- Developing various methods and tools for measuring food waste (amount, components and monetary value), such as an app, a diary etc.
- Collaborating with actors from the food chain to develop effective and user-friendly tools.

NGOs:

- Suggesting various methods for measuring food waste.
- Encouraging people (through marketing/communication) to measure their food waste daily.

POLICYMAKERS:

- Promoting financial incentives and funding programmes to develop methods for measuring food waste that are easy to use.

PRIVATE SECTOR:

- Supporting the development of methods to measure food waste, together with financial incentives and expertise if needed.
- Providing expertise in the development of the measurement methods.

INDIVIDUALS:

- Using methods for measuring food waste, to get every household to evaluate their production of food waste.
- Giving feedback for researchers/developers about the measurement tools and efficient reduction methods.

EXAMPLES OF GOOD PRACTICES:

- [Simple food waste calculator](#), which at the end will compare your result to Finland's average amount of edible food waste. There are also valuable tips on how reduce food waste in your home [available in the English and Finnish languages]

OUTCOME:

- Virtual and non-virtual methods for measuring food waste help young people evaluate the amount and monetary value of their food waste.



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VARIETY OF PACKAGE SIZES

Many food products do not come in small sizes, which means that single people often have to buy more than they need. This can increase food wastage at the household level. Discounts also tend to focus on larger package sizes or buying more items at once, when the reduced price acts as visual stimulus that catches the buyer's attention at the store. It is more important to calculate how much of the purchased product will be used and how much will be turned into waste. A wider variety of package sizes would enable young people to purchase the optimal amount of food.

YOUNG PEOPLE SAY

"...I buy large packages of potatoes because the price per kilo is lower compared to small packages, but because I live alone, I don't use them as fast as I should..."

– Finnish participant

"...also, [there are] good offers on those big packages, so sometimes you buy them, but then you don't manage to use it all..."

– Danish participant

"...it turns out that a lot [of products] are only sold in large quantities, large packages. If they were smaller or there was the option of buying loose ... then there wouldn't be so much waste..."

– Lithuanian participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Educating young people on how to correctly calculate the price of consumed food by drawing special attention to the price of the food that was wasted from the same package.
- Organising social campaigns on how and where to choose the right package size.

RESEARCHERS:

- Working with businesses to design and develop various food packages with different portion sizes.
- Developing new packaging modules for food producers to introduce them to the packaging equipment that is available.

POLICY MAKERS:

- Promoting the development of new educational courses on how to calculate the real price of food by evaluating the price paid, the amount consumed, and the amount that goes to waste.
- Creating initiatives for investing in new packaging solutions that allow for longer expiration dates and the use of less packaging material (young people simultaneously care about food wastage and the impact on the environment).
- Promoting innovations for smart packaging, where the package shows how fresh the food is.

PRIVATE SECTOR:

- Offering young people a wider variety of food package sizes.
- Investing in new food packaging solutions with regard to the needs of young people.
- Adopting smart packaging that allows young people to evaluate the freshness of their food at home.

INDIVIDUALS:

- Selecting the most suitable package size to be sure that all of the food purchased will be consumed.

EXAMPLES OF GOOD PRACTICES:

- Shops that sell a range of packaging sizes or products with no packaging when consumers can choose their own container, such as [BioPapa in Lithuania](#) and [LØS market in Denmark](#)

OUTCOME

- Improved ability among young people to calculate the real unit price of food consumed compared to the purchase price per unit.
- Selection of the right amount of food for the needs of their household.



Photo: Ritzau / Scanpix

EDUCATION ON WHETHER FOOD IS EDIBLE

The decision to throw food away depends on several factors, such as any health issues the person may have, the price of the product, quality, and so on. Young people have different criteria for determining food quality and whether it is still edible, including labels, sensory perception, and the price of the product. In addition to the expiration date, some young people also rely on their sensory perceptions to decide if a certain food is still edible. However, there is often uncertainty about whether eating food after the expiration date is safe or not. Better knowledge of how to tell if food is edible, along with better buying, storing and cooking skills, could help reduce the amount of food that is still safe to eat but is discarded nonetheless.

YOUNG PEOPLE SAY

"...if there is mould on one end and the other end is fine ... I would probably do that [throw it out] with a carrot or something like that ... but not with sweet potatoes because I think they are too expensive..."

– Danish participant

"...I trust my sensory taste receptors to assess whether the product is really okay to use"

– Lithuanian participant

"...in the case of best before date products, I smell and taste them before them throwing away..."

– Finnish participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Providing young people with more information about how to assess the appearance, smell and texture of the food, to decide whether or not it is still good.
- Organising classes for young people, to teach them how to reduce food waste and learn cooking and planning skills according to their needs.

RESEARCHERS:

- Developing and validating new schemes for extending food expiration dates and introducing them on front-of-package labelling. For example, adding information about how to understand if the food is edible or not by using sensory perceptions.

POLICYMAKERS:

- Promoting financial incentives to develop the new labelling schemes mentioned above and initiatives to fund educational programmes, and to produce educational materials for young people.

PRIVATE SECTOR:

- Promoting initiatives, for example, developing front-of-package labelling explaining how to extend the food expiration dates.
- Promoting educational content on how to evaluate and prolong the edibility of food, which could be disseminated in the supermarkets or on the supermarket websites.

INDIVIDUALS:

- Searching for information and learning how to prolong the edibility of food, as well as how to assess the appearance, smell and texture of the food to decide whether it is still good.

EXAMPLES OF GOOD PRACTICES:

- Lithuanian government page, State Food and Veterinary Service, with information on every type of food and its spoilage characteristics [in Lithuanian]
→ vmvt.lt/maisto-sauga/maisto-produktai?
- Two blogs that show how to tell if food is edible using sensory perceptions
→ tasteofhome.com/collection/how-to-tell-if-food-is-spoiled
→ self.com/story/how-to-know-if-food-has-gone-bad

OUTCOME:

- Young people would have more accessible information at shopping centres and educational institutions and in the media that would help them decide if a product should be thrown away or can still be consumed. Good cooking habits and skills would help prolong food edibility. This would reduce food waste among young people in general.



Photo: iStock

FOOD SHARING

Young people often have hectic work, study and life schedules with a lot of unplanned events, which makes menu planning difficult. During the focus group discussions, some participants suggested that eating together or sharing food with others may reduce food waste in unforeseen situations. Food sharing spaces – live or virtual – could be an excellent solution for creating broad networks of people with similar attitudes toward food. Many sectors could play an important role in ensuring such spaces and practices. A food sharing network should involve as many participants as possible to ensure that someone will use the food surplus offered by other participants.

YOUNG PEOPLE SAY

"...we buy food for a longer period, and then sometimes I have to leave unexpectedly because of my job..."

– Finnish participant

"...it made me join several food clubs ... these social things where people eat together..."

– Danish participant

"...I think that sometimes the problem is that when I only cook for myself, some of the food and products are left unused, so it seems to me that a good solution [would be] to share it with others..."

– Lithuanian participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Building food sharing spaces (physical or virtual) in communities and in cities.
- Promoting food sharing via social campaigns, as well as various communication channels such as social media, news outlets, etc.
- Setting up food sharing spaces in dormitories.

RESEARCHERS:

- Developing guidelines for the society on the food safety requirements for food sharing with other households.

POLICYMAKERS:

- Promoting financial incentives and programmes to fund the building of food sharing spaces for NGOs and communities, without forgetting interesting start-up ideas.
- Providing guidance and clarifications for the existing rules and laws on food safety, in order to ensure that all food that is shared is safe to consume, and to ease the process of creating food sharing spaces.

PRIVATE SECTOR:

- Promoting initiatives for food sharing or developing food sharing apps to aid the process.

INDIVIDUALS:

- Giving food to others, as well as sharing it when leaving home for a longer period.

EXAMPLES OF GOOD PRACTICES:

- Food Sharing Platforms in [Denmark](#) and [Estonia](#)
- Community Fridges in [Helsinki](#), [Tartu](#) and [Copenhagen](#)
- Food Sharing Applications, such as [Olio](#) and [Too Good To Go](#)
- Social Media Groups, such as [Zero Waste group](#) on Facebook in Lithuania and Food Sharing group in [Lithuania](#) and in [Tartu](#)

OUTCOME:

- Young people could share food surpluses to reduce food waste.



Photo: iStock

LEFTOVERS AND FOOD SURPLUS WHEN EATING OUT

Eating out is a special occasion, where young people tend to generate food waste because there is more food served than they can eat. The young people suggested two solutions – either they should eat everything or, if that is impossible, they should take the leftovers home. Some criticism was addressed toward the responsibility of catering services regarding food waste during the focus group discussion. The young people recommended encouraging a “doggy bag culture”, as well as defining the responsibilities of the catering sector with regard to food waste. It was mentioned that doggy bags will only work if the amount of food that is left over is worth taking home. The research participants also had qualms about taking leftovers home because of the price and environmental impact of the packaging. Thus, more sustainability regarding the packaging is necessary as well.

YOUNG PEOPLE SAY

"... I ask for a box and everything is fine..."

– Lithuanian participant

"... they [restaurants] could easily just give it away... they [supermarkets] throw out a lot – and the same goes for restaurants..."

– Lithuanian participant

"...it's just not worth getting a doggy bag, because the packaging itself costs money..."

– Lithuanian participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Initiating social campaigns focused on bringing your own reusable food containers to restaurants in order to take leftovers home.

RESEARCHERS:

- Developing guidelines about the main food safety principles at home for storing and eating leftovers obtained when eating out.

POLICYMAKERS:

- Revising and making the requirements for take-away container hygiene more flexible, to encourage young people to use their own containers.
- Ensuring that legislation is passed regarding liability for food poisoning when customers bring their own containers to a restaurant.
- Legislating requirements for food waste controls in the catering sector.

PRIVATE SECTOR:

- Asking people if they would like to take their leftovers home.
- Selling reusable containers, or offering a container deposit system, and advertising the option for taking leftovers home or ordering take-away food.
- Offering more options for selling the surplus food for a lower price at the end of the day, to keep it from being thrown away.

INDIVIDUALS:

- Taking your leftovers home and using your own reusable food containers.

OUTCOME

- Establishing the process of taking leftovers home and storing them in sustainable packaging as a social norm.



Photo: To Good To Go

PLANNING FOOD AND LEFTOVERS

Food planning is one of the most commonly suggested solutions when it comes to food waste. Planning meals is important, but so is thinking about what you can do with leftovers. Education and practical advice on how to use leftovers and ensure a variety of dishes could be very helpful. Young people have many different goals related to food, including enjoying their food and eating different meals every day. The focus group discussions revealed that young people find it hard to not waste food and not get bored by eating the same meal several days in row.

YOUNG PEOPLE SAY

"...I want to eat different kinds of food, and sometimes it's challenging to eat all that food [before it goes bad]..."

– Finnish participant

"...it's very hard for us to eat those leftovers because what we want usually changes every day – one day you want something with a lot of vegetables, the next day you want something with a lot of meat..."

– Lithuanian participant

"... and then you might not be at home to eat the leftovers because you just had other plans, so leftovers sometimes also go to the trash..."

– Danish participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Creating guidelines for food planning, keeping in mind the needs of different groups in terms of age and lifestyle. For example, going food shopping once a week is not necessarily good advice for a young person with an unpredictable schedule.
- Providing more information or suggestions on how to plan meals during the week to avoid eating the same food (repetition of the same dishes).
- Developing guidelines for weekly menus, and what and how many products young people need to use up everything, including leftovers.
- Organising food planning events for young people.

RESEARCHERS:

- Developing guidelines for young people about the main food safety principles at home for storing and eating leftovers.

POLICY MAKERS:

- Promoting financial incentives and programmes to develop advice tailored to different lifestyles, as generic advice is not right for everyone.

PRIVATE SECTOR:

- Diversifying the existing information in the media on how to avoid food waste based on young people's lifestyles.
- Preparing shopping lists for two, three or seven days with recipes for how to use the food and its leftovers, and for eating a variety of interesting and healthy dishes.

INDIVIDUALS:

- Looking for information and choosing the food planning strategy that is best for the needs of their household.
- Trying to measure the amount of food needed for one dish and buying just that.
- Purchasing food more often (which is also a good option for people with unpredicted schedules).
- Not only planning the food needed to prepare a meal, but also thinking about what to do with possible leftovers.

EXAMPLES OF GOOD PRACTICES:

- The app [For Resten](#) helps people give food leftovers a new life in exciting dishes [in Danish]
- [CozZo](#) is a food, home and personal supplies management app that helps avoid food waste by tracking what you have and when it expires.
- Many of supermarkets suggest apps or e-pages with possibility to plan menu from your leftovers an example in [Lithuania](#)
- A [blog](#) that highlights examples of how to use leftovers

OUTCOME

- Young people could plan their food according to their preferences and lifestyle, and this would help avoid food waste.



Photo: To Good To Go

REDUCING FOOD EXPIRATION DATE STIGMA

In some countries, there is a stigma related to consuming food that is close to or past its expiration date. Therefore, young people need to be persuaded that it is okay to buy and consume products that are close to their expiration date. This will result in saving money (since these products are often discounted), as well as an understanding about how these products will be used, and that may contribute to reducing food waste. Best practice from other countries includes social movements, marketing campaigns, or even attractive labelling for products that are close to their expiration date. Research has revealed significant differences between countries; this particular stigma was only mentioned by Lithuanian participants.

YOUNG PEOPLE SAY

"...saving food is generally considered something for people in a bad situation ... in Soviet times, people saved food because there was, I don't know, a deficit, [and people] had nothing to eat. During a war, people save food because they have nothing to eat, and people in poor countries save food because they don't have money..."

– Lithuanian participant

"...if my mum and I go to a shop, it's almost always with a list and we look at products on sale ... but I noticed that in our environment, many people don't know or just find it inappropriate to buy things on sale..."

– Lithuanian participant

CO-CREATED SOLUTIONS FOR:

NGOs AND EDUCATIONAL INSTITUTIONS:

- Initiating social campaigns to reduce this stigma.

RESEARCHERS:

- Initiating research to identify the root causes of the stigma in our society, and to find ways to solve or reduce the stigma.

POLICYMAKERS:

- Developing a strategy to communicate that buying and consuming a product on the last day of its expiration date is not only safe, but also saves the product from being turned into waste.

PRIVATE SECTOR:

- For products that are close to their expiration date, adding communication on the labels and shelf space, emphasising that these products are safe and suitable for consumption at the time of purchase.

INDIVIDUALS:

- Forming a new habit of checking whether the store has any products that are close to their expiration date among the food groups that they are shopping for.

EXAMPLES OF GOOD PRACTICES:

- Explicit explanation on how to distinguish between "best before" and "use by" with practical examples what to do when date has passed → toogoodtogo.co.uk
- Differences in date labelling → food.ec.europa.eu

OUTCOME:

- Understanding that products that are close to their expiration date are safe to eat, and that buying and consuming these products helps save food from being turned into waste.

AUTHORS

Food waste represents a multifaceted challenge that entails financial cost, severe environmental impact, risks to food security, and deepening social inequality. Throughout the region, young people are concerned about these challenges but at the same time waste a significant amount of food in their home. This shows an important attitude-behaviour gap influenced not only by young people, but also by the food system around them. These guidelines were written with the input by young people aged 18-26 from Nordic-Baltic region to identify situations when food is wasted and to find ways to help young households waste less food. Preparation of the guidelines allowed to crystalize priorities, identify best practice examples, and highlight specific recommendations for all stakeholders that young people would see as most helpful on their journey to reducing household food waste.

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Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland and Åland.

Nordic co-operation has firm traditions in politics, economics and culture and plays an important role in European and international forums. The Nordic community strives for a strong Nordic Region in a strong Europe.

Nordic co-operation promotes regional interests and values in a global world. The values shared by the Nordic countries help make the region one of the most innovative and competitive in the world.

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