



# Final Report

2017–2020



Text: Matvett by Anne Marie Schrøder, Erik Vold and Anne-Grete Haugen

Translation: Paula Capodistrias

Layout: Anne Cathrine Haug, Salt Concepts AS

©KuttMatsvinn2020



4

Preface by the steering  
group and Matvett

-----

6

KuttMatsvinn2020  
in a nutshell

-----

10

Project goals  
and results

-----

12

Food waste  
per sector

-----

17

Causes and  
challenges

-----

18

Tools and  
materials

-----

20

Measures  
by Matvett

-----

22

Best practices

-----

24

Best practice from  
nursing homes

-----

26

Best practice model  
for collaboration

-----

28

Why collaboration is  
important

-----

30

Impacts from  
KuttMatsvinn2020

-----

32

Evaluation of  
KuttMatsvinn2020

-----

34

The way forward,  
together

-----

37

Ten further  
recommendations

-----

38

Acknowledgments

-----



**Stig Jørgensen**  
*ASKO Norge*

When NorgesGruppen and ASKO took the initiative to start the project KuttMatsvinn2020, it was on the basis of the sustainability challenges the hospitality industry, together with its suppliers and wholesalers, were facing. Other actors also saw the potential in collaborating to solve these challenges, and so Unilever, BAMA, SiO Mat and Drikke, Nordic Choice and Scandic joined the initiative.



**Morten Malting**  
*Scandic Hotels*

KuttMatsvinn2020 is a project that links concrete sustainability measures with good finances. That in itself is a good reason for spending time and resources on such a project. Furthermore, the project is also about making visible our commitment to climate-friendly solutions through active action.



**Steffen H. Greff**  
*SiO Mat og Drikke*

KuttMatsvinn2020 showed what is possible to achieve when several actors come together to create positive change. Through joint efforts, the members of the project put the fight against food waste on the agenda. But the most important result coming out of the project, was creating a common understanding that the effort made by everyone has a collective impact, both in reducing greenhouse gas emissions and to improve their own finances.



**Jon Eskedal**  
*BAMA Storkjøkken*

Four years after the project was launched, it is satisfactory to confirm that the constructive discussions within the steering group and the good dialogue with Matvett as a project manager, have showed such positive results: 35 percent of the hotels, 44 percent of the canteens and as many as 57 percent of the restaurants involved in the project, cut their food waste with a minimum of 20 percent. This is formidable and shows great potential.



**Bjørn Jørgensen**  
*Unilever Food Solutions*

In addition, the project secured the development of useful tools to combat food waste. Furthermore, a lot of work was done in identifying the different sources of the problem. The latter is crucial in finding the right instruments to reduce food waste.

But one of the most gratifying things for us in the steering group is that KuttMatsvinn2020 contributed to a change of attitude which will be of great importance in the years to come. Everyone shared the responsibility to contribute to the best possible resource utilization. There are environmental, ethical and economic reasons why we should continue this important work.





*Anne-Grete Haugen*  
Anne-Grete Haugen

*Anne Marie Schröder*  
Anne Marie Schröder

*Erik Vold*  
Erik Vold

### An exciting journey

After four enlightening years as project manager for KuttMatsvinn2020, it is time to wrap it up. Through this time, we helped a new industry identify many opportunities and challenges. First stop on the journey was to find out where the “shoe pinched”, that meant evaluating the extent of the food waste problem, exploring the reasons for it, and identifying the industry’s need and expectations from both Matvett (the food and hospitality industry’s organization to prevent food waste) and the project.

### Many small logos

These were four busy years with KuttMatsvinn2020. We were probably not aware of how challenging it was going to be to recruit participants and get them up and running, while at the same acquiring the necessary insights and developing a toolbox for them. The first year of the project, the participants’ logo barely filled a plate, by the time we finished, the logos represented 2500 eating places associated with the project. The broad participation from leading hotel- and canteen chains, restaurants, convenience stores, bakeries, municipalities and amusement parks and vendors, provided a very special power to the work of the project.

### Engaged employees

A critical success factor was to engage employees. Without their efforts, we would not have been able to succeed with the project. Establishing good routines in the workplace was crucial. Many of the results achieved come as a result of good training of employees, better design of the menu and closer collaboration with suppliers.

### Need to involve guests to achieve the goal

We are proud to have led the implementation of this important project together with the steering group and participants. We are humbled by the footprint the project has set in the industry and we are convinced that KuttMatsvinn2020 has contributed much more than what the results of this report shows. The participants have proven that it is possible to achieve good and quick results and overall, we have contributed to savings by the millions. Despite this, the journey is not over. We see the potential to cut even more food waste and recruit even more participants. When in 2030 food waste is halved, it will mean that we have succeeded in bringing the guest on board. Together, we will be able to proudly tell our children and grandchildren that we were involved in launching a whole new sustainable era in the hospitality industry.

# KuttMatsvinn2020 in a nutshell

The idea of the project came in the spring of 2016, but the project was not formally established until January 2017. Far more participants than the ones involved from the beginning ended up joining KuttMatsvinn2020. This was a result of ever-increasing awareness of food waste in the industry, access to tools for success, increased expectations from guests and a desire to participate in a joint venture that the industry could be proud of. With KuttMatsvinn2020, the Norwegian hospitality industry put the issue of food waste on the agenda.



*KuttMatsvinn2020* was a 4-year project on behalf of the hospitality industry, which included hotels, restaurants, canteens, convenience stores, bakeries and public sector. The main purpose of the project was mapping and reducing food waste at the participating businesses. Suppliers from the food industry, wholesalers and group purchasing organizations also participated in the project, as these sectors are closely related to the hospitality industry in terms of product range, product supply and purchasing. The project was participant-funded.

## Establishment and organization

The initiative for KuttMatsvinn2020 was taken by NorgesGruppen and ASKO Servering when they decided to survey their customers on the sustainability challenges the hospitality industry was facing, in 2016. Food waste came out as one of the big challenges, but also as an area where the industry saw the potential of cooperating to do something about it. Soon after, companies like Unilever, BAMA, SiO Mat & Drikke (student canteens and restaurants), Nordic Choice Hotels, Scandic Hotels and Matvett came together to set up the bases for a joint industry project on food waste. In 2017, the project was launched at Norgesgruppen's "Customer and Supplier day" and Matvett took over the role as project manager, represented by Project Manager Erik Vold, Managing Director Anne-Grete Haugen and Communication Manager Anne Marie Schröder. The project was originally

intended to last for three years, but was extended for an extra year until 2020, by the request of the participating companies. This allowed the signing of additional agreements and secured activities for the last year.

## Research project to secure detailed mapping

NORSUS (formerly Østfold Research) had already mapped and analysed food waste in the food industry for many years and became an important resource for the project. Among other things, they participated with Matvett in the meetings with the steering group. Hanne Møller in NORSUS also led a research project on behalf of Matvett, called KuttMatsvinn2020 Research. Thanks to the research project it was possible to develop a system and a methodology for measurement and reporting of food waste from eating places, as well as to develop statistics on food waste from this sector. Mepex Consulting contributed with performing waste composition analysis of the food waste at some hotels, canteens and restaurants, which gave the project important insight into what the food waste consisted of, in what stage of operations it occurred and what the challenges were. The institute Nofima was also involved as a research partner and has, among other things, developed a guide on safe reuse of food together with Matvett. You can find a separate report from the research project, which was completed on des. 2019, in the reference list at the end of this report.





The project group at the launch of KuttMatsvinn2020 gathered at NorgesGruppen and ASKO's "Customer and Supplier Day" in Tønsberg in January 2017. From the left: Jarle Birkeli from Unilever, Anne Marie Schrøder from Matvett, Per Christensen from SiO Mat og Drikke, Morten Malting from Scandic, Øyvind Motrøen from NorgesGruppen, Stig Jørgensen from ASKO servering, Anne-Grete Haugen from Matvett, Cathrine Dehli from Nordic Choice, Signe Bunkholt Sæter from NorgesGruppen and Snorre Jordheim Myhre from NorgesGruppen.

## Goal

The steering group and Matvett set two goals for the project; contribute to a 20 percent reduction in food waste and recruit at least half of the hospitality industry, measured in turnover. The reduction target for food waste was ambitious and based on what the members of the industry group thought was possible from their own experience and interviews with some other key actors. In addition, the reduction target was in line with the long-term target to halve food waste by 2030 in the Norwegian "Negotiated Agreement on reduction of food waste", which applies to the entire supply chain for food.

## Financing

The participants in the project contributed to the necessary financing of KuttMatsvinn2020. The size of the participants' contributions was based on their turnover. The sum of the contributions covered the operation of the project, the development of tools and the implementation of various activities. The project KuttMatsvinn2020 Research received funding from the Norwegian Research Council to develop statistics for food waste in the hospitality industry, which made it possible to spend the necessary resources to learn about the volume and causes

of food waste and follow-up the development from year to year.

## Results

At the launch of the project, it was agreed that Kutt Matsvinn2020 should contribute to establishing a common method for measuring food waste, conduct public campaigns to raise awareness about food waste and develop an implementation package for the practical implementation of food waste reduction measures. The project achieved many milestones and below follows a summary of the most central results from the project:

### Establishing common methods for measurement

To be able to produce statistics on food waste in the hospitality industry, as well as to measure the impact of the measures over time, a common key indicator for the entire industry was agreed on: grams of food waste per guest. In addition, a common reporting system was established for the submission of food waste data. During the project period from 2017 to 2020 seven reports were published, with new businesses joining as the project progressed. Results and developments were documented and reported back to the industry throughout the project.

### **Toolbox for implementation of measures**

Amongst other things, the toolbox consisted of a training program, including courses and guiding material, with the goal of motivating employees to work with avoiding and reducing food waste. Most of the courses took place at the KIT Academy, ASKO's competence centre, but the course material was also made available online. In collaboration with NORSUS, a guide was developed for mapping food waste in the hospitality industry, which gave businesses a basic introduction to how they could practice systematic measurement of their food waste. A food waste calculator was also developed in collaboration with NORSUS, which enabled companies to calculate the annual effect of reducing their food waste in quantity, economic value and CO<sub>2</sub>.

### **Recruitment of participants**

To mobilize the industry to participate in KuttMatsvinn 2020, several recruitment activities were carried out, such as bilateral meetings with hospitality companies, participation and presentation of the project at industry meetings, agreements with group purchasing organizations to recruit their member companies to the project, participation at trade fairs etc.

### **Public campaign on food waste**

The goal of a public communication campaign was to set food waste on the agenda in the hospitality industry, as well as raising awareness and motivating guests to contribute to reducing food waste. Among other things, the project developed materials such as posters, table stands and buffet cards, short films for social media and "Goodie bags" for guests to be able to take their leftovers home. In addition, KuttMatsvinn2020 took the initiative for two annual campaign-weeks to set focus on food waste, which several of the participants joined. Feedback from surveys sent to the participants of the project shows that a large proportion of guests notice the campaign messages, and many become more aware of food waste.

### **Annual forums**

Two annual forums were organised with the goal of establishing an arena for the exchange of experiences, sharing of results, facilitating conversations and presenting new tools. These provided a good basis for how several players in the hospitality industry could meet to experiences and discuss their challenges.

### **Best practice**

After four years of increased attention, many of the participants have raised from word to action in the efforts to reduce food waste. Great work is done, and several new strategies are implemented. KuttMatsvinn2020 sat focus on good practice through the project's forums, Matvett's website, the project's Facebook group and other industry meetings. This served as good PR for several companies and as inspiration for the rest of the industry.

### **Collaboration with participating companies**

Several collaborative projects were carried out between Matvett and designated participants. Among other initiatives, these collaborative projects included creating increased awareness among guests through communication about food waste, testing of digital measuring tools and the concept «The best practice canteen». This was crucial in creating a good practice model to give recommendations to the rest of the hospitality industry.

### **International cooperation**

KuttMatsvinn2020 received increased international attention, especially in the Nordic region, but also in the EU via The EU Platform on Food Losses and Food Waste, of which Matvett, NORSUS and Nofima are members. Experiences from KuttMatsvinn2020 were also presented in international research projects where Matvett and NORSUS participated.





Professional forum in March 2017, held at the premises of the Confederation of Norwegian Enterprise (NHO)



## Main deliverables by KuttMatsvinn2020:

- Inspiring actors in the hospitality industry in Norway to put increased focus on food waste and work according to specific reduction targets, without the need for introduction of penalties or regulations from the authorities.
- Establishment of industry statistics. Previously, there were no statistics on food waste in the hospitality industry in Norway.
- More and more companies gained increased insight into their food waste, which also contributed to increased awareness among employees.
- Exchange of experience and cooperation towards common goals in the hospitality industry, including that between competitors.
- Broad support among several actors in the food industry, including a lot of positive media attention.

# Project goals and results

Together, the participants of KuttMatsvinn2020 achieved a 15 percent reduction of food waste. This is equivalent to 390 tonnes. The food waste reduction corresponds to 2,4 million EURO and 1400 tonnes of CO<sub>2</sub>equivalents.



The results include participants from hotels, canteens and restaurants only, which are the sectors from which we have sufficient data to be able to measure the development for the whole project period.

Comparable data is not available for convenience stores and the Institutional sector (nursing homes, hospitals, kindergartens, schools, etc.) Data for 2020 is not comparable due to the COVID 19 situation.

**15 %**

food waste reduction

**390**

tons of edible food  
saved from being wasted

**2,4 million**

is the value of food waste  
reduction in EURO

**1400**

tonnes of CO<sub>2</sub>  
equivalents saved

**36 %**

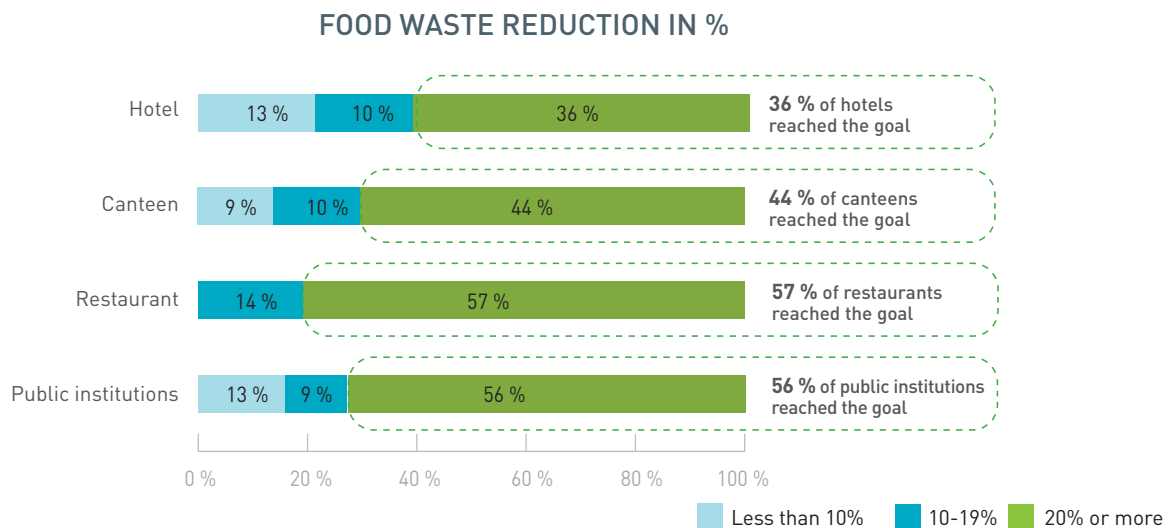
participation of the hospitality  
industry measured in turnover



**The project's goal** was for each participant to achieve a food waste reduction of at least 20 percent. Of all participating eating places that have provided figures from a minimum of two measurement periods, 46 percent have reached their goal. It is extremely positive that so many have achieved such good results, as we know that it has

been challenging to establish routines for measurements, in addition to many of the participants coming late into the project.

The figure below shows the proportion of businesses in KuttMatsvinn2020 which have achieved the goal per sector.



**The second goal of the project** was about recruitment. An ambitious goal had been set to recruit at least half of the hospitality industry, measured in turnover. This industry consists of different sectors such as restaurant, hotel, canteen/catering, bakery, convenience stores and the institutional sector, and these sectors were the target group for the project. When we calculate the share of the industry that has joined the project, the institutional sector is not included, because it cannot refer to turnover on equal terms as the rest of the industry. KuttMatsvinn2020 achieved participation from 36 percent of the hospitality industry. The sector with the best representation is hotels, with 66 percent participating in the project.

Although the project did not achieve the goal of recruiting at least half of the hospitality industry, we are very pleased with such broad participation. In total, the project was joined by 200 businesses representing 2500 eating places and a turnover of 35 billion NOK.

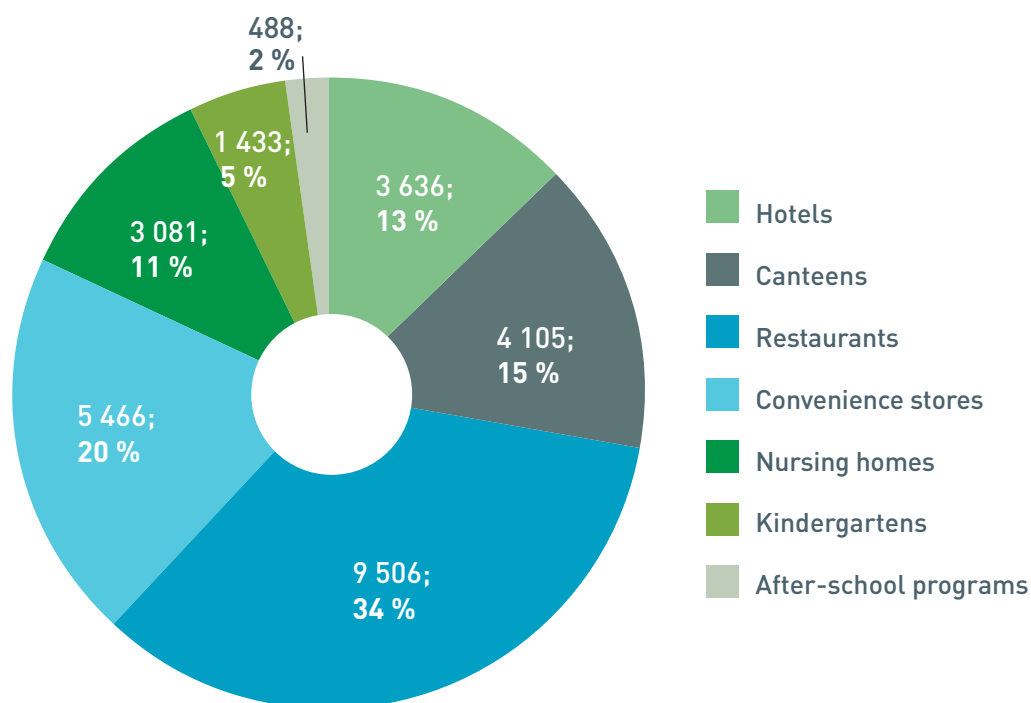
In addition to the sectors mentioned before, other institutional kitchens such as hospitals and municipalities, commercial boats, offshore platforms and amusement parks also joined the project. KuttMatsvinn2020 succeeded in hitting wide and achieving the representation of actors from many different sectors, which was a success factor that contributed to food waste reduction gaining a solid foothold across a large industry.

# Total Food waste per sector

The estimated food waste in the hospitality industry in 2019 was 27,700 tonnes and includes hotels, canteens, restaurants, convenience stores, nursing homes, kindergartens and after-school programs. Food waste amounts to a value of approximately 1.6 billion NOK and greenhouse gas emissions of 96,520 tonnes of CO2 equivalents.

*KuttMatsvinn2020* included a three-year research project called «KuttMatsvinn2020 - research », funded by the Research Council of Norway (2017- 2019), led by NORSUS and owned by Matvett. The goal of the

research project was to develop industry statistics and key figures for food waste in both private and public sector. Most of the figures presented in this report were developed as part of the research project.



FOOD WASTE PER SECTOR IN TONS

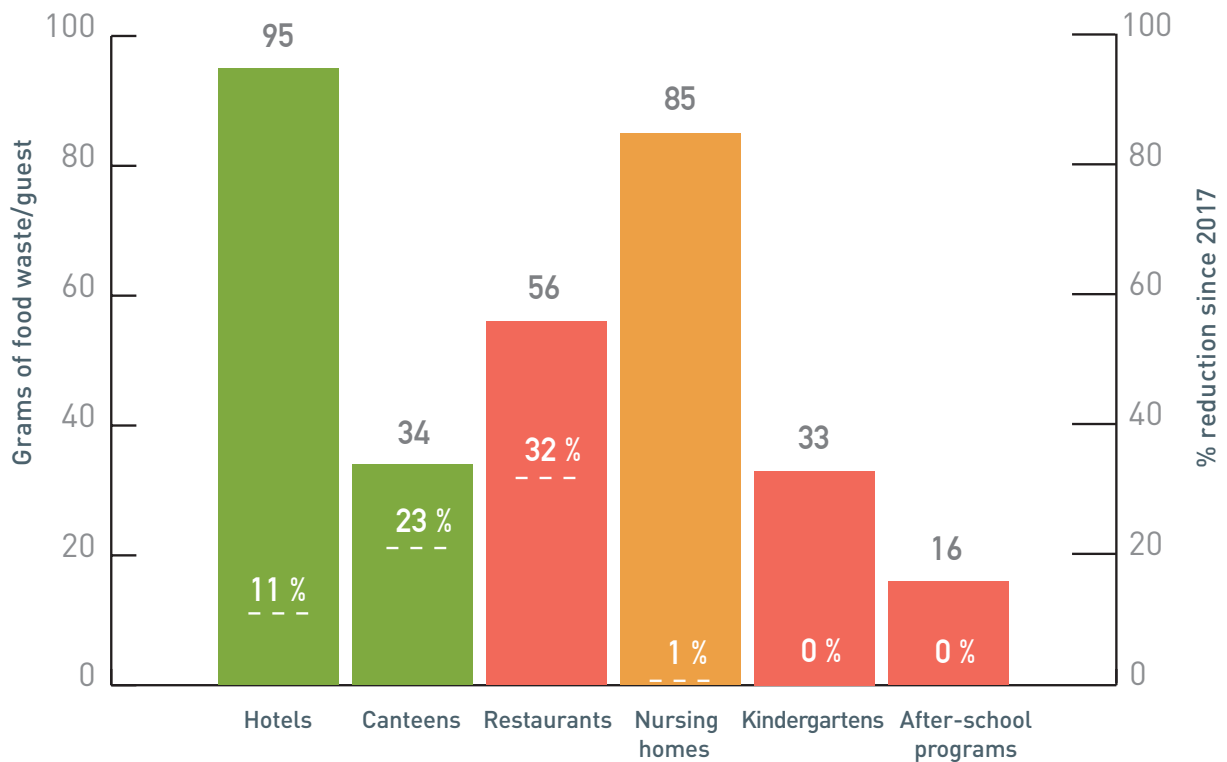


### Key indicator: Grams of food waste per guest

Participating eating places provided data on food waste and number of guests per day, twice a year. This made it possible for the project to calculate the key figure “grams of food waste per guest”.

The figure below shows the amount of food waste per guest in 2019 by sector and achieved reduction since 2017. Note that convenience stores are not mentioned in the graph as the key figure for this sector is measured in

economic value. According to the figure, all sectors have achieved a reduction, except for kindergartens and after-school programmes, which only delivered data at the end of the project, and therefore do not have comparable data. The largest reduction was achieved by restaurants followed by canteens, hotels and nursing homes. The latter achieved only a small reduction, because large municipalities joined late into the project.



The colours in the figure illustrate the quality of the key figures.  
Green stands for good quality, yellow for medium and red for poor quality.

»»»

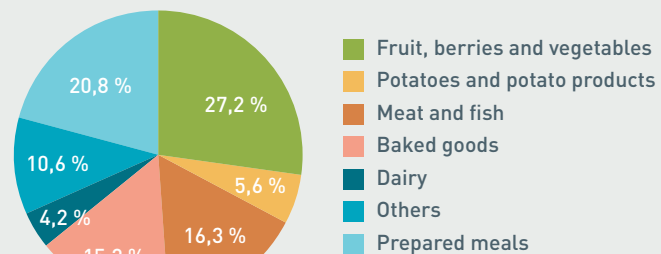
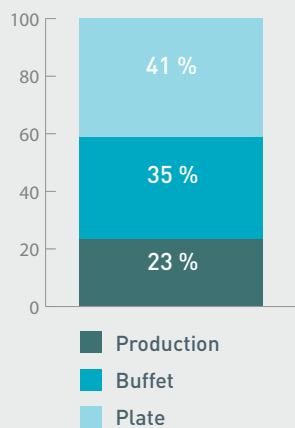
## Where does food waste occur and what does it consist of?

*Mepex* carried out waste composition analysis at three hotels, two canteens and two restaurants, to gain more insight into where food waste occurs, and which food that was most wasted. It is important to add that the results are not completely accurate or 100% representative of the industry, as they show a snapshot of food waste on the day of the analysis only. Food waste will vary according to the type of eating place, meal, time and season. Still, the insights about the composition of food waste and where it typically occurs were very important for the priorities made in the project.

### HOTEL

All of the hotels that participated in the waste composition analysis served both lunch and dinner. Two of the hotels also served breakfast.

#### The buffet counts for half of all food waste



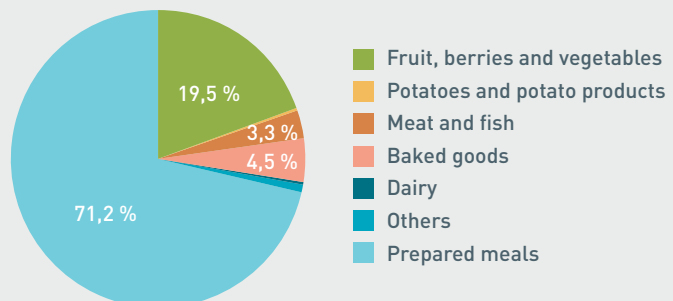
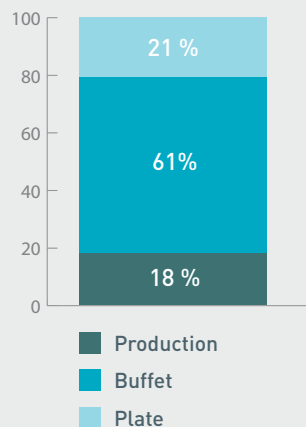
#### Composition of food waste

As the figure shows, fruit and vegetables, prepared meals and fish/ meat are the three product groups with the highest food waste in hotels.

### CANTEEN

The canteens that took part in the analyzes were a large canteen with self-service and a smaller canteen with a-la-carte lunch and dinner.

#### Most food waste from the buffet



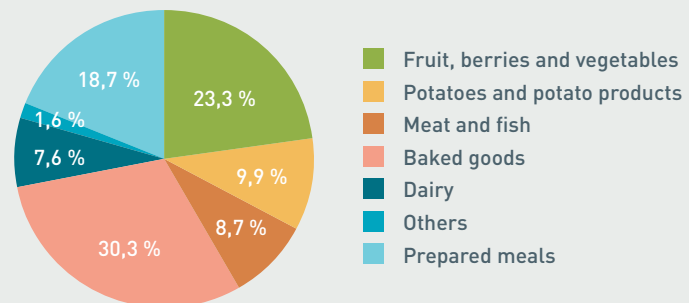
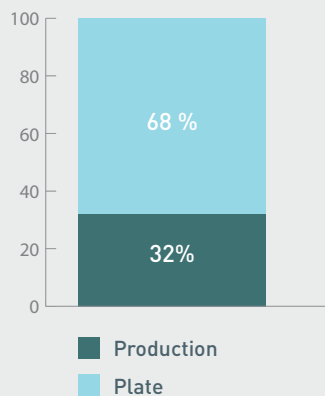
#### Composition of food waste

Prepared meals account for most food waste.

## RESTAURANT

Analyzes were conducted at two restaurants that served breakfast, lunch and dinner.

### Most food waste from guests

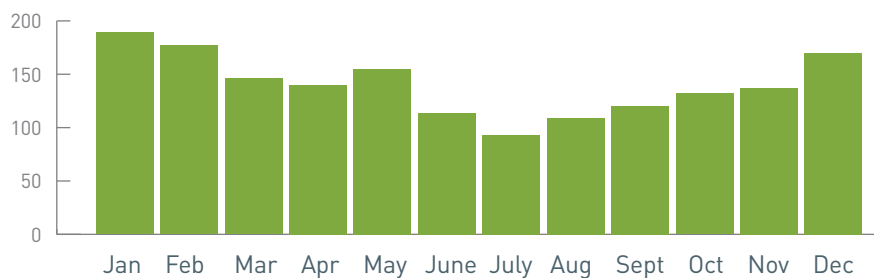


#### Composition of food waste

Bread, fruit and vegetables and prepared meals are the largest groups with the greatest wastage in restaurants. Some of the composition can be explained because bread was cut up and set on the table without request from the guests, and many of the dishes were garnished with fruits/ vegetables that were later discarded.

## Seasonal fluctuations

Food waste data from hotels shows that food waste fluctuates during the year. As the figure below shows, food waste is high at the beginning of the year and during holidays (Easter, Christmas) in addition to May, which has many public holidays.



HOTEL FOOD WASTE IN GRAMS BY GUEST



### Where does food waste occur and what does it consist of?

In the hospitality industry, it is not always possible, or the right prioritization of resources, to distinguish between avoidable food waste (food waste) and unavoidable food waste (bones, shells, peels, etc.), both because it is time consuming and because it can be a challenge for employees to have a common understanding of what is useful and what is not. Therefore, participants were

able to choose whether they registered avoidable food waste or total food waste. For the restaurants that register total food waste, the data was corrected based on default values of unavoidable food waste within total food waste by NORSUS (table below). The values were calculated using completed waste composition analysis.

Proportion of avoidable food waste of the total food waste by sector and stage

Sector	Storage	Production	Buffet	Plate	Total
Canteens	100%	32%	99%	80%	65%
Hotels	100%	38%	86%	67%	61%
Restaurants	100%	30%	95%	74%	63%
Nursing homes	100%	20%	100%	74%	63%
Kindergarten and after-school programs	100%	30%	95%	74%	63%

# Causes and challenges

-----

To reduce food waste, it is crucial to have knowledge of the causes and challenges of food waste. Although measuring the volume of food waste is very important, analysing what the food waste consists of and why it occurs, is equally critical.

## Most food waste from buffet and guests

Through waste composition analysis carried out on selected hotels, canteens and restaurants, we found that about two-thirds of food waste occurs after it has left the kitchen, that is in connection with serving, buffet and from the guests' plates. According to a survey among the participants in KuttMatsvinn2020, the following causes stood out as the most common:

- Difficulty to predict the number of guests.
- The food must be thrown away because it has been on the buffet for too long.
- Few opportunities to sell or give away surplus food.
- Serving dishes at the buffet are too large.
- Guests serve themselves more than they can eat.

At the same time, food waste also occurs in storage and in production (approximately one third).

The most common causes are:

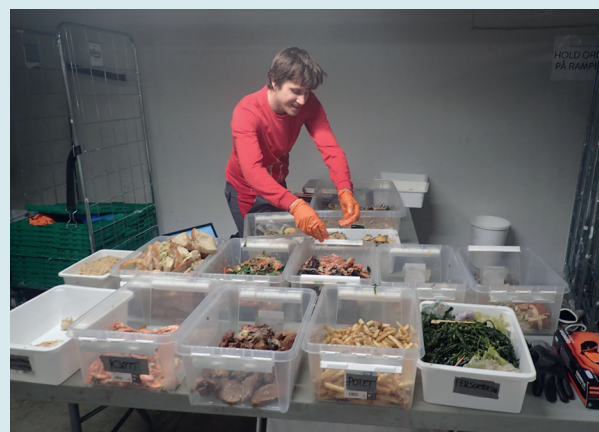
- Too many dishes/options on the menu which require larger purchases and more products in stock.
- Lack of skills among employees.
- Raw materials packed in large packages which are not used completely.
- Raw materials with a short shelf life that must be discarded.

## The importance of competence and training

Many of the causes of food waste show that preventive measures must be taken to avoid having to unnecessarily throw away food as a result of short-shelf life or over-production. This shows how important it is to focus on training the staff, inspiring guests and find innovative ways to contribute to less food waste.

## The most wasted product groups

The waste composition analysis also provided good insight into typical food groups that are most wasted and have the largest reduction potential. This includes baked goods, prepared food and fruit & vegetables in all restaurants, hotels and canteens. While these foods usually can be reused in other dishes, the experience shows that reducing the volume of purchase and preparing of these products can have larger potential in reducing food waste.



Waste composition analysis by Mepex

# Tools and materials

KuttMatsvinn2020 developed an implementation toolkit for the reduction of food waste for participating businesses. Developing tools that would provide value for the participants and help ensure that they had sufficient resources in their daily operations and routines, was an important focus of the project.

— — —

## Measurement guidelines

The establishment of new routines, especially for measuring food waste, has proven to be challenging. Many businesses had no experience with this, so Matvett set up a one-pager that easily described how to get started with strategies to reduce food waste.

Measurement is an important step in this process and

in collaboration with NORSUS, the project developed its own guide for mapping food waste, which includes different methods which can be used to get started. In addition, the project developed a separate Excel template for reporting food waste, which was used by many participants.

## Course and training kit

In the first year of the project, the goal was to launch courses and a training package, which would motivate employees at the participating businesses to work with strategies to reduce food waste and give them the necessary skills to succeed with that work. In collaboration with the agency *Bokstaven K*, which develops learning programs, and a reference group consisting of professionals from the industry, Matvett developed a training program targeted at different functions such as central management, kitchen management and employees.

The course package consisted of e-learning and guidance materials and was developed as a “train the trainer” model, where managers and key resources from the kitchen had the opportunity to acquire sufficient competence at the course, to later trans-

mit the knowledge to the rest of the employees. A total of 31 courses were completed at ASKO’s competence centre “The KIT Academy”, with a total of 435 course participants. All course materials were also made available online. The course and the training package were, according to the evaluation of the project, an important contribution of key resources to work with reducing food waste.



KuttMatsvinn course at the KIT Academy



### Guideline for “Safe reuse of food”

It can often be challenging to know what ingredients can be reused. Furthermore, the Norwegian Food Safety Authority’s rules can be perceived by many as strict. Therefore, in collaboration with Nofima, Kuttmatsvinn 2020 developed a guide for the safe reuse of food, which gives kitchen employees good guidance on safe practice, and tips on how different ingredients and dishes can be reused in new ways.

### Product catalogue

A product catalogue was developed for the project participants which included useful tools such as scales and reporting tools, waste bins, goodie bags, solutions for the sale of surplus food, etc.

### Food waste calculator

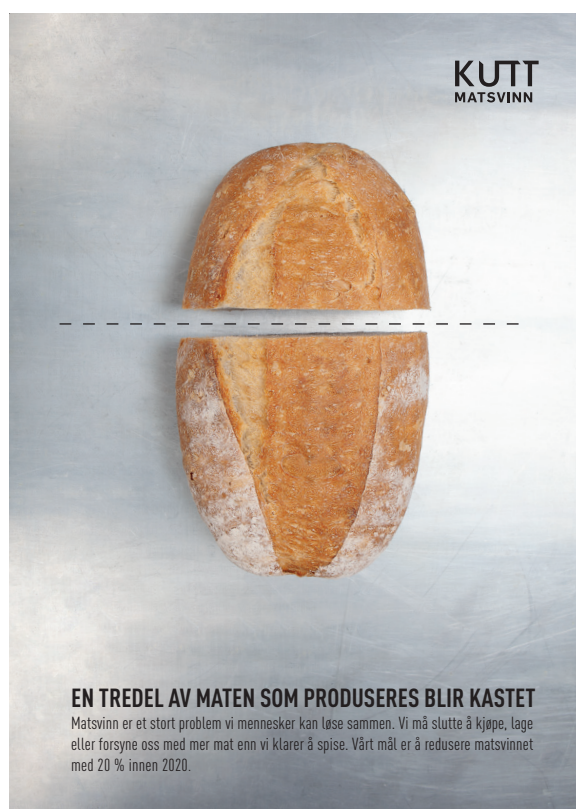
Using the food waste calculator, which was developed in collaboration with NORSUS, catering operators were able to calculate annual volume of food waste and its equivalent in Norwegian crowns and CO2 emissions. This tool was also useful when calculating the progress of the participants goal to reduce food waste by 20 %.

### Communication materials

Kuttmatsvinn2020 developed communication material to get the problem of food waste high on the agenda in the catering industry, to show that the participants stood together for reaching a common goal and to make guests aware that they are part of the solution. The message that was emphasized on the material was to highlight the challenges around food waste, and profile the project participant’s commitment to work actively to reduce food waste. The communication material included posters, buffet cards, table signs and short films for social media, in addition to buttons for employees and stickers for goodie bags.

### Best practice cases

The exchange of experiences about strategies and achieved results was a way to inspire the industry and to profile the good work of the participants. A designated page on [matvett.no](http://matvett.no) shows 19 best practice cases that describe strategies such as reducing the buffet selection, communication with employees and guests, measuring and training.



Posters from the communication material

# Measures implemented by Matvett

Matvett, as the project's leader, had the role of recruiting participants, developing tools and materials, and leading and coordinating the activities with the participants. With 2500 eating places the project's participants represent a large share of the hospitality industry. This means that by going in the same direction, the industry can make a real impact. In addition to establishing industry statistics through a common measurement and reporting system, it was also important to gather participants to forums and joint campaigns.



## Forums

Kuttmatvinn2020 organised two annual forums, 6 in total during the project's period. These forums were created to provide a common arena for the participants, with focus on results along the way, skill-sharing, inspiration through best practice cases and awards. The feedback from the project participants is that the forums were useful and perceived as valuable in the work against food waste.

Key activities at the forums:

- Exchange of experience and inspiration
- Sharing results
- Panel discussions on various issues
- Presentation of new tools from the project
- Review of insight studies
- Competitions and prizes

The forums formed a good basis for how several players in the industry can meet to share challenges and experiences. The project ended with a digital final conference summarizing the results and the experiences from the project.



Proud nominees for the "best practice" award at the forum in 2019 at the Thon Conference Hotel in Oslo.

« » *Attending these forums has been very helpful, both to get access to good examples from the other participants, and to see the developments in industry figures*



Communication campaign at ISS canteen, Nordea's HQs

## Communication campaign

Setting food waste reduction on the industry's agenda, raising awareness about the problem of food waste and motivating guests at the restaurants, was an important focus area for Kuttmatsvinn2020. In 2018, the project developed common communication materials for the participants to use at their locations. The use of this material was encouraged through two annual campaign weeks organised by Matvett. Material such as films, was also shared on social media. Participants agree that running joint campaigns against food waste had a positive effect in their business. Two canteens (the Eurest canteen, located at the Confederation of Norwegian Enterprise building and ISS canteen

located at the Nordea Bank) measured the effects of the campaign:

- 74-80 % of guests ate all their food
- 75-100 % of guests noticed the food waste campaign
- 85-90 % of guests evaluated the campaign as positive
- 65-90 % of guests increased awareness of food waste

Preliminary figures from the Eurest canteen showed that plate wastage was reduced by approx. 25 percent within one year. By then, the canteen had carried out two campaign weeks about food waste. This shows awareness campaigns aimed at guests, have a positive impact.





## Best practice

KuttMatsvnn2020 contributed to increased focus and attention on food waste in the hospitality industry, and many participants experienced that their work created good results. The project had a lot of focus on motivating companies to introduce effective measures to help employees reduce food waste.

The best practices were recognised and shared through an award at each forum.



Although there is not just one path to success, we have identified some aspects that are common for those who achieved the best results:

- Reducing food waste defined as a focus area by Management
- Clear goals and plans
- Dedicated key resources allocated to coordinate and follow up the work
- Involvement and ownership of employees
- Good communication and follow-up
- Focus on new routines and communication
- Sharing experiences, challenges and results internally and with the project management

*The participants of the project contributed with many good examples of measures to reduce food waste. Many of the measures were presented during the project on Matvett's website and in the media. Below are some of the implemented measures in general terms:*

### **Portion size adjustment**

Leftovers from side dishes that are not eaten by the guest can be a cause of food waste, either because there is too much of it, or because the guest does not like or tolerate the food. This is neither profitable for the restaurant or desirable for the guest. By having good communication with the guest when ordering side dishes, and adjusting the amount of fries, sauces or dips, a lot of food waste can be avoided. Letting the guests know that they can always get more later if they want instead of getting a lot at once, shows good results too. Likewise, uneaten garnish can be replaced by seaweed or other non-edible decoration.

### **Measurement for necessary insights**

Measuring food waste is an important step towards gaining insights into how much food is thrown away. This gives employees increased awareness, and businesses an opportunity to follow developments over time.

### **Alternative sales channels**

New technology is important to reduce food waste. The app Too Good To Go created a unique marketplace that connects consumers with eating places that have surplus food. In the past, much of this food was thrown away, but now consumers have the opportunity to save it by buying it at a reduced price through this platform. Several eating places have also started offering discounts on food at the end of the day, in order to sell what may still be unsold before closing.

### **Training for increased knowledge**

Involvement of employees, skills development and establishment of routines are important for the success of cutting food waste. Several courses for food managers and chefs took place at the KIT Academy or in-house at participating companies.

### **Efficient use of raw materials**

The efficient use of raw materials is an important measure to reduce food waste in the kitchen. It is also a measure that is easy for the kitchen to have control over as it is not based on the buffet's offer or guest's expectations. Typical examples of this include good knowledge of proper filleting, peeling and preparation of raw materials in order

to get the most out of the food, including parts that have traditionally been discarded, but can be used for other purposes. Some examples of this are using broccoli stalk in soups or parts of the tomato to make sauce or Pebre.

### **Modernization of the buffet**

The buffet has proven to be one of the big culprits in food waste. By reducing the number of items on the buffet, and investing more on quality rather than quantity, switching to smaller serving bowls and smaller plate sizes, several participants managed to cut food waste from buffets considerably.

### **Goodie bag for guests' leftovers**

There is unfortunately a considerable amount of food waste from leftovers on guest's plates, so to save more of that food, goodie bags were offered, so that the guest could eat their leftovers for lunch or dinner the next day. There is still great potential to offer goodie bags more naturally, so that this becomes a habit for guests, and not a stigmatization. It has therefore been important to facilitate a goodie bag as part of the project material. There is still room for improvement in this regard in Norway.

### **Involvement of employees**

Employees are perhaps the most important resource to reduce food waste at eating places. It is important that they are involved early into the plans, and that they feel ownership for the efforts. They should be inspired to both highlight challenges, and to provide input for solutions. Good communication with management and sharing results and rewards for good work, are important to ensure continuity and development in the work.

### **Creative reuse**

It is not easy to produce the right amount of food when one does not always know the number of guests. That is why it is important to have good routines for the safe reuse of leftovers. This can be for example making croutons from excess bread, omelette with cheese and vegetable leftovers or stew from other leftovers. Make "Today's special" with a mix of raw ingredients and leftovers.

### **Guest involvement**

Much of the food waste occurs in connection with serving (buffet) or with the guest. Promotions and information which encourages guests to not help themselves with more than they can eat, as well as creating an understanding that not all food can be available at all times, are important measures.

# Best practice - Municipal nursing homes

---

Including municipalities and institutions in Kuttmatsvinn2020 was an important part of the project.

There are many institutions serving food, such as nursing homes, but also schools, after-school programs and kindergartens. We have succeeded in recruiting nursing homes from several municipalities, which gave us the necessary insight into the scope and causes of food waste in this sector. A guide for mapping food waste and useful reports summarizing the work to reduce food waste from the nursing homes, were also created.





To ensure focus and continuity in the work against food waste at the municipal nursing homes, it was important that the participants set aside resources and established a project group consisting of service leaders for all the nursing homes and central kitchens. The project group held regular meetings to discuss challenges and opportunities. Below is an overview of typical causes and some of the measures adopted at nursing homes.

### Most common causes of food waste

A year of mapping and measuring food waste, gave the participating nursing homes in Bærum municipality a better overview of the amount of food they throw away and the most common causes for food waste:

- Unpredictability makes it difficult to calculate the quantity of servings accurately, especially in large institutions with residents with low appetite and day care centres, where it is not possible to know how many will show up.
- The guidelines of the Norwegian Food Safety Authority make it challenging to reuse food.
- Portions produced at the central kitchen are too big, and there is too much bread delivered by the bakeries.
- Challenges in the flow of information between the municipality's central kitchen and the institutions.
- The routines for ordering food at the institutions are not good enough, often leading to ordering too much food.
- Employees with little knowledge and/or time to heat the food can lead to lower quality food, which in turn can result in residents eating less.

### Actions that work

After identifying the causes of food waste, the project set focus on finding areas for improvement, and ensuring increased communication between the institutions and the central kitchen, in order to customize orders and the size of these. Involving the employees in suggesting measures for improvement and gathering the ideas in one resource bank for future use, was also important.



#### USEFUL TIPS:

- Keeping a tidy refrigerator and establishing good routines for food-orders.
- Good guidance on ordering options from the central kitchen.
- Ordering food for fewer residents than needed, there is always residents with little appetite, empty rooms, etc.
- Adjusting the lunch menu. More options for a more varied food offer.
- Reducing the amount of potatoes and vegetables per portion - these are product groups that often have high waste levels.
- Availability of different portion sizes from the central kitchen.
- Make less food for the canteens, rather have ingredients ready to make food as needed.
- Introduce smaller serving dishes, bowls, etc.
- Encourage refills rather than a first big serving.
- Make smoothies from leftovers of porridge, banana and yogurt.
- Purchase of freezers to store bread and other foods, so that they can be used "fresh" as needed.
- Increase the dialogue with residents about what and how much food they want.
- Share the food among institutions.
- Create information material for raising awareness among employees.

# Best practice model. Collaboration pays off

As part of the Kuttmatsvinn2020 project, Eurest, the Confederation of Norwegian Enterprise (NHO) and Matvett collaborated on a “Best practice canteen”-campaign at the Eurest canteen at NHO’s headquarter. The goal of this project was to reduce food waste from the canteen, meetings and conferences by 20 percent in 2019.



The model shows the important areas for a holistic approach to the reduction of food waste in canteens

The purpose of the campaign was to create a model based on a holistic and systematic approach to reducing food waste in canteens, which could eventually be shared with the rest of the industry.

### Analyses provide valuable insights

Waste composition analyses were carried out to gain increased insight into where food waste occurred, and what it consisted of. In addition, interviews were conducted with key people from the Eurest team and with the leader of the event network at NHO to identify challenges. The results of this work show that food waste from meeting rooms accounted for over 50 percent of the total food waste, equivalent to 59 grams per guest. Leftovers on plates accounted for 21 percent, equivalent to 25 grams per guest. These values coincide with the industry's average. The rest of the food waste was a result of overproduction of buffet food. The product groups that were thrown away the most were meals served in the buffet, sliced fruit, baguettes and bread.

The main reasons for food waste from meetings and conferences were:

- Lack of a minimum order requirement, which in combination with a large menu, lead to purchasing several product groups that contribute to wastage.
- Little guidance on how to calculate the number of portions per type of meal and type of guest.
- Little information about the size of the dishes.
- Large portions (especially for cakes).
- No procedures for cancelling attendance of guests at meetings and conferences.
- By removing the plastic wrap to set the food for the guests, it is not possible to reuse the leftovers.

### Implemented measures

In collaboration with Matvett, two campaign weeks were arranged in January and October. These included, among other things, serving smoothies to employees, serving surplus food in the canteen, and communication material for employees and guests. The entire Eurest team was involved in coming up with proposals for food waste reduction measures. This created commitment and ownership among employees.

### Most important measures:

- Established a system and routines for measuring food waste.
- Training of employees.
- Redesign of a clearer meeting room menu, with better guidance and minimum order for selected dishes.
- Surplus food made available to employees at a designated fridge at the canteen.
- Surplus fruit from meeting rooms used at the Cafe to make smoothies.
- Sale of surplus food from the cafe, meeting-rooms and canteen through the app *Too Good To Go*.
- Awareness raising of employees and guests through communication material.
- Active involvement of employees sharing tips to reduce food waste on social media.
- Conference guests asked to pre-confirm whether they would join lunch or not.
- Placing of goodie bags next to the serving area, to encourage guests to bring their leftovers home.
- Presenting food at meeting rooms and conferences by batches that include all alternatives, so that some food can remain covered by plastic wrap to ensure better durability and possible reuse.
- Placing a sign to make sure the plastic wrap is not removed from the serving plates until guests are ready to eat.
- Signs at the buffet to share information about the weight of the food waste generated the day before, to raise awareness of the problem.
- Signs at the waste station to share information about the weight of the food waste generated the day before, to raise awareness of the problem.
- Guidelines for notifying cancellations the day before a meeting or event.

### Results

Food waste from meeting rooms was reduced by 54 percent in grams per guest from September 2018 to September 2019. This corresponds to 123 kilos less food waste compared with the same period the year before. Waste from plate leftovers was reduced by 25 per cent in the same period. The campaign showed that collaboration and knowledge sharing between the canteen operator and client, creates unique results. The Eurest canteen at the premises of NHO succeeded in engaging the employees and achieved a good collaboration to identify challenges and find solutions.

# Why collaboration is important

Cooperation in the supply chain can be one of the keys to halving food waste, both between competing companies and between the different sectors in the supply chain. Some of the causes for food waste can be traced back to suppliers and wholesalers and others traced forward to the guest.



It soon became clear that both suppliers and wholesalers wanted to have an important role in the project, and to be part of the solution. An analysis of product groups with high wastage at the participant's locations, showed that it was important to invite suppliers of fruit and vegetables, baked goods, dairy products, fresh meat, and fish to join the project.

For a supplier, a closer collaboration can contribute to better insight into which of their products are thrown away at the eating place.

Other benefits for suppliers:

- Join the industry's efforts as a responsible supplier
- Strengthen reputation and relationship with customers
- Access to industry's statistics and insight into customer needs
- Influence tomorrow's sustainable solutions

## Food waste causes earlier in the value chain

According to a survey conducted among the participants in the autumn of 2020, one fourth of the participants reported that the reason for their food waste was due to large-size packaging from suppliers or not frequent enough deliveries from wholesalers. Many of the suppliers are working to customize their packaging, but smaller packages require in addition more material used for packaging, more air in the shipping volume and larger complexity of the supply chain. More frequent deliveries from wholesalers are negative for the climate because of

higher CO2 emissions. This shows the complexity of the supply chain and the importance of collaboration and knowledge sharing across the different actors and sectors.

## Great potential for more collaboration

Most of the food waste occurs during serving or with guests. Nevertheless, the survey shows that a quarter of food waste comes from storage or cooking. "Training of employees" is one of the most important measures to reduce food waste in the future, according to the businesses themselves. Many employees in this industry are unskilled; with many seasonal workers, there is also high turnover, with many young people with different backgrounds and language skills. Optimization of purchasing routines, better knowledge of date labelling and creative use of raw materials are all effective measures that suppliers can contribute with. The project had many good examples of suppliers that helped kitchens with increased knowledge of, for example, how they could use ingredients in a different way, set up a climate-friendly menu with minimal food waste, etc.

« » *The amusement park Tusenfryd has young, unskilled staff, therefore training them on storage and reuse of food secured increased skill development, confidence about proper storage and clever strategies to use leftovers that are still fit for reuse*



Example of areas for improvement where suppliers can influence:

- Purchasing routines
- Product development
- Logistics
- Package size
- Packaging technology that extends shelf life
- Guidance on storage, preparation, reuse and alternative use of raw materials
- Menu planning

### The importance of group purchasing organizations for wider reach

According to Trade Solution (2018), group purchase organizations account for about half of the purchases of food and beverages. The participation of these groups in the project contributed to increased recruitment of several eating places and better results for the overall project. Some examples of recruitment activities are:

- Establishment of a sustainability fund to finance participation on KuttMatsvinn courses and the purchase of scales and other measuring equipment
- Presentations on behalf of Matvett at member's internal meetings
- Customized courses for members
- Participation in trade fairs

In the future, food waste will most likely be more relevant in negotiations between suppliers and group purchasing organizations, and between suppliers and customers. Public organizations and government agencies have already included food waste in their new criteria for public procurement. Increased awareness about how group purchasing organizations can influence their members to prevent food waste will therefore be important going forward.

The project has helped to shed light on the importance of good collaboration with suppliers. A survey revealed that collaboration in the hospitality industry is not a widespread practice, with 30 % of respondents not collaborating with anyone and those reporting collaborations, mentioning "suppliers" as the actor they collaborate with.



# Impact

KuttMatsvinn2020 was much more than a project to cut food waste in the hospitality industry. The ripple effects spread beyond getting at least half of Norwegian hotels, restaurants and canteens to reduce their food waste by 20 percent by 2020.



Not only has the project shown the authorities that the hospitality industry is taking a step further in taking responsibility for solving the challenge of food waste themselves, but it also influenced increased cooperation far beyond what is usual between competitors and across the supply chain, which is crucial to solve the problem of food waste.

Ten years of experience working to put food waste on the agenda gave Matvett good insight about how slow changes in daily routines and breaking barriers towards more sustainable operations, can be. When we started the work of mapping the extent and causes that led to food waste in the hospitality industry, we quickly found out that it was necessary to think more broadly, both to meet the companies in several contexts, but also to solve various challenges we had not thought of initially.

## Environmental certification and procurement criteria

The project collaborated with two different certification schemes to develop new food waste criteria: Miljøfyrtårn and Miljømerking/Svanemerket. This was important to ensure that certified actors had access to guidance on measurement methods, common key figures and recommendations to avoid and reduce food waste. Matvett contributed also to the new criteria for food and drinks developed by The Norwegian Agency for Public Management and Government (now known as The Norwegian

Agency for Public and Financial Management), to ensure that these mirrored KuttMatsvinn2020's criteria, and that participation in the project was promoted as a resource to reduce food waste. In addition, The Norwegian Environment Agency which distributes funds through municipalities to stimulate climate projects, reported an increased number of Municipalities applying for funds to support food waste reduction efforts. The agency also refers to KuttMatsvin2020 on its platform where it shares the benefits of joining the project.

## More reuse of food

Many catering operators are unsure about the regulations for reusing food that has been presented at the buffet or in front of serving counters. Based on the most common discarded product groups identified through the waste composition analysis carried out by the research project, Nofima and Matvett, in collaboration with the Norwegian Food Safety Authority, developed a guide to increase knowledge on how different ingredients and dishes could be reused. The creation of this guide was an important step forward in the work with reducing food waste in the industry.

## Communication to engage the guests

As soon as you start telling your guests that your business is working to reduce food waste, this will eventually increase their awareness and expectations about a more sustainable dining experience, not only at your premises, but also when visiting other caterers. Surveys show that while we want to take environmental responsibility, we do not always know how. The projects' campaigns aimed at facilitating a good food experience for guests without food being wasted, as well as providing inspiration to become better at reducing food waste at home. When the industry works together, the ripple effects become greater, in particular when more and more caterers encourage guests to be aware of food waste. It is then more common and less embarrassing to ask for a goodie bag for leftovers or share information about the weight of the food wasted the day before at a canteen.

“Making the guest part of the team” will be a key concept for success when it comes to taking a step further with even more powerful measures to reduce food waste.

## Media attention

KuttMatsvinn2020 and the participants' efforts have attracted a lot of media attention during the last four years. In the first year alone, we counted over 20 media cases about the project, with special features on NRK Dagsrevyen and BBC. Since then, the project has been mentioned in the media on a regular basis, usually in regard to sharing the results achieved by the project's participants, but also featuring examples such as strategies practiced at buffets, the introduction of goodie bags, buffet cards and posters to increase customer awareness, or internal measures such as training employees.



Mention of KuttMatsvinn2020 in all industry-oriented, local and national news media.

# Evaluation of KuttMatsvinn2020

To evaluate the value of the project and the measures implemented, as well as to get input on how the work should continue, a survey was conducted among all participants in the project. The survey had a 15 % response rate and included mostly canteens, followed by restaurants and hotels. A summary of the most important results is described below.

— — —

## The project receives good rating

The results of the survey show that 97 percent of the respondents were satisfied with the implementation of the project and found value in it. The following points were highlighted as particularly useful:

- Raising awareness among employees by measuring food waste
- Being part of a larger collaboration in the industry
- Access to industry figures to compare with own development
- Guidance, materials and events

« » *The project has been a driving force to stay focused, provide increased knowledge and constantly contributing with new input to reduce food waste. Simply crucial for our work.*

Only a third of the respondents did not meet the expectations of the project. Particularly, the development of simpler systems for registration of food waste and more training and guidance for the practical implementation of the work, were emphasized. Some participants also wanted more specific focus per sector. This is important input which Matvett will take into consideration in further work.

## Changed focus and routines

Two thirds of the respondents state that the project helped them change the way their business is run, bringing about increased awareness of food waste in daily operations, and greater focus on achieving goals. Many participants report that they think differently and smarter when setting up menus or the buffet, and have better routines for the rotation of ingredients in stock and the calculation of portions.

## 10 out of 10 state a reduction in food waste

When asked about the extent of food waste reduction during the project period, all respondents report having experienced at least some level of reduction in food waste. As many as 38 percent of the respondents achieved more than 20 percent reduction, another 38 percent reported a 10 - 20 percent reduction, while 24 percent achieved a reduction between 0-10 percent.

## The importance of the course and training package

The course and training package scores highest among the tools that the project developed for the caterers, followed by the communication material for employees and guests, supervision for mapping food waste and conducting professional forums.





Animated film about food waste in the hospitality industry, which can be found at [vimeo.com/matvett](https://vimeo.com/matvett)

« » *Communication and involvement of the guests is very important, facts and storytelling work!*

« » *The course package, tips & advice along the way were very important to us*

### The pandemic's impact on the project focus

The last year of the project was marked by the COVID-19 pandemic, where the activity among participants was dramatically reduced. This was taken into consideration in the analysis of the project. There is no doubt that the pandemic created major consequences for the eating places. We wanted to know whether this had also changed the focus of the participants on sustainability and food waste. 54 percent answered that the pandemic decreased their focus, 19 percent said it reinforced it, while for 27 percent of the respondents, the focus on food waste reduction was unaffected. These results highlight the importance of continuing the work helping the businesses find good and sustainable long-term solutions for the reduction of food waste. We have less than nine years to reach the goal of halving food waste by 2030, and food waste reduction will continue to be relevant to strengthen the profitability of the hard-hit hospitality industry.

### To involve the guest will be even more important

What should be prioritized in the future? Where do the participants feel the shoe pinches after four years with the project? These questions were asked to participants and it is perhaps not surprising that changes in attitude and behaviour of the guests are the main priority going forward (80%). Another area that should be prioritized more is “cooperation across the supply chain with suppliers, wholesalers and group purchasing organizations” (78%) in addition to the “implementation of sorting requirements for food waste from the authorities” (68%). This is an interesting insight which shows that cooperation in the supply chain and with the authorities, as well as the involvement of the guests, is crucial to success in the future.

### Want to continue the cooperation with Matvett

Although the project finished at the end of 2020, the activity will not cease. 85 percent of the respondents of the survey want to continue to be involved in Matvett's work to prevent and reduce food waste in the future. This includes several hotels and canteen chains, restaurants, convenience stores, group purchasing organizations, bakeries, municipalities and more. All participants in the project will be invited to enter into new cooperation agreements from 2021 and forwards.

# The way forward, together

KuttMatsvinn2020 gave us valuable knowledge about the scope and reasons for food waste in the hospitality industry. Cutting food waste is high on the agenda and has become an important tool in environmental and climate policy in Norway. This gives us a good starting point for including the whole food and hospitality industry in the efforts to find effective solutions that will ensure that we half food waste by 2030.



Food waste prevention is a major societal challenge, and everyone has a responsibility to help ensure that the food produced is eaten. In order to achieve lasting results, a long-term and broad cooperation throughout the supply chain and with the society in general is required. The evaluation of the KuttMatsvinn2020 project (pp. 32-33) provided useful insights about what should be the most important priorities for the hospitality industry in the future. Furthermore, it is a very good sign that 85 percent of the respondents expressed a wish to continue to be involved with Matvett's work in future.

## National framework in Norway

The Norwegian public and private sector have taken a step further towards a more circular economy and a zero-emission society through various national and international agreements. These commitments include, amongst other things, reducing greenhouse gas emissions and helping create carbon-neutral companies and products that can be recycled.

World food production accounts for approx. 30 percent of global greenhouse gas emissions. When one third of the food produced is discarded, it means that 8 percent of the emissions from the food system correspond to food waste. With this in mind, including all the actors that produce or sell food in Norway in the efforts to reduce food

waste, including joining the “Negotiated agreement for the reduction of food waste“, is crucial. The agreement’s goal is halving food waste by 2030 in line with the UN’s sustainability goals (12.3). In this regard, 80 percent of the respondents from the evaluation of the project reported that they already have or want to join the negotiated agreement. Most hotel and canteen chains have already joined, the next focus is including independent restaurants also.

## The importance of prevention

The most important thing you can do to contribute to a sustainable food industry is preventing food waste. That is, to prevent food waste from occurring by ensure that the food produced is sold at full price, and that no more than what is demanded is produced. This means having good control of inventory and prognosis to avoid being left with food with short shelf life, while still presenting an attractive selection of food to guests. Finding this balance is often difficult. Businesses need tools for accurate forecasts, and strategies to gain more insights about what customers expect to find at the supermarket, on the menu or in the hotel buffet, especially when they are being informed that food waste is a challenge we must solve together. Cooperation in the supply chain becomes crucial for coming up with good long-term solutions that ensure satisfied customers and minimum food waste.



### Further organization of the work

Matvett will continue to recruit companies in the food service industry, both through direct agreements with specific actors and by recruiting actors to join the Negotiated Agreement, which includes the commitment to measure, report and implement measures to reduce food waste.

### Follow-up and tools

In connection with the transition from project to the inclusion of the food service industry as part of the regular work of Matvett, we have redesigned, simplified and mobile-adapted the e-learning course for employees at caterers, so that it is easier for new employees or those who need a refresher, to implement the appropriate measures to avoid and reduce food waste. In addition, Matvett will continue to follow up businesses in many different areas, such as:

- New insight into guest's expectations
- Recommended measures in a searchable database on [matvett.no](https://matvett.no)
- Easier guidance on measurement and reporting
- Further development of existing tools and materials
- Skill-sharing through common meeting places for the industry
- Implementation of joint campaigns to make the efforts and achievements of the industry visible
- Implementation of joint communication campaigns towards the guest

### What will the future be like?

The last year has shown us that it is impossible to predict the future, and that unforeseen events can have a major impact on both food supply and amount of food waste, in different parts of the supply chain. In order to better equip companies by 2030, Matvett and Opinion have looked at the trends and driving forces that will help shape how we are going to produce, prepare and sell food in the future, and which possible scenarios may apply. The driving forces we have taken as our starting point are the sum of several trends that point in the same direction, and which in turn, form the basis for the future scenarios we believe will affect the work with food waste towards 2030.

Among the major macro trends mapped, food safety and food safety control will be important in the future. Consumers will, to some extent, accept that food and technology are melting more and more together. Manipulated foods that are more sustainable and provide better health and price, will probably become more common. As a natural reaction to the economic uncertainty the world is in, we will also produce and choose more Norwegian food. Consumers' expectations of availability, good taste and quality at the right price, will continue to be the most important criterias.



The four future scenarios we have developed in collaboration with Opinion, describe different realities that give companies inspiration to think in brave and innovative ways about the different strategies to reduce food waste. Briefly summarized the scenarios consist of the consciousness scenario “We must all do our part », based on a few simple, but effective measures based on collaboration; the technology scenario “The waste-free society”, where new technology eliminates the problem through more efficient production and resource utilization; the nudging scenario “The adults know best”, where we see a recognition that necessary changes will not happen without regulations and legal obligations; the austerity scenario “Respect for food”, where insecure times and growing mistrust strengthen local food production and makes it unnatural to waste, (see illustration for overview and more information about the different scenarios).





We will use these scenarios as inspiration to ask the right questions. Which of the driving forces and trends will have the greatest impact on food waste and which are most likely to occur? We will be able to influence some of them, but not all. There are few cues, but most likely the future will be a combination of several of the scenarios. This method has so far been tested in a workshop with NORSUS, as part of the research project BREAD, where Matvett invited companies from the food industry to

dive into the future and point out challenges and possible solutions based on different scenarios.

### Roadmap with industry recommendations

Once the current situation is normalised, we will carry out experiments and surveys to test different solutions for hotel buffets, bread shelves in supermarkets and customers’ expectations about the availability of food through the day. The trend analysis, future scenarios and customer study will be gathered in one report and will act as a roadmap towards 2030. All the knowledge acquired together with the actors in the food and hospitality industry, and in the long run the authorities, will help explore how far measures can be stretched, while maintaining customer acceptance. This can be a great recipe to achieve the halving goal.

### Future scenario

				
	Consciousness scenario “We must all do our part »	Technology scenario “The waste-free society”	Nudging scenario «The adults know best »	Austerity scenario «Respect for food»
Characteristics of each scenario	<ul style="list-style-type: none"> <li>• Agreement on solutions</li> <li>• Collaboration</li> <li>• Volunteer change vs regulations</li> <li>• Individual responsibility</li> <li>• Social pressure and consciousness</li> </ul>	<ul style="list-style-type: none"> <li>• New technology</li> <li>• Effective use of resources</li> <li>• Government and industry responsibility</li> <li>• Low individual behavioural change</li> <li>• Food manipulation acceptance</li> <li>• Higher safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Acceptance of intervening regulations</li> <li>• Government responsibility</li> <li>• Less freedom of choice</li> <li>• High trust in authorities</li> <li>• High trust in the industry</li> <li>• National vs International initiatives</li> </ul>	<ul style="list-style-type: none"> <li>• Economic uncertainty</li> <li>• protectionism and scepticism</li> <li>• Protection of local food production</li> <li>• Low trust in authorities and industry</li> <li>• Each individual takes responsibility for them selves</li> </ul>



# Ten recommended food waste measures for the hospitality industry



- 1:** Think holistically - set clear goals, introduce good routines for how to measure and implement measures and involve and engage employees
- 2:** Introduce few, but targeted measures
- 3:** Respect the value of all food - strive for proper storage, reuse and max utilization of raw materials. Do not throw away food without using your senses first
- 4:** Create smart menus with fewer dishes, higher quality and ingredients that fit in well together
- 5:** Think seasonally and locally, demand goods with high quality
- 6:** Invite the guests to join your efforts, make it easy to choose the right amount of food
- 7:** Do not be afraid to run out of food, as long as you can offer guests an alternative
- 8:** Be proud of the work and results you achieve and communicate this to employees and guests
- 9:** Step up the collaboration in the supply chain on product development, orders/forecasts and training
- 10:** Use new technology to get a better overview of purchasing, inventory and number of guests. Use data to improve orders and minimize overproduction

# Thanks to our supporters!

One of the success factors for the KuttMatsvinn2020 project was the extensive collaboration between Matvett, the businesses, different professional networks, suppliers, wholesalers and group purchasing organizations, as well as the authorities and other social actors. Everyone mentioned below deserves a big “Thank you” for putting food waste even higher on the agenda, and setting the foundation for further work with food waste in the hospitality industry.

The steering group that led the work and acted as an important sparring partner for Matvett consisted of the following actors:

- *Stig Jørgensen*, Marketing Director, ASKO Norge Servering
- *Morten Malting*, District Director, Oslo Food & Beverage Director, Norway, Scandic Hotels
- *Steffen H. Greff*, CEO, SiO Mat og Drikke
- *Jon Eskedal*, Sales and Marketing Director, BAMA Storkjøkken
- *Bjørn Jørgensen*, Wholesale Manager, Unilever Food Solutions

Many actors participated in the KuttMatsvinn project since 2017 and have contributed to increased focus on food waste and increased knowledge on food waste's scope and causes. A total of 212 actors representing over 2500 eating places participated and contributed to the financing of the project.



## Other key supporters:

NORSUS • Norsk forskningsråd • KIT-akademiet • NHO Reiseliv Innkjøpskjeden v/Morten Karlsen, som også er styremedlem i Matvett • NOFIMA • MEPEX • Mattilsynet • eSmiley • Winnow Solutions • DFØ • Miljøfyrtårn • Miljømerking (Svanemerket) • Miljødirektoratet • Matsentralen • Too Good To Go • TotalCtrl • Verdimat • Bokstaven K og TASK • Willy Nikkers • IntoFood v/ Will NicholSEN

## References and link

1. "KuttMatsvinn2020 Forskning" 2017-2019
  - a. Sluttrapport fra forskningsprosjektet KuttMatsvinn2020, Hanne Møller, Pieter Callewaert og Aina Stensgård (2020)
  - b. AVARE- (Adding value in resource effective food systems)  
<https://www.matvett.no/uploads/documents/KuttMatsvinn2020-Forskning-sluttrapport-NORSUS.pdf>
2. Oppsummering av resultater "Evaluerings av KuttMatsvinn2020-prosjektet", okt. 2020
3. Trendrapport "På lag med kunden", Ole Petter Nygård, Opinion (sept. 2020)
4. BREAD-prosjektet; <https://www.matvett.no/bransje/aktuelt/nytt-forskningsprosjekt-pa-matsvinn>
5. "Bransjeavtalen om reduksjon av matsvinn":  
<https://www.matvett.no/bransje/aktuelt/bransjeavtale-om-matsvinn>
6. Veileder for kartlegging av matsvinn i serveringsbransjen:  
<https://www.matvett.no/uploads/documents/OR.10.19-Veileder-for-kartlegging-av-matsvinn-serveringssektoren-02.07.2019.pdf>
7. Veileder for trygg gjenbruk av mat;  
<https://www.matvett.no/uploads/documents/Veileder-for-trygg-gjenbruk-av-mat.pdf>

## Contact Matvett

### Anne-Grete Haugen

Managing Director

—

+47 98 23 69 45

agh@matvett.no

### Anne Marie Schrøder

Communication Manager

—

+47 95 22 09 95

ams@matvett.no

### Erik Vold

Project Manager

KuttMatsvinn2020

—

+47 97 76 87 63





2020  
**KUTT**  
MATSVINN