



CONSUMPTION RESEARCH NORWAY (SIFO)

## **Sustainable corona life – Changes in consumption among Norwegian during the COVID-19 lockdown in 2020**

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<p><b>Contracting entity</b></p>		
<p><b>Summary</b></p> <p>The results in this note are mainly based on data from a nationally representative survey conducted in December 2020 - February 2021. SIFO regularly conducts consumption surveys (SIFO surveys) which provide large amounts of data on various aspects of consumption, including consumers' attitudes, knowledge and practices. In this note, we have highlighted data that can tell something about how the corona pandemic affected consumption in Norway in 2020.</p>		
<p><b>Keywords</b></p> <p>Consumption practices, Covid-19, sustainability, consumption, infection control measures, corona, transport, trade, food, clothing, leisure, survey</p>		

# Preface

This research note is a translation from Norwegian into English of a research note that was published in connection with a webinar that Consumption Research Norway SIFO arranged on 20 April 2021 - "Bærekraftig koronaliv"; "Sustainable Corona Life" - (SIFO-Notat 1-2021). SIFO conducts regular surveys among Norwegian consumers (SIFO surveys) which provide large amounts of data about various aspects of consumption including consumers' attitudes, knowledge and practices. These surveys have nationally representative samples of the adult part of the population. This report focuses on a survey conducted in December 2020 - February 2021. We have extracted data that can tell something about how the corona pandemic affected consumption in Norway in 2020. This study is funded by SIFO at OsloMet as part of the research theme Sustainable Consumption, and the note is the result of joint work from researchers associated with this research theme.

Oslo, September 2021

Consumption Research Norway SIFO

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# 1. Introduction

*Harald Throne-Holst, Gunnar Vittersø and Torvald Tangeland*

The topic of this Research note is Sustainable life during the corona pandemic. Some may find this framing controversial or even provocative. Sustainability is a notion that is much discussed on its own terms. One frequent topic in such discussions is if we can determine to what extent something is sustainable or not? And, as we here merge it with the corona (COVID-19) - pandemic, some might find this provoking due to the stark back drop: Many have been infected, and more than 700 have died from the pandemic here in Norway (April 2021), despite severe restrictions and hygiene measures.

The strict measures that were implemented by local and national authorities have also had other negative implications. Some have become unemployed; more people have been temporarily laid off and a number of these might not have any position to return to once the pandemic is 'over'. These are important dimensions of the pandemic that we have included in our thinking when writing this research note.

However, the pandemic might also be viewed as a major social experiment. The global nature of the COVID-19 pandemic, and the various measures that were taken to slow or stop the pandemic, have resulted in swift and substantial changes in our social-, working-, and everyday lives. Our ambition here is to take a closer look at how, and what effects the changes had on our everyday lives. Perhaps the pandemic made us catch a glimpse of a sustainable future? The path towards to such futures cannot be paved with pandemics, diseases and unemployment. On the contrary, visions of a sustainable society must be positive and inclusive. It must be a society you and I would want to take part in, and where we can envision ourselves (and our children) living good, fun and fulfilling lives.

The results we present in this research note are primarily based on a country-representative questionnaire conducted between December 15<sup>th</sup> 2020 and February 4<sup>th</sup>, 2021. It had 1297 respondents aged 15 and 80. The selection was weighted so that it is representative of the Norwegian population when it comes to gender, age, education and place of residence. The timing of the survey means that respondents had approximately 1 year experience of life in the shadow of the pandemic. At SIFO we regularly conduct such questionnaires where we repeat questions and themes for earlier years. We often refer to these questionnaires as the "SIFO-survey" to show the continuity in the data that are collected. However, we sometimes shift the content and new topics are introduced from time to time. This flexibility made it easy to include consumption during the pandemic in the survey. However, we have built on topics and questions used in earlier surveys, and this could contribute to shed some light to what extent consumption has changed over the pandemic.

Starting off this research note, Torvald Tangeland presents changes in attitudes to environmental and climate issues and people's perceptions of the Corona pandemic's possible effects on consumption, climate and the environment. Following, Kirsi Laitala and Ingun Grimstad Klepp discuss how the leisure pattern has changed during the corona, for example when it comes to interacting with family and friends, outdoor activities, training, needlework and refurbishment. They look further at how the corona has affected the purchases of selected products such as furniture, electronics and sports equipment, and not least how clothing consumption has changed during the pandemic. Nina Heidenstrøm and Marie Hebrok have examined changes in people's food purchases with emphasis on various forms of e-commerce and use of digital platforms including online grocery shopping, food boxes, websites and food delivery apps. By repeating some of the same questions about

changes in food habits that were made in April 2020, i.e. soon after the strict measures were introduced, they have also been able to track developments in Norwegian habits during the corona when it comes to food procurement, preparation and processing of food. Finally, Gunnar Vittersø and Hanne Torjusen discuss to what extent the corona pandemic may have had an impact on a more sustainable, local food supply. They address, among other things, purchases through alternative distribution channels such as market stalls, specialised stores and purchases directly from the producer. They also examine the prevalence of – and changes in – various forms of foraging of food such as fishing, hunting, berry picking, growing and harvesting from their own garden, windowsill etc.

## 2 Environmental beliefs and willingness to change

*Torvald Tangeland*

In this chapter we will take a closer look at how environmental attitudes among Norwegian consumers have changed in recent decades and how these changes affect the willingness to reduce consumption. The findings have implications for what policy measures that can be put forward and implemented to change Norway in the direction of becoming a low-emission society.

### 2.1 COVID-19 impact on climate and environment

From March 12<sup>th</sup> 2020, Norway was to a large extent shut down due to the Covid-19 pandemic. This marked the beginning of a period of a very different everyday life in Norway, with periodically closed schools, kindergartens, shops and travel restrictions. From one day to the next, a large part of the labour force started working from home. The Covid-19 pandemic forced our society to reorganise how we lived our lives. For example, it became normal to work from home, which in turn has reduced the need for daily transport. This change was clearly good for the environment, but to what extent did the average citizen perceive this? In December 2020 and January 2021, we asked a representative sample of the adult population how they experienced that the pandemic had affected the climate and the environment. The majority (58 %) agrees with the statement *“The COVID-19 outbreak was good for the environment and climate change because we travel less”*. At the same time, fewer (30 %) agree with the statement the *“COVID-19 outbreak is good for the environment and climate change because we buy less”*.

### 2.2 The problem and the road to a sustainable future

The environmental debate has historically focused on how to reduce pollution from production. As the knowledge on how modern society contributes to climate change, loss of biodiversity and ecosystems has become more extensive, the recognition that there is a need to reduce the negative climate and environmental impacts from the consumption phase itself has increased (IPCC, 2018; IPBES, 2019). Basically, the negative effects of consumption on climate and the environment can be reduced by using three strategies alone or in combination: (1) **Replacement**: replace products with a high negative effect with products with a lower negative effect (e.g. replacing the fossil car with an electric car), (2) **Reorganise**: change how we consume (e.g. use public transportation instead of traveling alone in a car) and (3) **Reduce**: reducing the consumption level itself (e.g. travel less between home and work workplace) (Vittersø, Strandbakken & Stø, 1998). In Klimakur 2030, it is pointed out that new technology and behaviour are needed in several areas if Norway should be able to cut non-ETS emissions by 50 percent by 2030<sup>1</sup>. There is a growing understanding that new and cleaner technology alone will not be able to solve the climate and environmental problems. To become a low-emission society we can not only focus on

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<sup>1</sup> For more information go to: <https://www.miljodirektoratet.no/publikasjoner/2021/mars-2021/mitigation-analysis-for-norway-20212030-short-term-climate-impacts-and-co-benefits/>



using the replacement strategy. We need to use the reorganise and reduce strategies to a larger extent. This is because the growth in the consumption of goods and services (the volume) in itself is an important driving force that absorbs most of, and sometimes even more, than the efficiency gains that new technology brings with it (Vittersø & Strandbakken 2016). During the last decades there has been a change in the public debate connected to climate and environment. Question connected to how to reduce the negative climate and environmental impacts from the consumption phase are more often present in the debates. In the course of 2020, the discussion on whether Norway should receive consumer-based climate accounts has also received increased attention.

## 2.3 Environmental attitudes

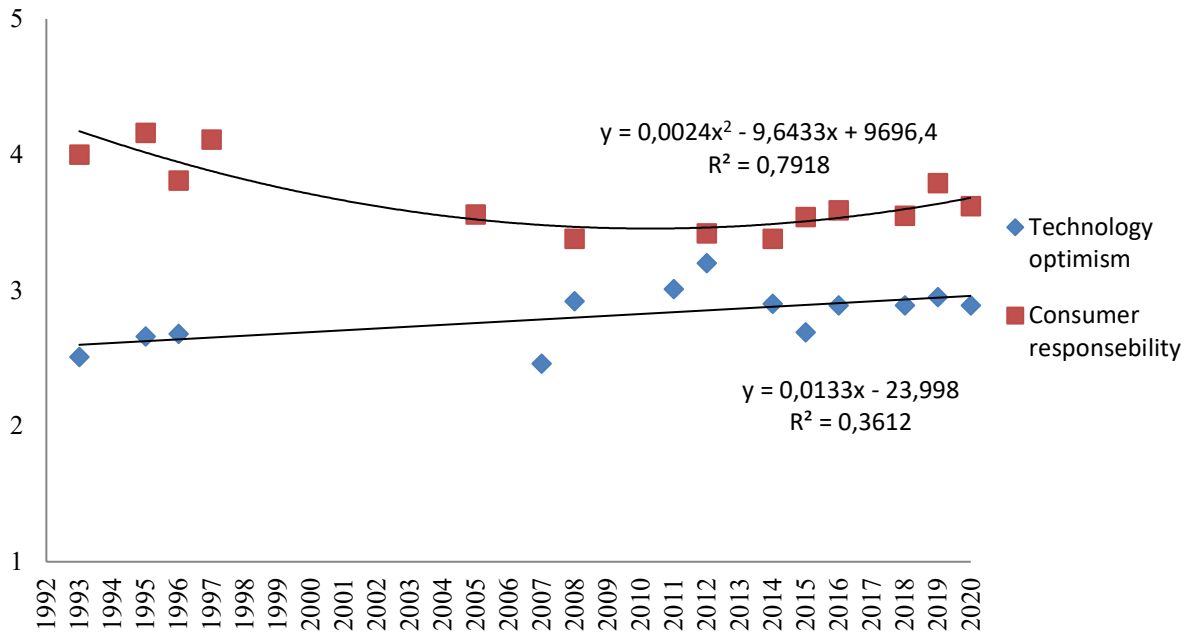
Consumer attitudes are changing in several areas. In order to record the changes in environmental attitudes in the period 1993-2020, consumers have been asked to what degree they agree with two statements related to how the problems can be solved. The first statement seeks to uncover the belief that new technology will solve the problems (technology optimism):

*(1) New technology will reduce the negative effects of consumption on the climate and the environment.*

The second statement seeks to reveal the responsibility the individual consumers feel they have (consumer responsibility):

*(2) – Individual consumers can contribute, by changing their behaviour, to solve climate and environmental problems.*

Figure 2-1 shows how the support for the two attitudes has changed in the last two decades. Throughout the period, there has been most support for the notion that that the consumers themselves can contribute to solving environmental problems. However, the support for this attitude was reduced between 1993 and 2014. After 2015 there has been a slight increase in support for the statement on consumer responsibility. The degree of agreement among consumers with the statement related to technology optimism has been increasing between 1993 and 2020.



**Figure 2-1: Changes in support for technology optimism and consumer responsibility among Norwegian consumers between 1993 and 2020 (scale: 1-5 where 1 completely disagrees and 5 completely agrees).**

The increase in technology optimism may be related to the focus area in the environmental and climate debate that has been ongoing in Norway. Technological solutions to the problems are often put forward in the debates. For instant, electrification of the car park is often expressed as part of the solution to cut greenhouse gas emissions from the transport sector. In the 2019 survey, 45 percent believed that electric vehicles were a good environmental measure. By 2020, this share had increased to 54 percent. Another measure that is often highlighted in climate policy debates in Norway is CO<sup>2</sup> capture and storage. Here it is hoped that emissions from oil installations, gas and coal power plants etc. will be minimised. Such measures are seen as far more efficient than trying to influence people's consumption patterns. Consumption is not at all affected by sustainability policy (Kasa 2016). It can be speculated that this is due to a political refusal to introduce measures that affect people's everyday lives, and which more directly affect people's consumption using measures such as prohibitions, taxes and excise duties.

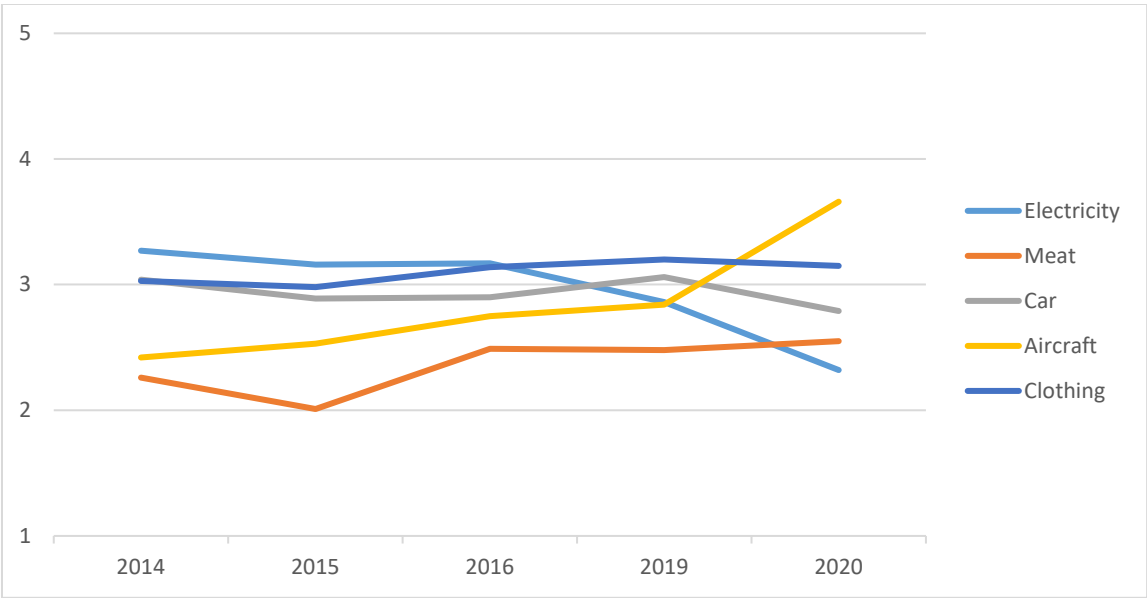
In the 2020 survey, we find that most consumers (54 %) are positive to the statement *"It should cost more to produce goods that contribute to environmental pollution and climate emissions, even if this causes these products to be more expensive in sales"*. However, there is a decline compared with the 2019 survey, when 63 percent were positive. If we move closer to the consumer's concrete willingness to pay a higher price, we see that the level of agreement is reduced. Among the respondents, 43 percent agree with the statement *"I am willing to pay more for environmentally friendly/sustainable products"*. There is a relatively high support for banning environmentally harmful products. 58 percent of respondents agree with the statement *"To get more environmentally friendly behaviour we must prohibit environmentally harmful goods and services"*.

## 2.4 Reduction of consumption

To minimise global warming and the extinction of species and ecosystems several changes need to occur: (1) The level of the greenhouse gas emissions from human activities must be reduced. (2) The overuse of non-renewable resources must stop. (3) The overall energy consumption must be reduced. This can be achieved through the three strategies: **Replacement, Reorganise and Reduce**. The last strategy is often forgotten, but it is the

most efficient and probably the one that is most difficult for policy makers to put forward. In this section we will take a closer look at consumers' willingness to reduce their own level of consumption. In the 2020 survey, 56 percent replied that they agreed with the general statement "I am willing to renounce goods and services I am now using if I can help protect our natural resources". In the 2019 survey this share was 62 percent.

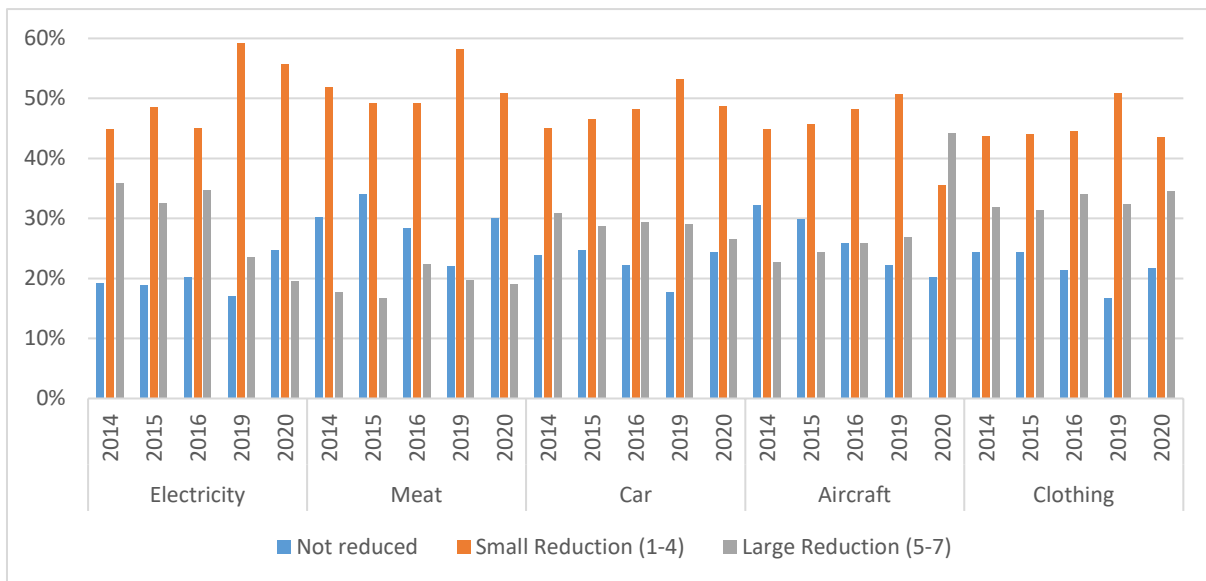
From earlier studies we know that it is often the case that people are more positive to general changes in the society than the ones that have a direct effect on their daily lives. This social phenomenon is often referred to as "not in my back yard" (NIMBY). In order to get better insights into the real reduction willingness, we asked the respondents to what extent they have previously, for environmental reasons, reduced their consumption of electricity, meat, car, aircraft and clothing on a scale from zero to seven, where zero means *no reduction*, one means *very small reduction* and seven means *very large reduction*<sup>2</sup>. This is not an exact measure of reduction, but it provides us with an insight into their intention to reduce their own consumption level. Between 2014 and 2020 there have been changes in the reduction willingness in all these five areas of consumption, figure 2-2. For all the consumption areas we observe that the willingness to reduce is relatively low.



**Figure 2-2: Willingness to reduce own consumption level within consumption of electricity, meat, car, aircraft and clothing in the period 2014 - 2020, average score.**

To get a better insight in the changes in willingness to reduce we have reduced the scale from eight points to three: no reduction (0), small reduction (1–4) and large reduction (5–7), figure 2-3.

<sup>2</sup> Question formulation: To what extent have you, for environmental reasons, reduced your consumption within the following categories? If you have not reduced your consumption for environmental reasons, use the "not reduced" answer option.



**Figure 2-3: Proportion who answer that they have not reduced versus those who to a small or large extent have reduced consumption for environmental reasons in 2014 (N = 1014), 2015 (N = 1003), 2016 (N = 1004), 2019 (N = 1196) og 2020 (N = 1271).**

For electricity, the share of consumers that report moderate reductions in electricity use (1-4) has increased from 45 to 56 per cent in the period 2014-2020, figure 2-3. The share that replies that they have implemented large reductions is lower in 2019 and 2020 (24 % and 20 %) than in the previous three years (33-36 %). In 2020, there is an increase in the proportion of respondents that have not reduced their consumption of electricity (25 %) compared with the previous four measurements (17-20 %). If we look at the average, we see that in the period 2014-2020 there has been a decline from 3.27 in 2014 to 2.32 in 2020, figure 2-2. This has shifted from being the consumption area with the highest share of reductions to becoming the one with the lowest share. The decrease in the reported reduction in electricity consumption may be related to the fact that many Norwegian households already have reduced their consumption by, for example, lowering the indoor temperature or turning off the light in rooms that are not in use. It may also be related to the fact that they have already taken measures such as installing the heat pump or post-insulating the house (Heidenstrøm & Strandbakken 2012). Another possible explanation may be related to the fact that their consumption has risen because of them spending more time at home due to the covid-19 shutdown of the society.

When it comes to meat consumption there has been a decrease in the share of respondents that report to have made *no reduction* from 30 to 22 percent between 2014 and 2019, figure 2-3. In 2020, the share that have not conducted any reduction was back again at 30 percent. Between 2014 and 2020 the share that reports a small reduction has been within the interval from 49 to 52 percent. In 2019 share was 58 percent. Figure 2-2 shows that it has been an increase in support for reducing meat consumption between 2014 and 2020. Still the reduction willingness is low. Several factors may influence the willingness to reduce meat consumption. Food culture is one of the main factors that can constrain a reduction in meat consumption (Tangeland et.al., 2020). Removing meat from the diet will be seen as a reduction in quality of life for some. Furthermore, there may be a lack of knowledge about how to cook vegetarian and vegan food that restrict dietary changes.

For the use of cars, there was a decrease in the share that did not reduce mileage between 2014 and 2019 from 24 to 19 percent, figure 2-3. In 2020, the share that did not reduce anything was back at 24 percent. The share that has reduced their use of cars to a small degree has been increasing, from 45 to 49 percent, although there is a decline from 2019 to

2020, with the share being 53 percent. The share that has made larger reductions was also on the way down. In 2014, it was 31 percent, while it was 27 percent in 2020. Looking at the mean scores illustrated in figure 2-2, we see that the reduction of willingness to reduce car use has been relatively stable between 2014 and 2019. In 2020, we'll see a fall in willingness to reduce use of cars. Car use is probably seen as more tied up and somewhat less flexibility to change. This is due to the daily need for transport to and from work, shopping, collection of children etc. Alternative transport options can be experienced by many people as unavailable. In connection with the corona pandemic, people have also been encouraged to avoid using public transport. This may have resulted in people replacing public transport with increased use of cars when they have travelled in 2020.

The willingness to reduce flying has been increasing between 2014 and 2020, figure 2-2. In 2020, we see a large increase. The share of respondents that did not reduce air travel was reduced from 32 percent in 2014 to 20 percent in 2020, figure 2-3. In 2020 the share that reported that they had conducted large reductions was higher (44 %) than previous years where this share has been between 23 and 27 percent. The corona shutdown meant that people's needs and opportunities for air travel was reduced. The increase in willingness to reduce air travel may indicate an increase in willingness to fly less, but it may also be that people have reported that they have reduced from environmental considerations even though there are other reasons that have resulted in a change in their behaviour.

The willingness to reduce consumption of clothing has been at a stable level between 2014 and 2020, figure 2-2. In 2020, this was the consumption area that came in second, after flight. The share that replies no reduction, moderate reduction and large reduction has been relatively stable during the period, figure 2-3. The exception is 2019 where there was an increase in the proportion of moderate reductions.

## 2.5 Environmental attitudes and reduction of consumption

We will now take a closer look at how the two general environmental attitudes – *technology optimism* and *consumer responsibility*, affect the consumer's willingness to reduce their own consumption in 2020 (table 2-1). For all consumption areas, we find a negative effect of technology optimism and a positive effect of consumer responsibility on willingness to reduce. The model explains three to seven percent of the variation in the reduction rate. This is not surprising since there are several other factors that also affect people's willingness to reduce their consumption of these product categories.

**Tabell 2-1: The effect of environmental attitudes on the willingness to reduce own consumption in 2020**

	<b>Meat</b>	<b>Electricity</b>	<b>Car</b>	<b>Flights</b>	<b>Clothing consumption</b>
<b>Technology optimism</b>	-,259***	-,184***	-,131**	-,273***	-,305***
<b>consumer responsibility</b>	,439***	,344***	,431***	,525***	,558***
<b>Constant</b>	1,520	1,929	1,675	2,577	2,081
<b>R<sup>2</sup><sub>adj</sub></b>	,05	,033	,034	,047	,070
<b>N</b>	1133	1126	1110	1117	1130

P-Value (\* ≤ 10 %, \*\* ≤ 5 % og \*\*\* ≤ 1 %)

## 2.6 Conclusion

The 2020 measurement differs somewhat from the trends observed in the past for climate and environmental attitudes among consumers. Whether this is due to the corona shutdown of society or a shift in consumer attitudes is difficult to say based on this survey. The big

question is whether attitudes stand in the way of a necessary change in consumption so that the negative effects on climate and environment are reduced? The results of the 2020 survey indicate that consumers' environmental attitudes are changing, and this may allow for more radical changes. Technology optimism is still on an upward trend which will help make it easier to convince consumers that they should buy electric cars than it is to get them to reduce the volume of their travel activities. Nevertheless, there is much evidence that we are at a crossroads. Consumer responsibility is on an upward curve after many years of fall.

Environmental attitudes among consumers are moving in a direction that opens new opportunities to put forward politics that can create a more a more sustainable future. Nevertheless, it is naive to believe that the rapid reconfiguration that the Intergovernmental Panel on Climate Change points out that we need globally (IPCC 2018) will happen if it is left to consumers and the free market to find better solutions. Through legislation and regulation, the authorities must facilitate a fair restructuring of society in a more sustainable direction. This and previous surveys show a clear tendency for consumers to believe that it is the authorities and secondly the business sector that has the greatest responsibility for achieving a restructuring (Tangeland & Vittersø, 2014). Consumers consider that they also have some responsibility, but to a lesser extent. This may indicate that consumers believe that the transition to a low-emission society must first and foremost be resolved politically.

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## 3 Shopping habits and leisure

*Kirsi Laitala and Ingun Grimstad Klepp*

In this chapter, we look at how the Norwegians' shopping habits, leisure activities and clothing use have changed as a result of infection prevention and control measures. The questions are stated in such a way that the respondents are asked to tell whether they had increased, decreased, or even terminated specific activities, compared to one year ago. It was also possible to report unchanged practices, or if the specific activity was not relevant before the pandemic either.

### 3.1 Leisure activities: More TV time than hiking

There are clear patterns of changes in leisure activities. Most notably, there has been a considerable decline in social activities. This is a direct consequence of the restrictions in the last year. 76 per cent say they have spent less time with friends, and 64 per cent have reduced family visits. Two per cent have completely stopped these social activities during the pandemic. Not surprising, pensioners and those living in Oslo have had the greatest decline in family visits. The authorities have been very clear in their communication on how the Covid-19 infection is most dangerous for the elderly. The long period of stricter measures in Oslo compared with the rest of the country is also very evident in the data.

The activity that has increased most is watching TV and the use of online streaming services, where 54 % say they have increased and only 3 % have decreased the time consumption. Especially the young respondents below the age of 30 have increased their TV and Internet time. Also, home renovation/refurbishment activities have increased. 23 % say that they have done some more home improvements, and we see tendencies that those with higher incomes have increased this more than those with low incomes. There has also been an increase in time used on handicrafts such as knitting and sewing (18 %). A higher share of women and unemployed respondents have increased their time consumption in handicrafts. The share of consumers that have done more gardening has also increased by 15 %. However, the majority finds that gardening has not changed during the corona period.

We also see a change in exercise patterns, where the share of people who have gone out on walks in the forest or hiking in the mountains has increased by 36 %, and training outdoors has increased by 20 %. Still, there is also a group that has reduced such exercise activities (7 % have gone less for walks and 10 % have reduced exercise out). There are more people who have reduced training indoors (21 %) than increased this form of exercise (13 %). This can be explained by the fact that gyms have been closed during periods. Questions do not distinguish between organised and unorganised training, and whether the indoors activities are at home or inside the fitness centre. Many people are likely to have changed their training habits so that they have trained more at home, either alone or with the use of various forms of training videos or apps. It is also likely that changes in some people's work situation due to covid-19 have affected the possibilities of exercising. Some have got more to do either at work or with home schooling of the children, while others have been temporarily laid off and received reduced income, but more free time. In Oslo, gyms have been closed for



several months. Not surprisingly, respondents from Oslo report more reduced indoors exercise than those who live in other parts of the country.

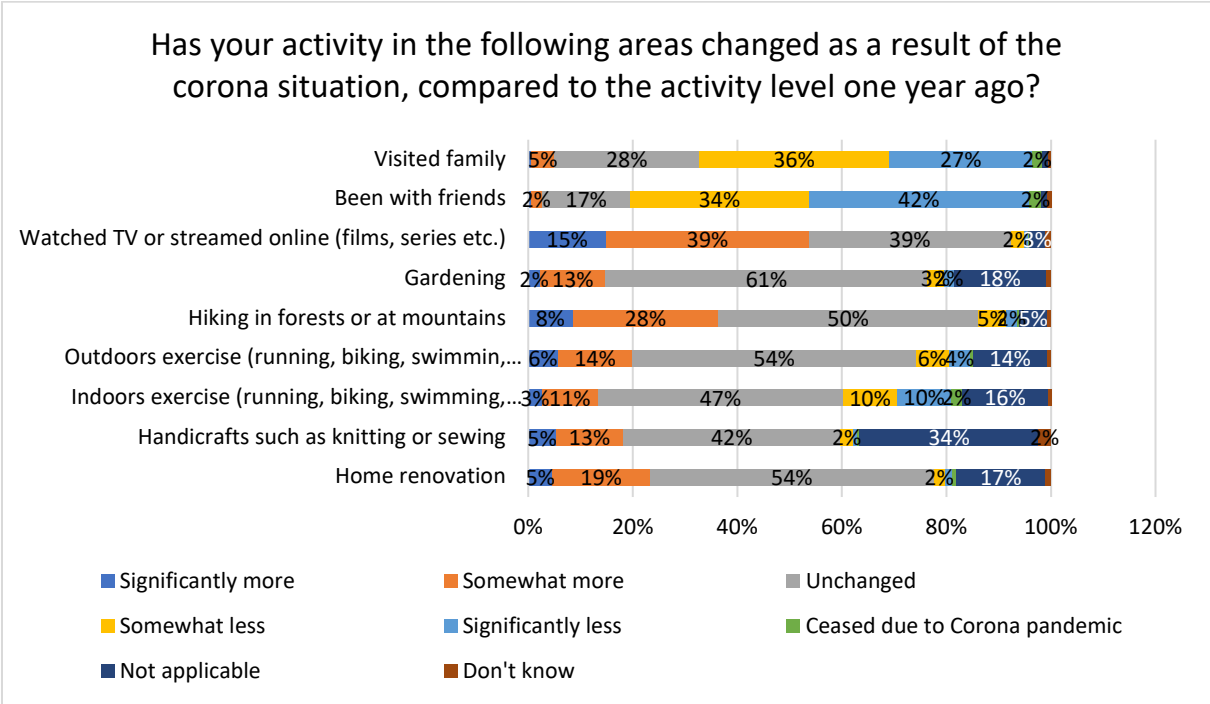


Figure 3-1: Changes in leisure activities (N=1209)

### 3.2 Clothing purchase habits have changed the most

When we compare changes in shopping habits of various product groups, we see the most obvious changes in the purchase of clothing. Almost half of the respondents reported that they have reduced buying clothing in stores, in addition to 3 % that have quit completely. Every fifth respondent says that he/she has increased buying clothing online, while there are 8 % that have reduced this activity too. For 24 %, online clothing shopping was not relevant, independent of the pandemic.

There is some increase in acquisition of furniture and interior articles, with some more who say they have bought more (13 %) against those who say they have bought less (9 %). We can see the same pattern in the acquisition of electronic products and/or computer equipment, where 14 % have bought somewhat more while 8 % say they have bought less. Acquiring sports and leisure equipment also follows the same pattern, where 16 % say they have bought more, while 8 % say they have bought less. Especially those with high income have increased the purchase and use of outdoors and exercise clothing.

These figures show the same general trends as a study conducted by a bank; “SpareBank1”. Their customers spent 36 % more in electrical stores, 23 % more on streaming and 35 % more on sports equipment in the first two weeks of January 2021 compared to the same weeks of 2020 (Askeland, 2021). At the same time, they found a 9 % reduction in clothing purchases, which is somewhat lower than our findings. This can be partly explained by the timing of the two studies. Clothing purchases had more marked reductions at the start of the pandemic when the Norwegian population spent about NOK 4 million per day on clothing, but

after the corona measures were implemented in March 2020, the figure fell to about one million kroner, while this curve has gradually increased again over the past year (Johansson, 2020).

The acquisition in the form of purchase or reception of second-hand clothing has had a slight reduction in the past year. Seven per cent say they have received or bought less, 2 % have stopped this completely, compared with 5 % stating that they have acquired something more than before the pandemic. As many as 44 % say that this way of acquiring clothing is not relevant for them, independent of the pandemic.

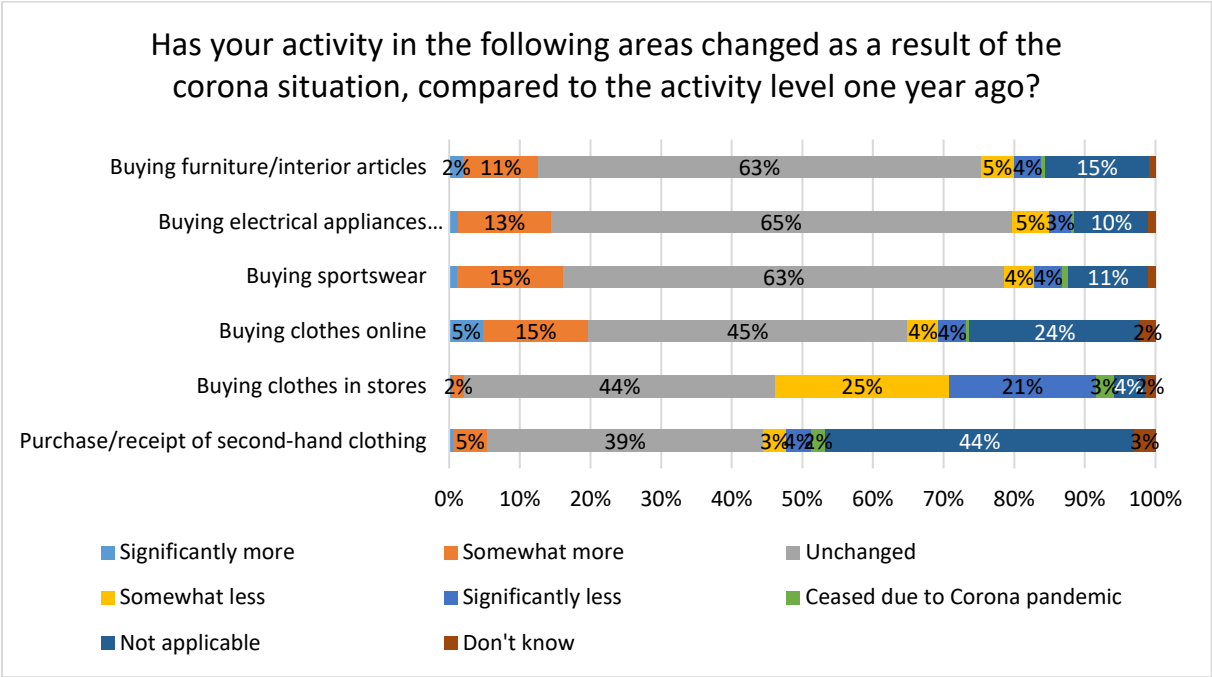


Figure 3-2: Changes in purchase habits (N=1209)

### 3.3 Less formal wear and more exercise and leisure clothing

There are clear changes in what types of clothing we have worn during the pandemic. As many as 44 % say they have worn less formal or dressy clothes, while 31 % have increased use of sportswear, and 36 % have increased use of comfortable clothing. Also, the use of older clothes has increased (18 %). A bit surprisingly, there has also been a reduction in the acquisition of clothing for use at home, where 24 % say they have reduced this compared to 6 % that have increased this. Clear differences can be observed between men and women. A larger proportion of women have used more of their older clothes and increased their consumption of comfortable clothing while reducing the use of formal and dressy clothes. One possible explanation is that women’s clothing habits distinguish more between the types of occasions that have been influenced by the pandemic, such as clothes for work at home versus in the office and various social occasions. There are also some geographical differences. Those living in Oslo have increased the use of comfortable clothes and reduced the use of formal clothing more than those who live in other parts of the country. Life situation is also important here, as students have acquired some more new clothes for home use and increased their use of comfortable clothing. Those who were at home also before the pandemic, have changed their clothing habits the least.

The pandemic can also have had an impact in our laundering habits. Awareness of infection and cleanliness is likely to increase washing temperature and/or washing frequency, but on the other hand, there are reduced requirements for newly washed clothes due to less social contact outside the home. The answers we have received to laundering related questions indicate that Corona has not changed our laundry habits much. There are about as many who say that they wash more clothes as those who wash now less (11 %), and 74 % say that this is unchanged. 80 % report that the use of high temperatures is unchanged, and there are about as many that say they have washed more at high temperature (8 %) as those who say they have washed less (7 %). Some more of the respondents in age groups between 30 and 80 years have increased the washing frequency than the young under 30.

There's a slight change in the disposal of clothes. 16 % of respondents say that they have delivered more clothes to reuse, against 8 % who say that they have delivered less. 12 % say this doesn't apply to them. This is consistent with figures from the largest clothing collectors, who report an increase in the reception of second-hand clothing during the first months of corona measures (Setten, 2020). However, after one year of measures, the various collectors have noticed a reduction in the collected amount (Hjelle, 2021).

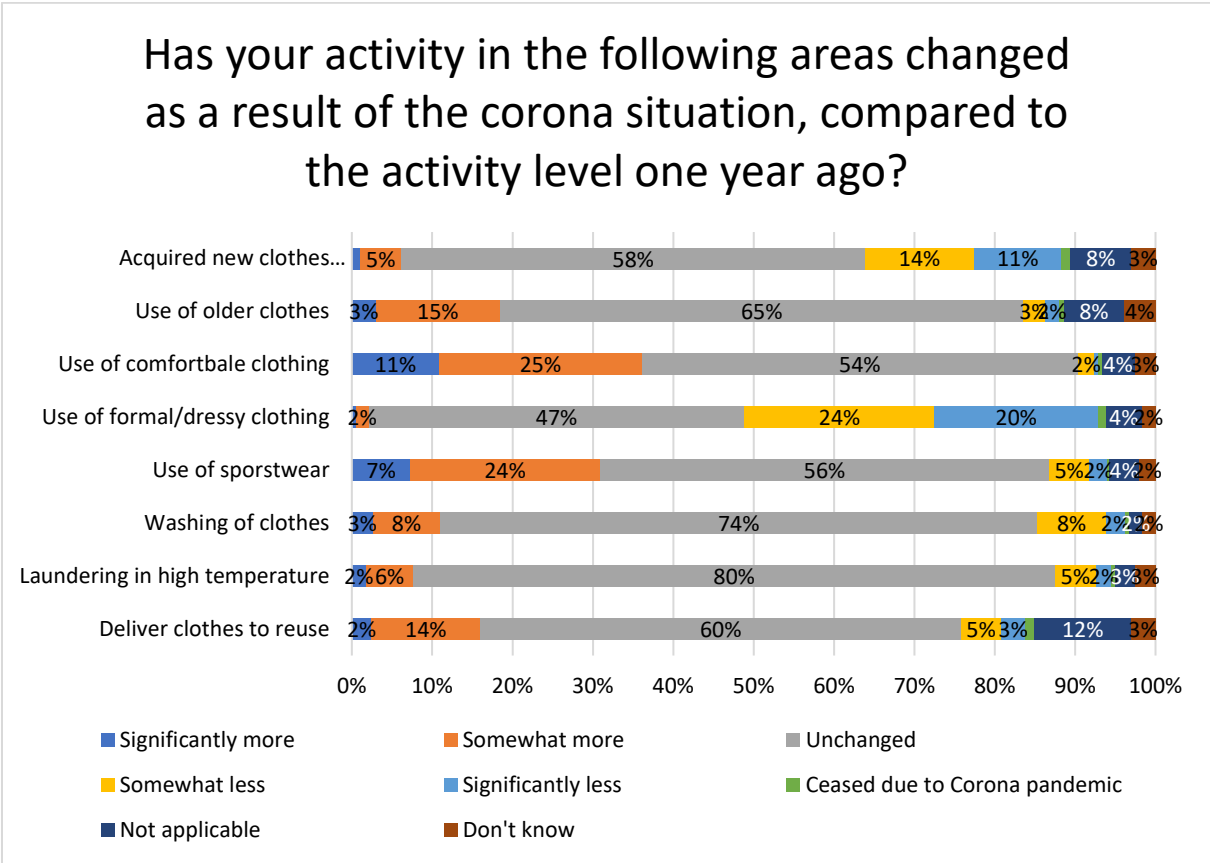


Figure 3-3: Changes in use and laundering of clothing (N=1209)

### 3.4 Conclusion

The measures against Corona have affected what we do and what we buy. Some of these changes have positive effects on the environment, such as less purchase of new clothes and more use of old clothes. Positive is also the ability to change daily life and our adaptability in the opportunities that exist, for example by changing the training habits to what is available. This willingness and ability to change can potentially be activated to find solutions to climate and other environmental challenges.

Negative in the findings are the differences between groups, such as a significant decline in social activities for pensioners. There has been considerable attention to the increased use of nearby forests and land areas for outdoor activities. The survey shows that it is primarily those with higher incomes who have been able to buy more recreational equipment. Not everyone has been able to increase their outdoor activities, as surprisingly many answered they reduced these activities. Once again, these results point out that Corona is not a common experience, and that age, gender, income and place of living are important for how the measures have influenced our daily lives and consumption.

The questions have been addressed at areas where we expected changes in consumption patterns. The biggest surprise in the material is perhaps the large number who have answered that their consumption has not been affected by Covid-19 measures, indicated by high overall agreement with “unchanged” patterns. This is a useful reminder, as although Corona has led to changes, most people respond that they do much of the same as before. An exception to this is what is directly governed by public measures, to be physically together with others.

### 3.5 References

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Hjelle, A.-W. (2021) 'Tall innsamling 2020', Sirkulære Tekstiler, arbeidsgruppemøte - innsamling, sortering og gjenbruk ['Figures collection 2020', Circular Textiles, working group meeting - collection, sorting and reuse], Oslo, 18.3.2021.

Johansson, E. (2020) Forbruket vårt har endret seg drastisk under korona [Our consumption has changed drastically during the corona]: Sparebank1. <https://www.sparebank1.no/nb/smn/om-oss/nyheter/forbruket-vart-har-endret-seg-drastisk-under-korona.html>.

Setten, K. (2020) 'Fretex fortviler – får mer og mer klær de ikke vil ha' ['Fretex despairs - gets more and more clothes they do not want'], *TV2 nyheter*, 10.09.2020. <https://www.tv2.no/a/11639606/>

## 4 Digital food provisioning and changes in food consumption during the corona pandemic

*Nina Heidenstrøm and Marie Hebrok*

### 4.1 Introduction

In this chapter, we discuss digital food provisioning before and during the corona pandemic, based on empirical data from the following research projects:

- The SIFO-survey: Survey December-February 2020/21, presented in Chapter 1.
- PLATEFORMS: A European research project on digital platforms for food provisioning. Interviews with 30 Norwegian households in the period 2019-2021 who used meal box schemes, online grocery shopping, REKO-ring, and Too Good To Go.
- Digital everyday life during the corona: Survey 1.-7. April 2020 (Slettemås & Storm-Mathisen, 2020).
- Corona 2020: Consumer survey 12.-16. March 2020 (Berg, 2020).

Despite its detrimental effects on society, the corona pandemic has also been a window of opportunity to study how a long-term crisis might change consumption patterns, as well as the environmental benefits of such changes during and beyond the crisis period. The following chapter provides a first insight into changes in food consumption during the corona pandemic in Norway. Previous research has shown that our habits tend to slip back after a crisis, to take back some kind of (new) normal state (Rinkinen, 2013). Whether the changes we report on here will sustain after the governmental restrictions are reduced and finally removed, must be further researched.

Moreover, we do not yet know whether online food provisioning is more environmentally sustainable than in-store shopping. However, it is possible to imagine that increased online food provisioning can reduce transport emission by transferring transport logistics to a coordinated distribution system. It is also possible that the amount of household food waste might be reduced by an increased opportunity to plan grocery shopping based on existing stocks in the fridge and freezer, as well as less impulse buying. Additionally, future digital food provisioning platforms can be designed to encourage consumers to buy organic products, vegetarian alternatives, and provide information on portioning and recipes with e.g., reduced meat quantities. On the other hand, increased online food provisioning may undermine sustainable urban development and social sustainability by reducing local spaces for enacting and sharing food culture.

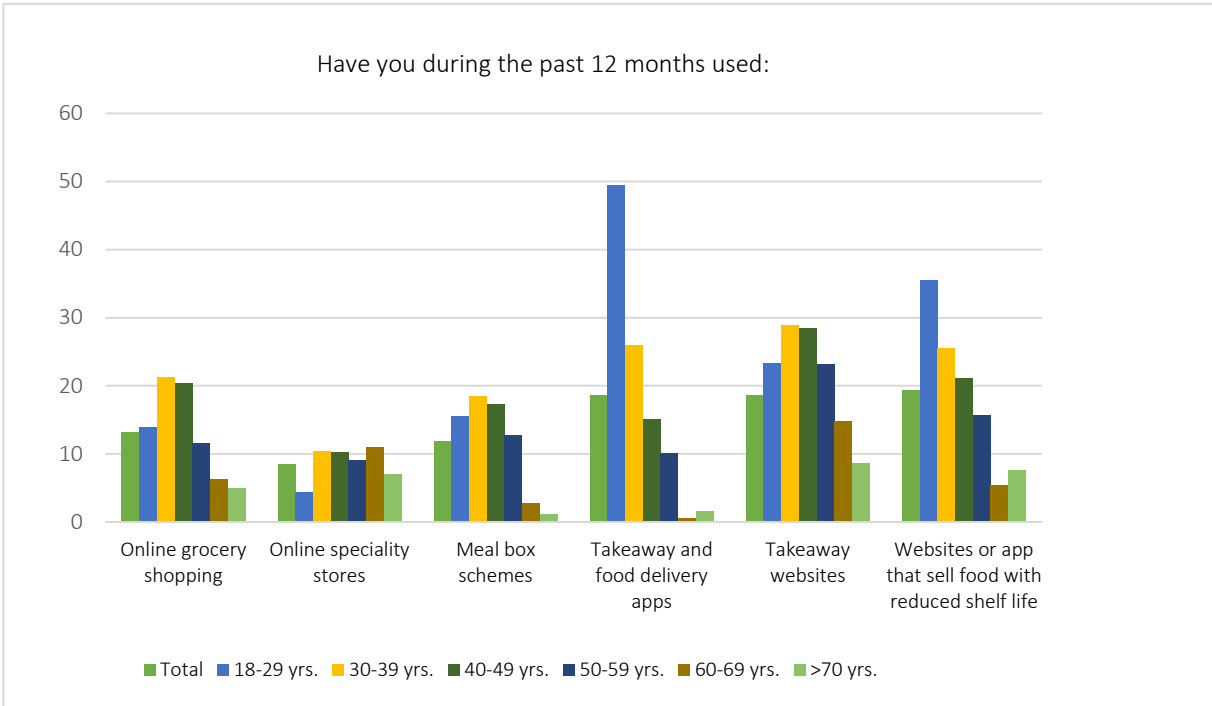
In the following, we first describe the use of digital platforms for food provisioning in Norway during the past few years. Secondly, we present the changes in use of digital platforms during the corona pandemic and discuss their relevance for sustainable consumption.

### 4.2 Use of digital platforms for food provisioning

In 2013, Kolonial.no established an online grocery store. Meny.no and Spar.no followed in 2017. The two largest meal box scheme suppliers Godt levert and Adams matkasse were

established in 2010 and 2013. The turnover of meal box schemes in particular has fluctuated; however, it appears that turnover for both grocery suppliers and meal box scheme suppliers has been increasing in recent years.

The SIFO-survey has examined the use of digital platforms for food provisioning since 2015. In 2015, 4.7 percent of consumers responded that they had bought groceries online during the past four weeks. In 2018, 14 per cent responded that they had bought online groceries during the past 12 months. These questions are not entirely comparable but give some indication of an increase in use. In 2020, we asked which digital platforms consumers had used during the past 12 months, shown in figure 4-1. Please note that this survey distinguished between different types of platforms, something that was not done in 2015 and 2018. Respondents could also tick off for more than one response option. The figures are therefore not comparable.



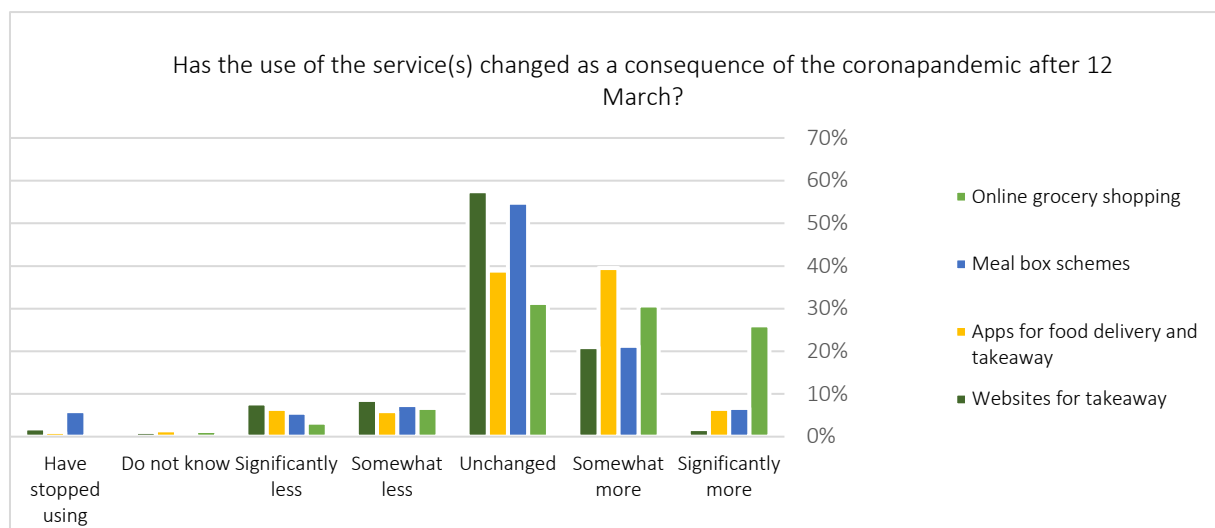
**Figure 4-1: Use of digital platforms for food provisioning 2020, by age groups**

Use of digital platforms for food provisioning seems to be more widespread among the younger age groups. Apps are mostly used by the youngest group (18-29 yrs.). For use frequency, we found that 22.6 per cent of those who used online grocery shopping also responded that they used the services 2-3 times per month, while 44.7 percent used such services less frequently than once a month. The same tendency was found for meal box schemes. 49.3 per cent of those who used meal box schemes used them less frequently than once a month. This is also consistent with the results from the Platforms project, where we interviewed households that used digital platforms for food provisioning. Many of the study informants reported that they used the services occasionally but that it was difficult to incorporate new ways of food acquisition into their everyday lives (Heidenstrøm & Hebrok, 2021).

### 4.3 Increased use of digital platforms for grocery shopping during the corona pandemic

On March 12, 2020, the Norwegian government implemented the most invasive restrictions for the population since World War II. Despite open grocery stores, Norway, like many other countries, experienced hoarding tendencies in the days following the first restrictions. For example, the results of the corona 2020 survey showed that 84 percent bought dry goods and 40 percent bought toilet paper (Berg, 2020). During this period, the use of digital platforms, such as food boxes and online grocery stores, exploded. The two largest food box suppliers, Adams matkasse and Godt levert, reported a growth of 290 per cent in new subscribers, and one of the largest suppliers for online groceries, Kolonial, reported a 250 percent increase in the number of orders.<sup>3</sup>

In the SIFO-survey carried out in December 2020, we asked consumers who had already answered that they used online grocery stores (13.2 per cent), meal box schemes (11.8 per cent), apps for home delivery and takeaway (18.6 per cent), and takeaway websites (21.6 per cent) if they had changed the use frequency of online platforms because of the pandemic and if so, in what way, shown in Figure 4-2.



**Figure 4-2: Changes in online grocery shopping during the corona pandemic 2020**

56.8 per cent of the respondents said that they had used online grocery shopping somewhat or significantly more during the pandemic. We see the same tendency for other digital platforms, although not as strong. 28 per cent responded that they had used meal box schemes somewhat or significantly more during the pandemic, 46 per cent responded that they had used apps somewhat or significantly more, and 23 per cent had used websites somewhat or significantly more. Clearly, a larger share of food provisioning has been done using digital platforms even though ordinary grocery stores remain open. More use of apps

<sup>3</sup> [Corona-viruset fører til kapasitetsproblemer for dagligvarehandel på nett – E24](#)

[Matkassegigant: – Vi jobber med 3–4 bemanningsbyråer for å ha nok folk – E24](#)

and websites for prepared food/takeaway might indicate that in addition to changes in how we acquire food, we have also changed what we eat.

### 4.4 Changed eating habits during the corona pandemic

Over the past year, we have on two occasions asked consumers if they have changed their eating habits during the pandemic. The first survey was conducted between 1-7. April 2020 and focused on digital everyday life during the pandemic (Slettemås & Storm-Mathisen, 2020). The same question was asked in the SIFO-survey in December 2020. The results are shown in Figure 4-3. Note that in the April survey, respondents could also answer “yes, I buy more food online” and “yes, I buy more fresh goods”.

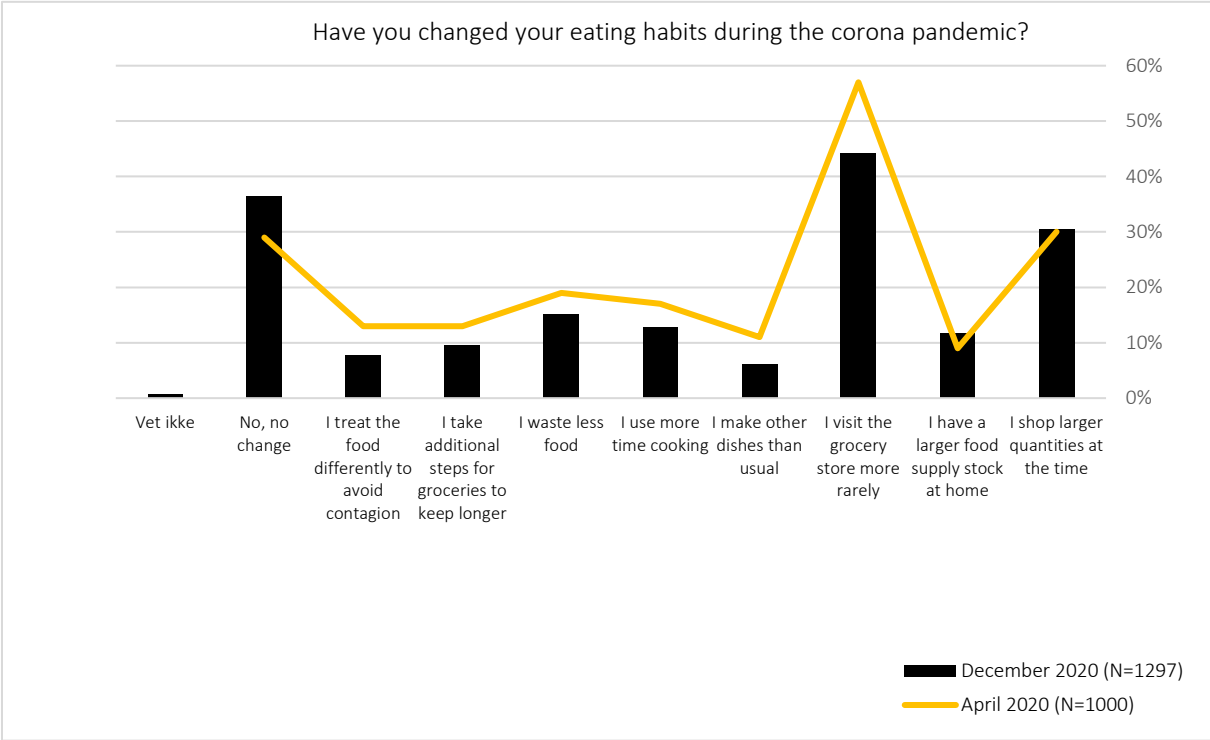


Figure 4-3: Changes in eating habits during the corona pandemic 2020

In April, 29 per cent responded that they had not made any changes to their eating habits during the corona pandemic. In December, the percentage had risen to 36.5. This might indicate that some changes were made for a short period of time immediately following the first restrictions.

Of those who responded that they had changed something, most people said that they visited the grocery store less frequently and that they bought larger amounts of food at a time. These changes have persisted throughout the period. This is consistent with the recommendations of the authorities to reduce mobility during the pandemic, and we see it particularly in April 2020, with 57 per cent responding that they visited the grocery store less frequently.

In December, the SIFO survey showed some differences in eating habits between those living in larger cities and those living in rural areas. For example, 10.5 per cent of those living in a big city centre responded that they treated the food differently to avoid infection, while 4.4 per cent of rural inhabitants answered the same. This might be due to higher infection rates in urban than rural areas. Moreover, it might also be due to a difference in food



handling skills. Hebrok and Heidenstrøm (2017) found in a study of household food waste that consumers with knowledge about food production and who lived at or near a farm or had grown up with parents who had such knowledge, were better at assessing food edibility and relied more on their own assessment ability. From a sustainability perspective, we can imagine that the expertise to assess food edibility can reduce the amount of food waste in households.

The options “I take better care of the food”, “I throw less food” and “I spend more time preparing food” shown in figure 4-3 indicate that consumers have been more active in their own food handling during the pandemic. Working from home and less travelling might have freed time for other activities, including cooking. We have seen an increased interest in cooking during the pandemic in Norway, the sourdough bread posted in many social media accounts is perhaps the most notable example. Such interests, along with being active in food handling (planning, purchasing, storing, cooking, eating, disposing) might contribute to less food waste. Previous research has shown that homemade food was perceived to have a higher relational value, meaning that was less frequently wasted if it was home made by either yourself or others that you have a relation to. Foods with high perceived quality and foods that you have spent time cooking were also less frequently wasted (Hebrok & Heidenstrøm, 2017).

We also found some age differences in food handling during the pandemic. In the December SIFO-survey, 14.3 per cent in the youngest age group (18-29 years old) indicated that they prepared other dishes during the pandemic than they usually would. Only 3.8 per cent in the two oldest age groups (60-69 years and over 70 years) reported the same. 23.6 per cent of the youngest respondents also reported that they spent more time preparing food, while 17.1 per cent in the two oldest age groups reported the same. More use of restaurants, student canteens or similar prior to the pandemic and more at home cooking amongst the youngest age group might be an explanation for the discrepancy between age groups.

Although unrelated to environmental sustainability, we also note that only 9 per cent in April and 11.7 per cent in December reported that they had stored extra food. The marginal increase might indicate that consumers do not consider it necessary to have a private food storage during long-term crises. This is in line with Heidenstrøm (2020) who studied household preparedness and found that Norwegian households did not store extra food as a preparedness measure because they had a high level of trust in the authorities to manage long-term crises and disasters.

## 4.5 Conclusion

National and local restrictions following from the corona pandemic have led to changes in food consumption habits. More people buy food online, especially using online grocery stores and ready-meals and takeaway. About half of the respondents used these services less than once a month, suggesting that online platforms might have served as a safer shopping alternative during periods of high infection rates, rather than replaced visits to grocery stores. More consumers testing online grocery shopping might lead to increased use in the future. Nevertheless, there are many barriers to increasing online food provisioning and its contribution to more sustainable food consumption. More research is therefore needed on the importance of new food services and technologies and their effect on existing food practices.

Fewer visits to the physical store and shopping larger quantities are the biggest changes in food consumption patterns during the corona pandemic. Online grocery shopping makes it possible to check what you already have in the fridge while making the online order, and the websites offer a range of tools for planning purchase and for meals. More time at home during the pandemic might lead to more food being eaten before it expires, including leftovers. Together, this can lead to less food waste (Hebrok & Heidenstrøm, 2017). 15-19 per cent (April/December) reported that they had wasted less food during the pandemic. Using online platforms for food provisioning can also lead to reduced car use. The changes have been stable between April and December 2020. To what extent they will sustain when the restrictions cease is uncertain.

## 4.6 References

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Rinkinen, J. (2013). Electricity blackouts and hybrid systems of provision: Users and the 'reflective practice'. *Energy, Sustainability and Society*, 3(1), 1-10.

Slettemås, D., & Storm-Mathisen, A. (2020). *Digitalt koronaliv 2020: Norske husstanders digitale håndtering av koronapandemien*. Notat. Oslo: Forbruksforskningsinstituttet SIFO. URL: <https://oda.oslomet.no/handle/10642/9054> I dette kapittelet diskuterer vi mathandel på nett før og under koronapandemien basert på data fra følgende undersøkelser og forskningsprosjekter:

## 5 Alternative food supply under the corona

*Gunnar Vittersø and Hanne Torjusen*

Food that is distributed locally, whether directly from the farmer, in a local market or in the form of self-sufficiency is often considered more sustainable than ordinary food distribution, both in a social, economic, and environmental sense (Vittersø et al. 2018). Various forms of direct food distribution can be beneficial from an economic perspective for both producer and consumer, partly because expensive intermediaries are cut out. Socially, it can help strengthen local networks, increase knowledge about local food production and promote local food culture. Local distribution and supply of food will also in many cases, although not always, reduce climate emissions as a result of less transport of food from producer to consumer (Vittersø et al. 2021).

An important aspect in this context is that access to food must be safe and predictable. Food security is perhaps something we have taken for granted for a long time in Norway, but which the corona pandemic has brought to the fore. As a supplement to ordinary food retail, alternative food supply can contribute to food security, among other things because it supports local food production, as well as sustains and develops knowledge and traditions about food production and consumption.

In this chapter, we will take a closer look at how Norwegians' supply of food outside the ordinary grocery market changed during 2020. We will first look at the extent to which food were bought directly from producers, in market squares or other outdoor food markets or in specialty stores such as fish shops, butchers or greengrocers. Who buys from this type of alternative outlets and has the corona pandemic changed the use of these outlets? We will then examine the extent to which the respondents have participated in activities where they have provided the food themselves, such as fishing, hunting, berry picking, mushroom picking and various forms of harvesting and growing their own food. Who is primarily involved in self-sufficiency in food, and has this been an important contribution to the households' food supply, so-called "matauke"<sup>4</sup> or should we perceive these activities primarily as a form of leisure activities?

### 5.1 Food procurement other than from ordinary grocery stores

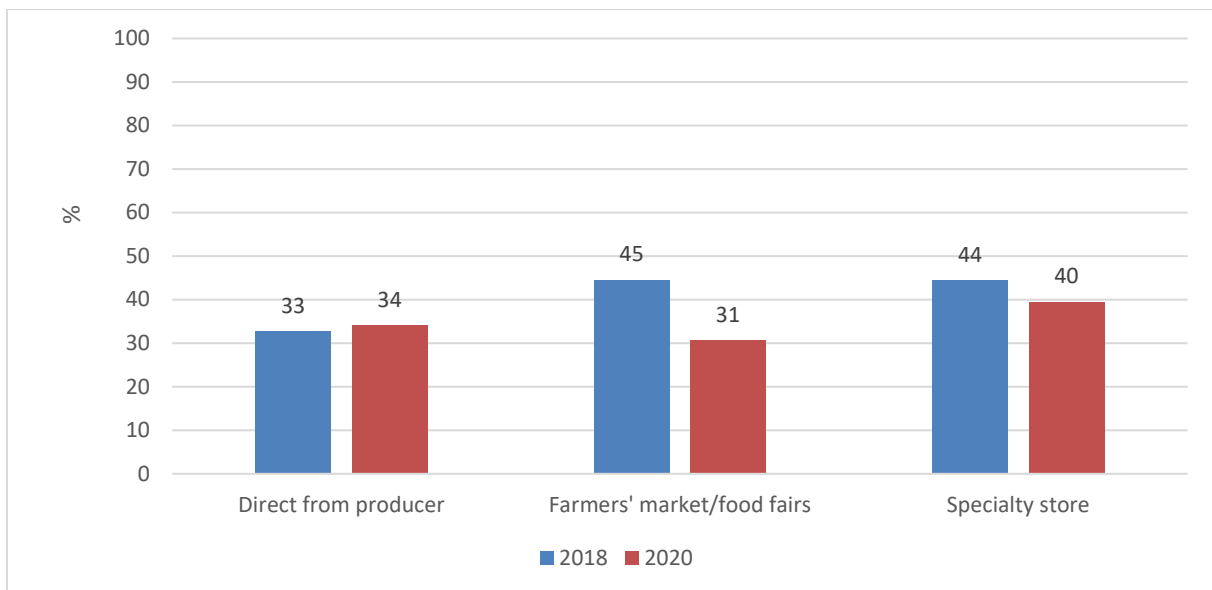
At the beginning of the corona pandemic, it was a concern that the ordinary grocery stores could run out of certain goods (Berg, 2020). This was due in part to the effects of hoarding, but also because people changed their shopping patterns. Among other things, the demand for yeast and flour sharply rose because people to a greater extent started to bake at home (Nationen, 08.09.20). There was also a discussion about national food preparedness and the extent to which Norwegian agriculture, which has gradually become largely dependent on foreign labor, could maintain its level of production, not least of vegetables, fruit and berries.

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<sup>4</sup> Matauke" is a Norwegian term that may be translated as an activity with the aim of supplementing ordinary food provisioning.

Although grocery stores have been open throughout the pandemic, the daily purchases have changed in character. There have been restrictions on how many people that can be present in the stores at any given time. This has encouraged customers to spread their shop visits throughout the opening hours. Hygiene rules (washing hands at the entrance and exit of the stores) and social distancing have markedly changed the shopping experience for the customers.

In the survey for 2020, we asked whether the respondents had used various services to obtain food, such as shopping directly from producers, food markets or specialty shops. To investigate whether the corona has affected Norwegians' use of these services, we have compared the results with figures from a similar survey in 2018 (Figure 5-1):



**Figure 5-1: During the last 12 months, have you used any of the following services to buy / obtain food? N = 1196 (2018); N = 1297 (2020).**

Purchase from outdoor markets such as the Farmer's Market, other food markets and food fairs, show the largest decline from 45 per cent in 2018 to 31 per cent in 2020. We also register a small decline for specialty stores (from 44 to 40 per cent), while shopping directly from producers is unchanged. Every third respondent answered that they have procured food directly from the producer in 2020. Various considerations may have influenced Norwegians' use of purchasing channels in the form that many who wanted to avoid large gatherings of people, might have preferred smaller shops or to shop directly from the farmer or at outdoor markets. However, it turned out that especially several of the larger outdoor markets (The Farmer's market, food fairs, etc.) were closed for longer or shorter periods<sup>5</sup>, while for example REKO rings could adapt relatively quickly, e.g. by increasing the distance between the providers at the collection point, increasing the time for picking up goods and organizing groups of customers (personal message)<sup>6</sup>.

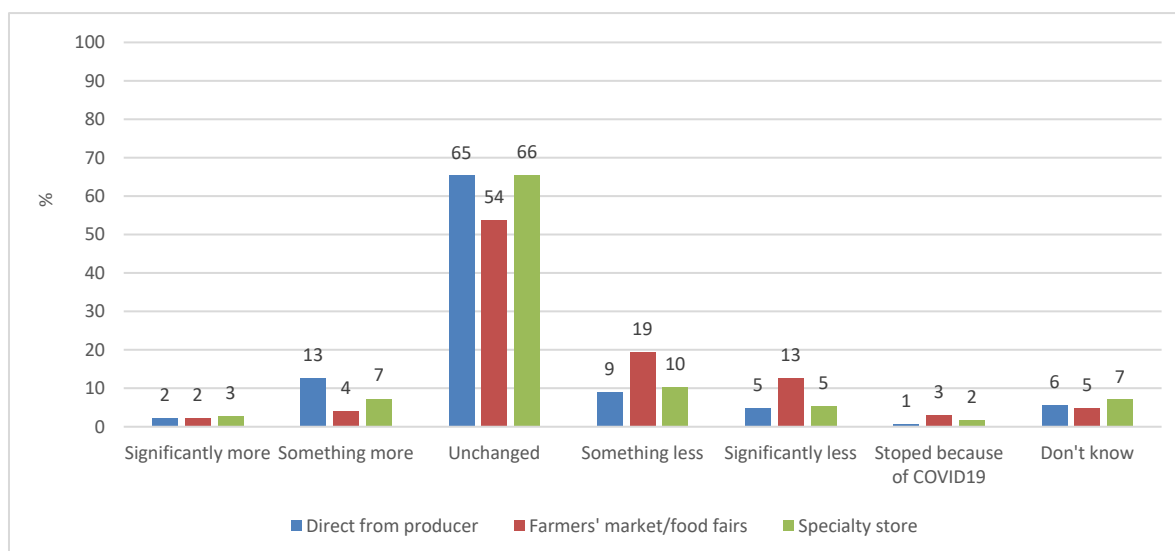
<sup>5</sup> <https://bondensmarked.no/nyhet/korona-markeder-168>; <https://bondensmarked.no/nyhet/pasketid-176>

<sup>6</sup> Pers. message 1.05.2020, Merete Nyrerød, REKO-ringen Sandvika

It is the older age groups (over 50 years) who for the most part have obtained food through alternative purchasing channels. This is in contrast to food purchases on the Internet, which younger groups (30-50 years) make greater use of (see Chapter 4). While both shopping in specialty stores and visiting food markets are more common among urban dwellers, direct shopping is more widespread among respondents in the smaller towns and in the countryside. In general, the use of alternative purchasing channels is associated with some types of environmental activities, such as reducing consumption based on environmental considerations (see Chapter 2), and buying products that are environmentally, organic, or fair trade labelled. This type of food purchasing is also associated with various forms of self-sufficiency in food, which we will return to below.

Not surprisingly, the survey shows that Norwegians do visit specialty stores more frequently than outdoor markets or purchasing directly from the producer. One in ten of those who shopped in a specialty store, answered that they visited these weekly and almost half on a monthly basis. Just under 40 per cent of those who shop directly from the producer do so at least once a month, while only 5 per cent do so on a weekly basis. Shopping from outdoor food markets is more seldom, and just under one in three do this more often than once a month.

As shown in Figure 5-1, there was a decline in the use of both specialty stores and food markets from 2018 to 2020, but Figure 5-2 shows that as many as two out of three answered that the use of specialty stores has remained unchanged during the corona pandemic. At the same time, a total of 15 per cent answered that they had used these stores somewhat or significantly less. Just over half of those who had visited outdoors markets (Farmers' markets, food fairs etc.) answered that the use of these markets remained unchanged, while almost one in five answered that the use was somewhat less and almost one in seven (13 per cent) had visited food markets significantly less during the corona pandemic. This corresponds with the decline we observe from 2018 to 2020. Figure 5- 2 shows that almost one in seven of those who have bought directly from the producer stated that this has increased during the corona pandemic, while almost two in three answered that the use was unchanged.



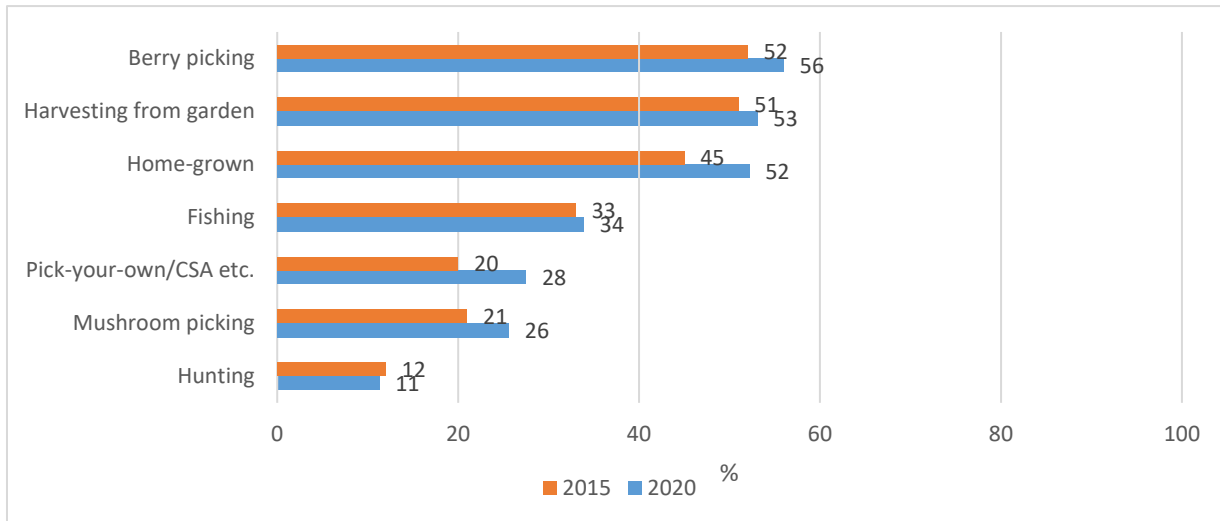
**Figure 5-2: Has the use of the service (s) changed as a result of the corona pandemic (after 12th March 2020)? Direct from producer: N = 442; Farmers' markets/food fairs etc.: N = 396; Specialty store N = 513.**

## 5.2 Own food supply

For many periods throughout history, self-sufficiency with food has been an important, and often a necessary supplement to the food supply in the household. For example, growing food in allotment gardens has been important. The first allotment garden in Oslo was established due to food shortages during the First World War, and also in the years 1940-1945, growing food in parks, allotment gardens and private gardens made important contributions to the diet - lawns and flower beds were put in the service of self-sufficiency. Harvesting from nature, for example by collecting mushrooms and berries, was also of great importance (Oslo Byleksikon; UiO, norgeshistorie.no).

Today, we buy most of the food in the store, while the traditional self-sufficiency activities such as berry picking, fishing and hunting are associated with leisure and outdoor life rather than vital supply of food for the household. However, in the light of the present discussions about sustainable consumption, the provisioning of local and home-grown food has gained increased interest, and not least growing own vegetables, berries and herbs (Nationen, 23.03.21). Own food supply has become relevant during the corona pandemic especially because more of the spare time has been spent on activities at home, for example in one's own garden. It has also gained greater attention due to the afore mentioned discussion about the need for national self-sufficiency in food in times of crisis.

Annechen Bahr Bugge examined the informal food market in a nationally representative survey (SIFO survey) in 2015 and concluded that it was a surprisingly large informal food market. She found that over half of the respondents had received/given away self-produced food, picked berries or harvested fruit and berries from one's own or someone else's garden (Bugge, 2015). In 2020, we observe an increase for almost all the activities included in the survey. However, the largest increase was for home-growing from 45 to 52 per cent, and self-picking from 20 to 28 per cent. Picking mushrooms also showed a certain increase from 21 to 26 percent.

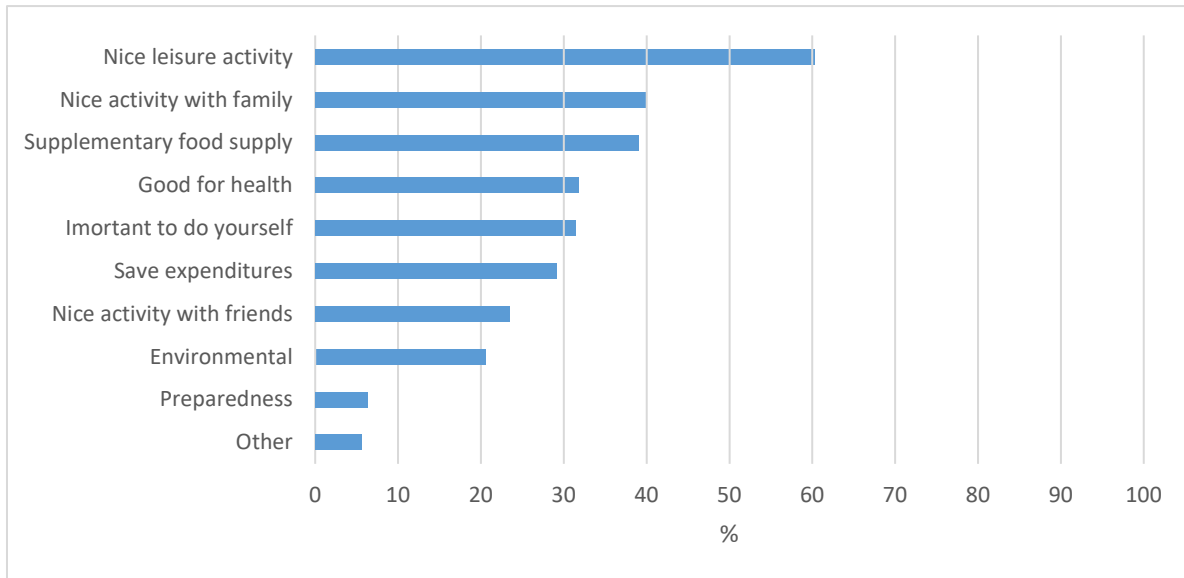


**Figure 5-3: Have you and / or someone in your household done the following during the last 12 months? N = 1003 (2015); N = 1297 (2020).**

Respondents living in the countryside to a greater extent engage in various forms of self-sufficiency, such as fishing, hunting, berry picking and self-picking on farms than those who live more urbanely. This was also found in the 2015 survey (Bugge, 2015), but we also found that city dwellers to a relatively large extent ran their own cultivation (such as in window sills, balcony boxes, etc.). This is in line with the impression that interest in gardening, cultivation and the like has increased in recent years. One in four stated that they eat food that they have harvested, grown, caught or fished themselves at least once a week, and many even more often than that. Just as many answered that they eat this type of food at least once a month, while almost one in three eat less often and one in six answer that they never eat home grown food.

### 5.3 Both pleasure and utility

If we look at all the activities together, people engage in a form of self-sufficiency primarily because it is a nice leisure activity (Figure 5-4). For many, it is also a nice activity to do together with the family. Just under 40 per cent stated that “matauke” (supplementary food supply) was one of the most important reasons for self-sufficiency, and this was especially true for harvesting from one’s own or someone else’s garden, going hunting and collecting berries or mushrooms. More than one in three of those who either harvested from their own garden or practiced one form of pick-your own, stated that saving food expenses was an important reason. Preparedness was to a small extent stated as a main reason. Hunting stands out here in that 14 per cent of the respondents who hunted marked preparedness as an important consideration. One in three respondents justified the activities on the grounds that they are good for health - in particular berry picking and hunting. On average, just one in five practice self-sufficiency for environmental reasons. However, for activities such as home growing, self-picking, harvesting from one’s own garden and berry picking, a few more (one in four) marked environmental considerations as important.



**Figure 5-4: What are the most important reason (s) to engage in ...? Mark everyone who fits. Average of all the activities.**

## 5.4 Conclusion

There are many indications that the corona pandemic has affected the alternative food supply in Norwegian households. As mentioned, a number of food markets were closed in periods and hygiene measures have possibly led to Norwegians seeking out this type of alternative sales channels to a lesser extent. At the same time, more of the food purchases has taken place online so that hygiene measures and e-commerce together may have contributed to more consumers choosing to shop directly from the producer in 2020. Several new REKO rings have been established in 2020 (the Norwegian Directorate of Agriculture 2021) which may have contributed to direct purchases having become more accessible to consumers. According to our survey, self-sufficiency has also increased in the households, and then in the form of more people growing own food and harvesting from their own or someone else's garden. Self-picking or the like on the farm has had the most significant growth since 2015. This may also be an activity that in 2020 has been more accessible than before. For example, several new cooperative farms (CSAs) have been established in 2020 (Norwegian Directorate of Agriculture 2021).

There are many indications that the availability of different channels for food supply depends on where people live, and that these differences in some areas have increased during 2020. The use of specialty stores and food markets has shown a decline during the corona pandemic, and these are primarily visited by consumers in the cities. On the other hand, self-sufficiency in the form of, among other things, home-growing and self-picking has shown growth, and these are activities that to a greater extent are available to consumers living outside the cities.

Many of those who grow and harvest themselves consider this activity as an important supplement to ordinary food provisioning and to save on food expenses. This is also emphasized by the fact that more than one in four eat self-provided food once a week or more often. Like Bugge (2015), we would therefore argue that the informal food supply takes



place on a larger scale than we previously thought, and that for many people these activities have a greater value beyond having something pleasant to do. With regard to sustainability, the corona period may for many have contributed to an increased experience and knowledge of growing and providing own food, and it will be interesting to see if this can have more lasting effects on the local provisioning of food.

## 5.5 References

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Consumption Research Norway (SIFO) is a non-profit, transdisciplinary research institute at OsloMet – Oslo Metropolitan University. SIFOs research aims to understand the role of consumption and consumers in society and to provide the knowledge basis for public consumer policy in Norway.

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