

# **Project:**

Awareness – raising campaign to prevent and manage food waste among consumers, the food and hospitality industries.

# K. Parpounas Sustainability Consultants

# April 2023

# **3<sup>rd</sup> PUBLIC OPINION SURVEY - FINAL REPORT**



FOODprint is co-funded by LIFE Programme of European Union











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## **Executive Summary**

The project FOODprint - "Awareness – raising campaign to prevent and manage food waste among consumers, the food and hospitality industries", co-funded by the Life Programme of the European Union (LIFE19 GIE/CY/001166) aims to reduce food waste in Cyprus through awareness campaigns, educational activities and the creation of tools to combat food waste. The project's duration is September 2020 to April 2023.

An integral part of the FOODprint project, is research through public surveys to better understand the habits and perceptions of Cypriot households regarding food and food waste. The responsible partner for the co-ordination of this activity is K. Parpounas Sustainability Consultants Ltd. The research activities in their entirety comprise of three main quantitative surveys conducted at the beginning, middle and end of the project and a series of 12 short online polls conducted throughout the project. The survey and polls are questionnaires designed to understand the habits and perceptions of Cypriot households regarding food and food waste.

The research is conducted throughout the project's duration so that the changes in habits and perceptions can be showcased and at the same time evaluate the effectiveness of the project's activities. The 1<sup>st</sup> and 2<sup>nd</sup> main quantitative research surveys and the 7 out of a total of 12 quantitative online polls have been completed. The results of these were presented in the report "Project Baseline Report" (November 2020) and the "2<sup>nd</sup> Public Opinion Survey Report" (July 2022). This report analyses the results of the 3<sup>rd</sup> and last main quantitative survey and online polls 8-12.

The  $3^{rd}$  main quantitative research survey (referred to as  $3^{rd}$  survey or 2023 survey in this report) was conducted between 28/02/2023 - 02/03/2023. It is the last consumer survey to be conducted within the FOODprint project as the project has reached its completion. The  $3^{rd}$  survey covered 510 people aged 18 and over, who are either responsible for their household shopping or household food preparation. The methodology used was the Computer Aided Web Interviewing (CAWI) and the sample was selected from a panel of participants in online surveys. The geographical distribution of the sample was proportional to the actual distribution of the population.

The  $3^{rd}$  survey comprised of 16 questions in total, of which 6 have been repeated in the previous 2 corresponding surveys and 5 have been repeated in the  $2^{nd}$  survey only. 5 questions are new. The  $1^{st}$  survey was conducted in October 2020 (21/10/2020-23/10/2020) and the  $2^{nd}$  in May 2022 (11/05/2022 – 13/05/2022). The repetition of questions allows the comparison of results between the surveys and to conclude whether there is indication of changes in consumer habits and perceptions during the project period (beginning, middle and end of the project). The following paragraphs provide a summary of results.

The online polls followed a different methodology than the surveys. The online polls were answered by visitors of the Dias websites (Sigmalive, Sportime.com.cy, I love style, City.com.cy, Check In, Economy today, MyCyprusTravel.com) and the sample comprised of people living in Cyprus but also from abroad (Greece, UK and EU). Given the nature of online polls, there are no data about the sample's characteristics other than the total number of respondents with an average of 1710 people participating in the polls. The



main objective of these online polls is to further investigate issues that cannot be explored in the main surveys due to the limited number of questions. The following paragraphs are a summary of results and conclusions for the last series of polls ( $8^{th} - 12^{th}$  polls) during the period June 2022 to April 2023. Some questions were repeated from previous polls, and some were new questions. The questions which were repeated had a much larger number of respondents in the polls 8-12 than in the previous series of polls 1-7. Overall, the results of polls 8-12 are mixed, where in certain cases we see a better picture regarding habits and perceptions contributing to the reduction of food waste and in other cases we see a worsened situation.

The research conducted throughout the project has collected a lot of useful information on habits and perceptions regarding food and food waste. Some habits have changed during the span of the FOODprint project while other habits have not. Given that the surveys carry more weight in understanding the changes of habits and perceptions over time (in contrast to the polls that do not have a controlled sample) the overall conclusion is that there is an overall improvement, albeit small. Key points of the research conducted are found below:

- Cypriot consumers tend to shop more food than needed and no significant changes have been observed in the duration of the project.
- Cypriot consumers tend to order or prepare more food than needed, however a slight decrease of this habit is observed in the duration of the project.
- Cypriot consumers understand that reducing food waste is important for the protection of the environment, however it does not act as the main motivator to reduce food waste. The most important reasons to reduce food waste are: i) "it is the right thing to do" and "saving money".
- During the project's duration more Cypriot consumers associate the action of throwing food in the trash with negative feelings such as guilt, wasting money and harming the environment.
- During the project's duration more Cypriot consumers adopt good habits such as
  - consume food surplus in the following days
  - use the freezer for food surplus storage
  - use food surplus to prepare other meals
  - give surplus food to other people
  - take away surplus food while out in restaurants
- Composting is not at all popular in Cyprus and there seem to exist a knowledge gap as to how composting is done at home.
- There is gross underestimation of the scale of the food waste problem. 8 out of 10 believe their food waste is less than Cypriot average.
- Cypriot consumers are very willing to participate in food waste reduction initiatives such as buying "ugly" fruits and vegetables at discounted prices, buying not as fresh fruits and vegetables at discounted prices and participating in give-away/donation platforms.



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## Introduction

This report is an integral part of the project FOODprint - "Awareness – raising campaign to prevent and manage food waste among consumers, the food and hospitality industries", co-funded by the Life Programme of the European Union (LIFE19 GIE/CY/001166). It presents and analyses the results of research conducted to understand consumer behaviours and beliefs regarding food waste. As there isn't much research about food waste and consumer habits in Cyprus, the results of this research are valuable in achieving the aims of the FOODprint project to raise awareness and change habits to reduce food waste.

The research activities concerning consumer habits in their entirety comprise of three main quantitative surveys conducted at the beginning, middle and end of the project and a series of 12 short online polls conducted throughout the project. The survey and polls are questionnaires designed to understand the habits and perceptions of Cypriot households regarding food and food waste. The responsible partner for co-ordinating this activity is K. Parpounas Sustainability Consultants Ltd.

The analysis included in this report is part of a series of questionnaires designed to understand opinions and behaviours regarding food waste. Research with the use of questionnaires is conducted in two ways throughout the project: A) 3 main quantitative research surveys and B) 12 quantitative online polls.

The FOODprint project duration is 01/09/2020 – 30/04/2023. This is the 3<sup>rd</sup> and final report pertaining to this research as part of the LIFE Foodprint project. It is being written after all 3 quantitative research surveys and 12 online polls have been completed. In this report the results of the 3<sup>rd</sup> main quantitative research survey are presented and the results of the online polls 8-12 (completed in the period June 2022 – April 2023). 2 previous corresponding reports have been completed: i) The Baseline report including the results of the 1<sup>st</sup> survey and 1<sup>st</sup> online poll, and ii) Report on the 2<sup>nd</sup> survey and online polls 2-7. The analysis in this report aims to evaluate the effectiveness of the project's campaigns and whether there are changes in consumer behaviour regarding food waste.

Section 1.1 provides the analysis of the results of the 3<sup>rd</sup> main quantitative research survey and Section 1.2 the analysis of the results of the 8<sup>th</sup> to 12<sup>th</sup> online polls.



# 1. Public Opinion Surveys

Due to the need to understand the extent of the problem of food waste in Cyprus, the factors that contribute to it, the pace at which it is produced and the identification of the places where they occur most often, a number of questionnaires have been conducted throughout the implementation of the Life FOODprint project.

During the implementation of the project, three main surveys have been carried out at the beginning, middle and end of the project. Each survey serves the respective objectives: a)  $1^{st}$  survey to determine the baseline of the project (completed in October 2020); (b)  $2^{nd}$  survey to determine the effectiveness of the project activities during the first months of the communication campaign (completed in May 2022); and (c)  $3^{rd}$  survey to measure the results of the project based on the initial data and information collected (conducted at the end of the project in March 2023).

The 1<sup>st</sup> main quantitative survey was conducted at the beginning of the project in October 2020 and the results were presented and analysed in the FOODprint's "Project Baseline Report" in November 2020. The 2<sup>nd</sup> main quantitative research survey was completed in May 2022, the results of which are presented in the report "2<sup>nd</sup> Public Opinion Survey Report". The results of the 3<sup>rd</sup> main quantitative survey are presented in this report.



## 1.1 Results of 3<sup>rd</sup> main quantitative research (March 2023)

The 3<sup>rd</sup> main quantitative research survey, referred to as 3<sup>rd</sup> survey or 2023 survey in this report was conducted during 28/02/2023 to 02/03/2023 and covered 510 people aged 18 and over, who are either responsible for their household shopping or household food preparation (see Annex A for the detailed questionnaire). As in the previous surveys, the sample was focused to ensure that the feedback comes from people with good knowledge of food management in their household. The methodology used was Computer Aided Web Interviewing (CAWI) and the sample was selected from a panel of participants in online surveys. The geographical distribution of the sample was proportional to the actual distribution of the population. Details of the sample are shown in Table 1 below.

		No.	%
Age	18-24	54	11%
	25-34	111	22%
	35-44	104	20%
	45-54	96	19%
	55-64	77	15%
	65+	68	13%
Gender	Male	256	50%
	Female	254	50%
Social Class	A-B	32	6%
	Г1	171	34%
	Г2	219	43%
	Δ-Ε	88	17%
Education	Up to Secondary	138	27%
	Tertiary (degree)	230	45%
	Tertiary (master)	142	28%
Province	Nicosia	221	43%
	Limassol	125	25%
	Larnaca	88	17%
	Famagusta	28	5%
	Paphos	48	9%
Area	Urban	356	70%
	Rural	154	30%
	Total	510	100%

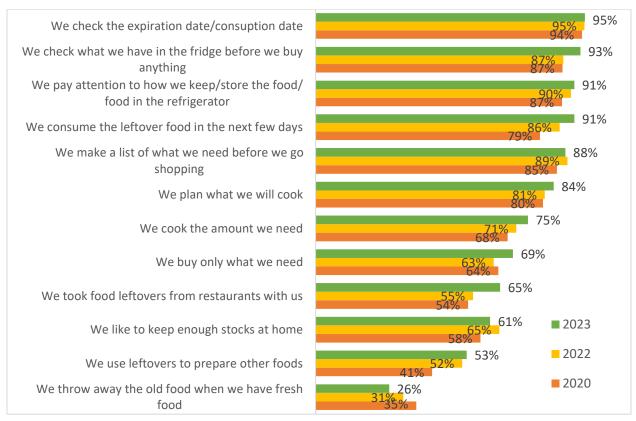
Table 1: Sample details

The aim of the 3rd survey is to understand whether there have been any changes in consumer's habits and perceptions related to food waste since the beginning of the project and to determine the impact of the project's activities. The 3<sup>rd</sup> survey comprised of 16 questions in total, of which 6 have been repeated in the previous 2 corresponding surveys and 5 have been repeated in the 2<sup>nd</sup> survey only. 5 questions are new. The repetition of questions allows the comparison of results between the surveys and to conclude whether there is indication of changes in consumer habits and perceptions during the project period (beginning, middle and end of the project).



## General habits of buying & preparing food

# *Question 1: Below are certain habits regarding buying and consuming food. Which of these do you do in your household?*



#### Figure 1: Food purchase & consumption habits

Almost all consumers (95%) check the expiry date of food when buying or consuming food, ranking it as the most common habit. Widespread 'positive' behaviours that are also common and reported by more than 8 in 10 households are checking products in the fridge before buying new ones (93%), paying attention to proper food preservation (91%), eating leftover food in the next few days (91%), preparing a shopping list (88%) and planning in advance what to cook (84%). Other 'positive' behaviours that show an increase over time are cooking the amount needed (75%), buying the necessary amount of food (69%), picking up leftover food from going out to a restaurant (65%), and using leftovers to prepare other food (53%).

At the same time, compared to the previous waves, there is a decrease in 'negative' behaviors, such as discarding 'old' food when buying new (26%). The same applies of the tendency to store food at home, a practice which, although decreasing, remains widespread (61%).





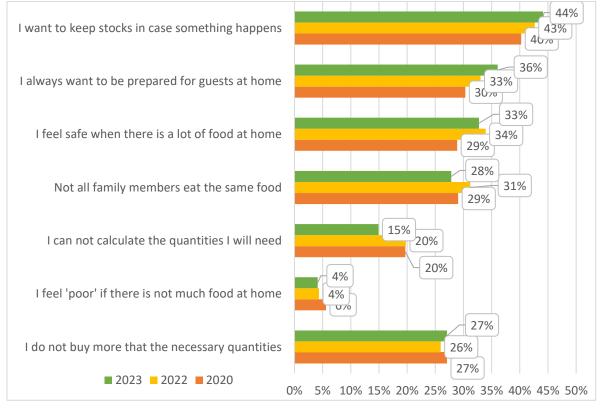


Figure 2: Reasons of buying more food than needed

In the span of the 3 surveys, about a quarter of households' report that they do not buy more than the necessary amounts of food (26-27%). This percentage does not show a significant change between the three waves. As regards the reasons for buying more than the necessary quantities of food, some parameters show an increase and others a decrease in the percentages. An increasing trend is observed over time, in the desire to keep stocks in case of emergency (44%) and in case of unexpected visitors (36%).

The purchase of more than the necessary quantities remains stable due to the sense of security that comes from keeping stocks (33%), while a decrease is recorded in reports of the need to satisfy different preferences of household members (28%) and the inability to calculate the correct quantities needed (15%).



*Question 3: Which of the two statements best suits your behaviour when you have guests at home or dinner or when you go out to a restaurant?* 

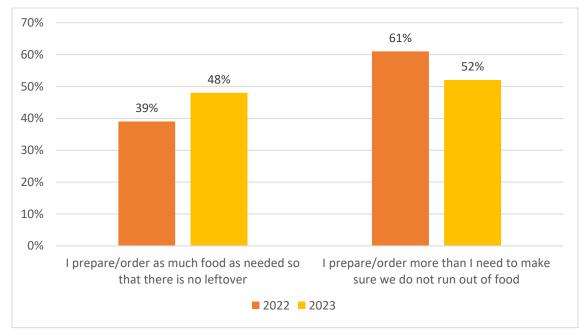


Figure 3: Preparation / ordering of food

Significant variations have been recorded over the last 12 months in the amount of food prepared when guests come to the house or order during outings. The tendency to eat more food than is needed to ensure there is no shortage has decreased from 61% to 52%. However, the proportion stating that they prepare/order as much food as needed has increased in the last 12 months from 39% to 48%.

Preparing/ordering more food than necessary is higher among men, younger age groups, the upper economic classes and households with children.

## Surplus management

*Question 4: How often do you do the following in relation with leftover food:* 

Results of the following question are presented in figures 4 - 11.

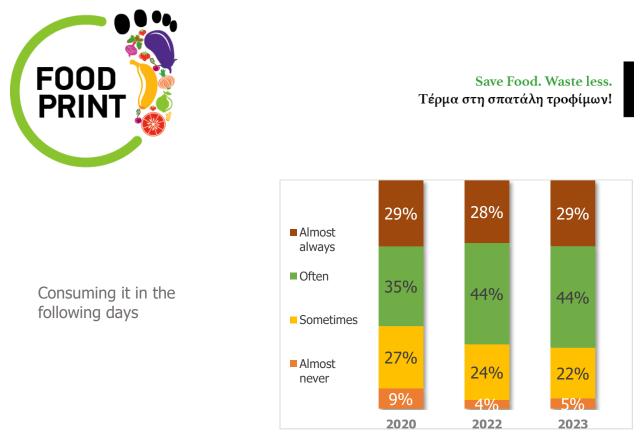
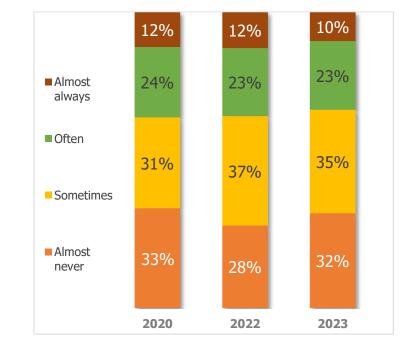


Figure 4: Consumption in the following days

The percentage of households that always/frequently eat leftover food in the following days is 73%. Although it does not show a substantial variation over the last 12 months (+1%), it has a significant increase compared to 2020 (+9%).

This practice seems to be somewhat more widespread among the lower economic classes and singleparent households.



Feeding pets

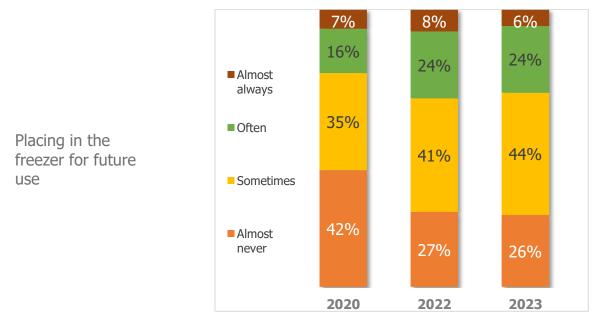
Figure 5: Food for pets





A third of households (33%) regularly use leftover food as pet food. This percentage is not significantly different from the previous two waves.

This practice appears to be somewhat more prevalent among women, lower economic classes, rural residents, households with children and multi-member households.



*Figure 6: In the freezer for future use* 

The percentage of households that always/often keep leftover food in the freezer for future use is 30%. This percentage has not changed significantly over the last 12 months (-2%). Compared to 2020 results it shows an increase of 7%.

This practice is more prevalent among upper and lower age groups, men, middle and lower economic classes and single-parent households.

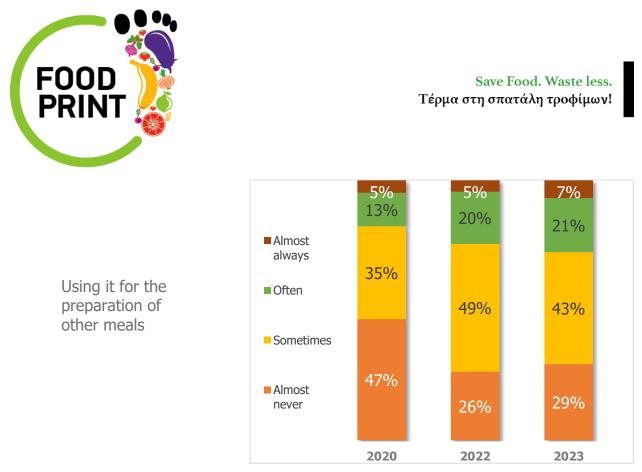


Figure 7: Preparation of other meals

Only 28% of households always/frequently use leftover food to prepare other meals. There is no significant variation in this behaviour in the last 12 months (+3%), but there is an increase (+10%) compared to 2020.

The use of leftover food to prepare other meals is more prevalent among younger consumers, lower economic groups and multi-member households.

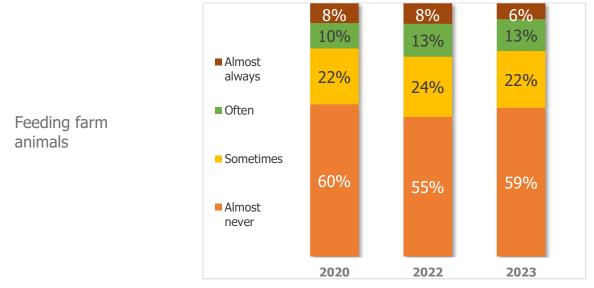


Figure 8: Food for farm animals



Over time, only one fifth of households use leftover food as feed for farm animals. This practice is most popular in rural areas.

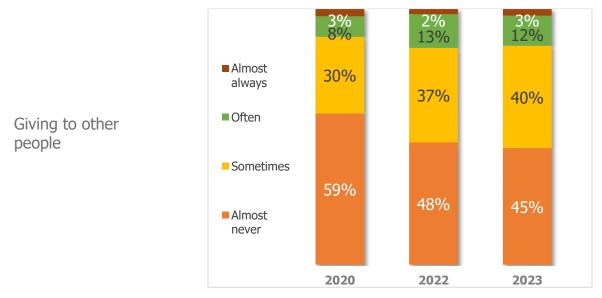


Figure 9: Giving to other people

It seems that giving leftover food to other people is not a common practice. Only 15% do so regularly. This percentage shows a slight increase compared to 2020 (+4%).

Giving leftover food to others is something that women report doing to a greater extent.

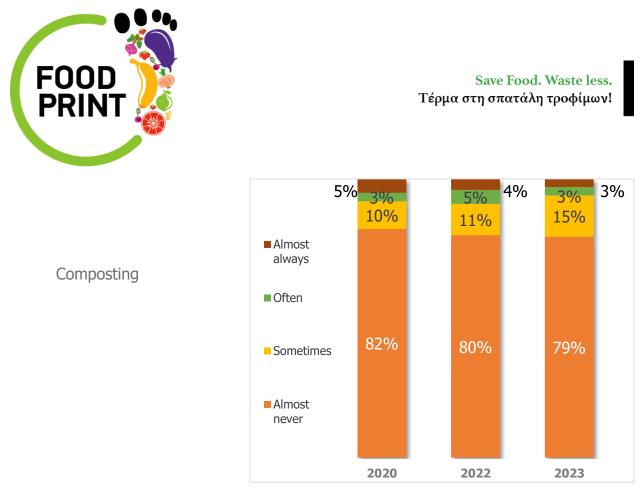


Figure 10: Composting

Only 21% of household's compost, and most (15%) only do so, sometimes. Consumers who compost systematically (almost always and often) are reduced by 3% compared to 2022 and by 2% compared to 2020.

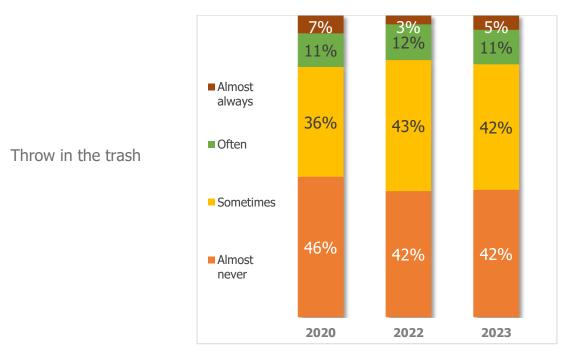


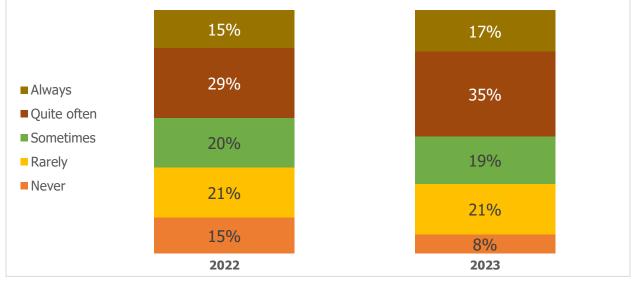
Figure 11: Thrown in the trash



The percentage of households that always/often throw away leftover food is 16% and does not vary significantly over time.

Throwing away leftover food is a practice adopted to a somewhat higher extent by younger consumers, middle and upper economic classes and those living in apartments.





#### Figure 12: Take away of food leftovers

On outings when there is leftover food, the majority of consumers either always take it with them (17%) or take it with them quite often for future consumption (35%). Compared to 12 months ago, there is a significant increase in the percentage of those who always or quite often take leftover food with them as a 'takeaway' (+8%).

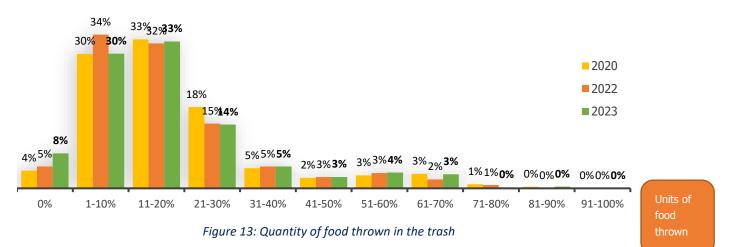
Older people, women, lower economic classes and people with a higher level of education are more likely to take 'take-away' leftover food from outings.



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Food waste

Question 6: In a typical week, if all the food, fruits and vegetables that you bought correspond to 10 units, how many of them did you throw in the trash?



8% of households say that they do not throw away food, fruit, or vegetables, a percentage that has been increasing marginally over time.

30% of households throw away up to 10% of the food, fruit and vegetables they buy in a week, while 33% throw away 11% to 20%. The remaining 29% of households throw away more than 30% of the food they buy.

On average, each household throws away more than a fifth (22%) of the food and fresh fruit/vegetables they buy. Over time, there is no significant variation in this proportion.



Question 7: From the following, what are the top 3 reasons you throw food, fruits and vegetables in the trash in your household?

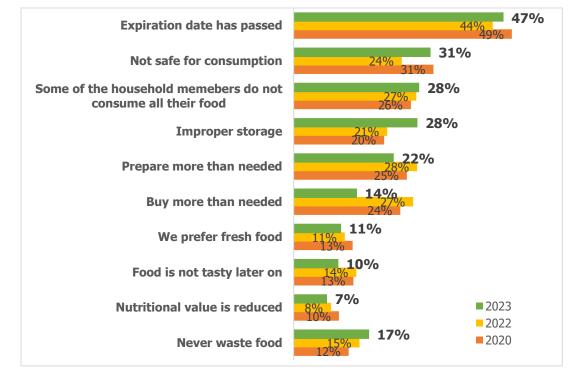


Figure 14: Reasons to throw food away

Spontaneously 17% of households say they never throw away food, fruits or vegetables in the trash. This percentage has been increasing over time. But the main reason why food, vegetables, and fruit are thrown away remains that the 'expiry date has passed' (47%).

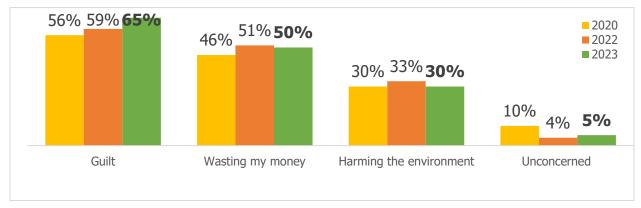
There has been an increase in the percentage of answers that leftover food is spoiled and unsafe to eat (31%), while the reason that some household members do not finish their food remains at the same level (28%).

However, there has been a decrease over time in the percentage of households that say they throw away food because they prepare more food than they need (22%) and because they buy more than they need (14%). Conversely, the desire to have only fresh items in the home (11%) and the perception that leftover food is not palatable (10%) are cited as reasons for throwing away food by one in ten households.

There is a significant increase in the percentage of households reporting that they throw away food due to incorrect storage (28%) compared to the two previous waves.



#### Attitudes and views



Question 8: How do you feel when you throw food in the trash? (Answer all that apply to you)

#### Figure 15: Feeling when wasting food

Two-thirds of consumers feel guilty about throwing food and groceries in the trash (65%). There has been a significant increase over time in the percentage of respondents feeling guilt when throwing food in the trash. The feeling of "wasting money", although reported by half of the households, does not vary significantly over time, while the proportion who feel that they are damaging the environment when throwing food in the trash remains stable at about 30%.

The percentage who feel nothing when throwing food in the trash (5%) has decreased compared to 2020 (10%) and remains at the levels recorded in 2022 (4%).



*Question 9: In the average Cypriot household, 50% of waste is food waste. In your household food waste is...?* 

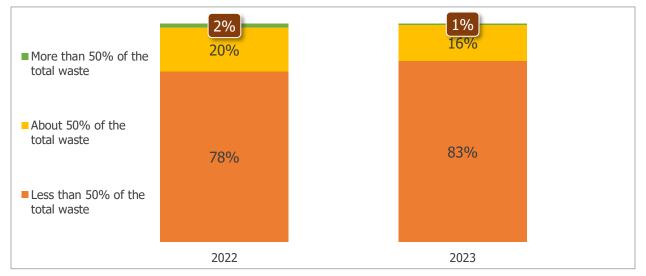


Figure 16: Estimation of the percentage of food waste in the household

Even though they are informed about the statistic that food waste in the average Cypriot household is about 50%, the majority of households (83%) state that their own household's food waste is less than 50% of the total waste. This view is enhanced compared to 12 months ago (+5%), while over the same time frame, the percentage of respondents finding their food waste to be in line with the national average decreases from 20% to 16%. Just like in 2022, the percentage who believe that their food waste exceeds the average is very small (1%-2%).

The perception that food waste accounts for less than 50% of waste in their own household is more widespread among older people and households with fewer members.



*Question 10: Compared to other actions you can take, how important do you consider the reduction of food waste to protect the environment?* 

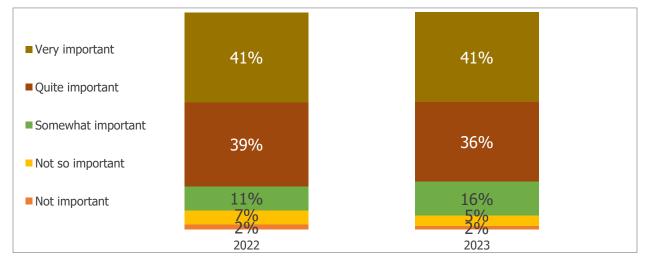
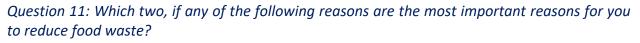


Figure 17: Importance of reducing food waste for environmental protection

Three-quarters of the survey participants believe it is either very important (41%) or quite important (36%) to reduce food waste to protect the environment. While a total percentage of 23% feels that reducing food waste is of limited importance in terms of protecting the environment.

Older people, middle and lower economic classes, urban dwellers, and households living in a house attach greater importance to reducing food waste for environmental protection.





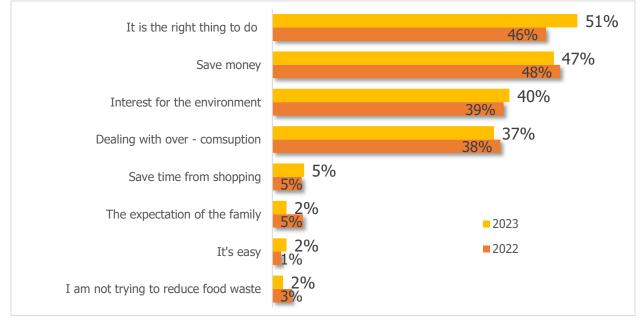


Figure 18: Reasons to reduce food waste

Half of the consumers consider "it's the right thing to do" to be among the most important reasons to reduce food waste with a 5% increase compared to 2022 results.

Saving money (47%) is again mentioned among the most important motivators, while concern for the environment (40%) and tackling overconsumption (37%) are also mentioned by four in ten of the households in 2023. Only a few households include the parameters of saving time on shopping, meeting family expectations, or convenience, among the most important motivators. As in 2022, only a very limited percentage of the households, 2%, spontaneously state that they do not make an effort to reduce food waste.



Question 12: Many fruits and vegetables, although good in quality, due to their "ugly" (deformed) appearance are rejected by the producers and do not reach the consumer. To what extent would you be willing to buy good quality but "ugly" looking fruits and vegetables at discounted prices?

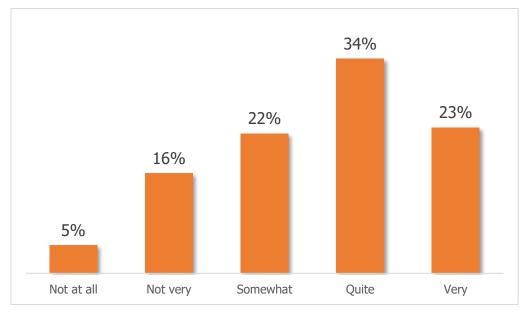


Figure 19: Willingness to buy ugly fruits and vegetables

The majority of participants stated that they are very (23%) or quite (34%) willing to buy good quality but "ugly" looking vegetables and fruits at reduced prices. In four out of ten households, however, the intention to do so is limited (43%).

The positive propensity to buy good quality but ugly-looking vegetables and fruits at reduced prices is higher among the 45-54 age group, the upper economic classes, people with a lower level of education, and households without children.



Question 13: At the end of each day, many fruits and vegetables that are left behind are discarded by the retailers who always want to offer the freshest to their customers. To what extent would you be willing to buy good quality, but not as fresh fruits and vegetables at significantly reduced prices at the end of each day?

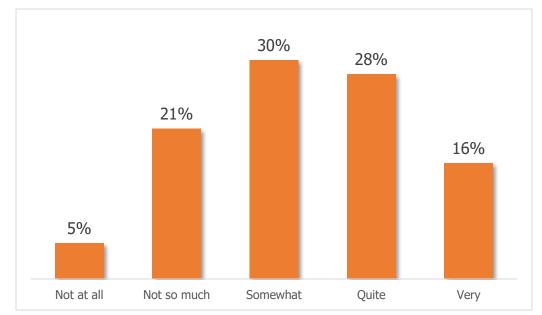


Figure 20: Willingness to buy not as fresh fruits and vegetables at lower prices

4 in 10 households are very (16%) or quite (28%) willing to buy good quality but not so fresh vegetables and fruit at significantly reduced prices. However, the majority (56%) express a limited intention to do so.

The positive propensity to buy good quality but not so fresh vegetables and fruits at reduced prices is higher among the 45-54 age group, those living in rural areas, and those living in apartments.



Question 14: Many households discard leftover foods that are nearing or out of date. To what extent would you be willing to participate in a network in which these foods can be offered for free to those in need?

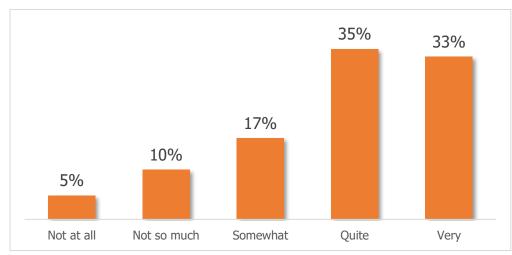


Figure 21: Willingness to participate in a network to give away food you don't need

The majority of participants are very (33%) or quite (35%) willing to participate in a network through which they can offer food that is close to or past its expiry date as a donation to people in need. A third of the households (32%) are not so interested in participating in such a network.

The positive propensity to participate in a food donation network that is close to or past its consumption date is higher among younger consumers, women, the upper economic groups, households without children, and those living in apartments.



*Question 15: Do you think that the use of home food delivery services via online applications has increased or decreased food waste in your household?* 

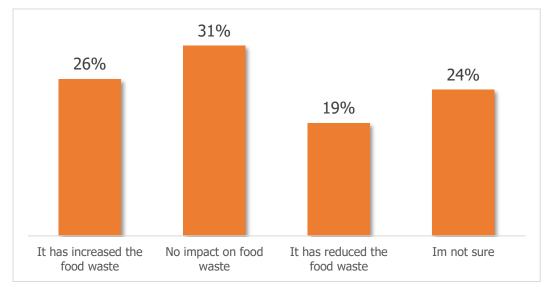


Figure 22: Use of food delivery services in households

Respondents seem to have no clear view on whether home food delivery platforms have had an impact on the volume of food waste. At both extremes, 26% believe that food delivery services have increased food waste and 19% conversely believe that platforms have led to a reduction in food waste. In the middle, is the largest percentage of consumers who feel that delivery services have not had an impact on food waste volumes at 31%. A proportion of 24%, are unsure as to the impact that delivery platforms have had on food waste.



*Question 16: Regarding composting, which of the following apply in your case? (mark one answer)* 

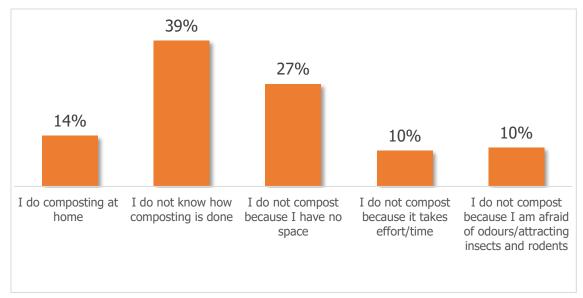


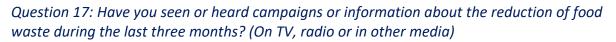
Figure 23: Composting at home

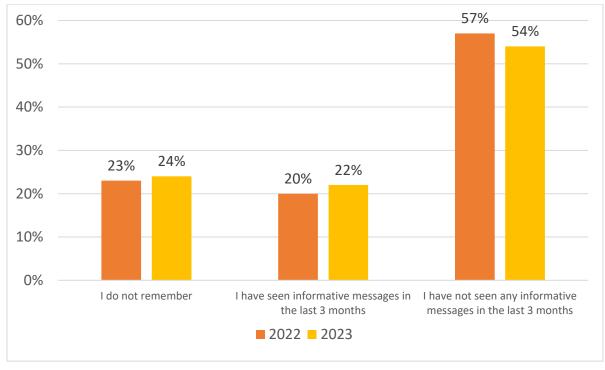
The majority of households do not compost (86%) and the main reason given for this is a lack of knowledge of how to compost (39%), which is reported to a greater extent by younger people. Only 14% of households say they do compost (at least to some extent) at home. This percentage is higher among the elderly, the lower economic classes, those living in rural areas and those living in houses.

Conversely, 1 in 10 households stated they do not compost either because of the effort/time required (10%) or because of fears of attracting insects and rodents (10%).



### Revocation of information





#### Figure 24: Revocation of information

22% of respondents recall having seen or heard in the last 3 months in media campaigns or information messages about reducing food waste. This percentage shows a marginal increase within the last 12 months (+2%). The percentage who recall not having seen information messages of this kind is 54%, with a marginal decrease within the last year (-3%), while the percentage who do not recall whether or not they have seen information campaigns or information messages on reducing food waste remains stable at 23-24%

Recall of communication messages about reducing food waste is higher among older and upper economic classes.



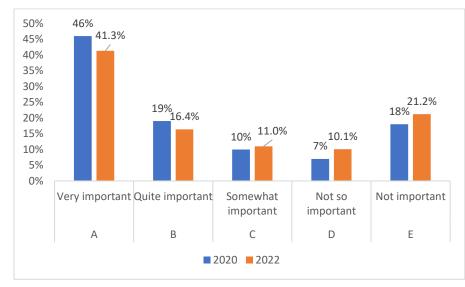
## 1.2 Quantitative Online Polls via the Dias Media Group websites

In parallel to the quantitative surveys that have been performed in three waves, during the duration of the project, 12 online polls were also conducted on a quarterly basis. The purpose of the online polls was to further investigate issues that cannot be investigated in the main surveys due to the limitation of the number of questions and to give additional insights about the potential lack of knowledge in parameters that are related to food waste. The online polls are carried out through the websites of the DIAS Group (Sigmalive, Sportime.com.cy, I love style, City.com.cy, Check In, Economy today, MyCyprusTravel.com) and the sample comprises of people living in Cyprus but also from abroad (Greece, UK and EU). 7 online polls have been completed in the period November 2020 to May 2022 with a sample average of 1288 respondents. The results of the 1<sup>st</sup> online poll were presented in the "Project Baseline Report", while the results of the 2<sup>nd</sup> to 7<sup>th</sup> online polls will be presented in the "2<sup>nd</sup> Public Opinion Survey report".

This section presents the results of the online polls 8<sup>th</sup> to 12<sup>th</sup> (included in Annex B) conducted during the period June 2022 to April 2023. Some questions are repetitions from previous polls (1-7) with the purpose of observing any changes in consumer behaviours.

## 8<sup>th</sup> online poll

The 8<sup>th</sup> online poll was conducted in June 2022 (09-14/06/2022) and concerned habits and beliefs about food waste.



Question 1: Compared to other actions you can take to protect the environment, how important do you think reducing food waste by buying food with a longer shelf life is?

Figure 25: Importance on buying foods with longer shelf life

Sample size: 1828 (2020), 3041 (2022)





The results show that 57.7% consider reducing food waste by buying food with a longer shelf life to be very or quite important for protecting the environment. While 31.3% consider that this specific action is not so important or not at all important. Although the dispersion of responses is similar to the 2020 poll, there is clearly a deterioration in the indicators as fewer people consider this action very or quite important to protect the environment (65% in 2020 vs. 57.7% in 2022) and more consider it not so important or not at all important (25% in 2020 versus 31.3% in 2022). The results of this poll highlight a more negative picture in people's views on the importance of reducing food waste by purchasing products with a longer shelf life to protect the environment.

# Question 2: Compared to other actions you can take to protect the environment, how important do you think it is to eat leftover cooked food either later or the next day, or to use it to prepare other foods?

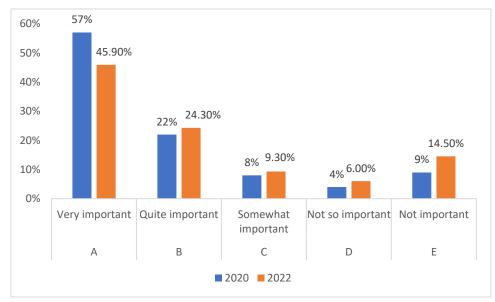


Figure 26: Importance on using leftover foods

#### Sample size: 1306 (2020) / 1927 (2022)

The results of the poll show that 70.2% consider the consumption of cooked food in the following days to be a very important or a quite important action to protect the environment, while 20.5% consider that this action is not at all or not so important. As in the previous question, the indicators show a worsening of the situation since in 2020 where 79% considered this action to be very or quite important compared to 70.2% in 2022, while on the other hand only 13% considered it not so or not at all important in 2020 versus 20.5% in 2022.



*Question 3: Compared to other actions you can take to protect the environment, how important do you think reducing food waste through composting is?* 

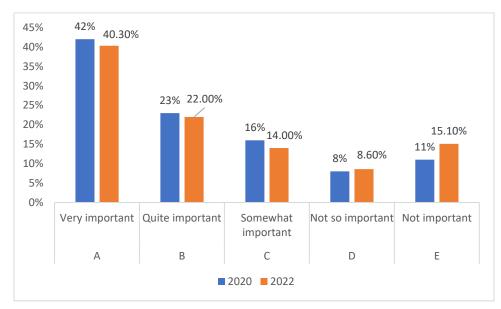


Figure 27: Importance of reducing food waste for environmental protection

#### Sample size: 1196 (2020) / 1748 (2022)

Most participants (62.3%) believe that reducing food waste through composting is very or quite important for protecting the environment, while 23.7% consider it not so important or not at all important. In this question there is also a deterioration of indicators, but significantly less. The poll results are very close to those of the 2020 poll.

Overall, it appears from the 3 questions above, that the assessment of the importance of actions to reduce food waste for the protection of the environment has decreased. It is not easy to clarify the reasons for this due to the different samples. One possibility is that due to the time of year, the moods of the public are different. The previous research was done in November 2020, which is the autumn season, while the current research is in the middle of the summer season (June 2022). It is common in mainly warm climates that moods relax in the summer and people are more carefree with less inclination to deal with big problems such as environmental ones.



*Question 4: Have you seen on TV or heard on the radio or other media campaigns or information about reducing food waste in the last 3 months?* 

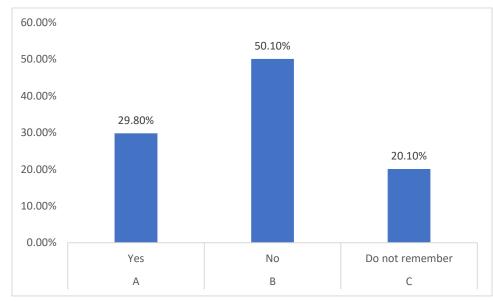


Figure 28: Revocation of information

#### Sample size: 1720

50% of the participants stated that they have not seen or heard a campaign or information about reducing food waste in the media, 30% said that they have, while 20% do not remember.

In the context of the FOODprint project, actions have been taken to inform and raise awareness among the public in the mass media and local authorities regarding food waste and ways to reduce food waste. These actions will also continue after the project.

The results of this research show that even more effort needs to be made by various stakeholders to inform the public about the problem of food waste. The fact that traditionally more emphasis was placed on other types of waste and less on food waste, is reflected in various ways in the research carried out within the FOODprint project. It seems that the public mainly views food waste as a moral and economic issue, rather than an environmental problem. Communication campaigns should aim to change this approach, but also to achieve the main goal of reducing food waste.



## 9<sup>th</sup> online poll

The 9<sup>th</sup> online poll was conducted in July (15-18/07/2022) and concerned the willingness to adopt habits that can potentially decrease food waste.

Question 1: Many vegetables and fruits, although good in quality, due to unsatisfactory appearance are rejected by the producers and do not reach the consumer. To what extent would you be willing to buy good quality but strange looking vegetables and fruits at discounted prices?

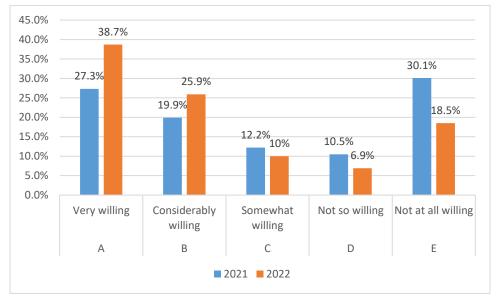


Figure 29: Willingness to buy ugly fruits and vegetables

#### Sample size: 1559 (2021) / 2437 (2022)

The results show a clear positive trend since a large percentage, 64.6%, are very or considerably willing to buy fresh vegetables and fruits with unsatisfactory appearance at lower prices. Compared to 2021 there is a big improvement in public opinion as the percentage who are very or considerably willing to buy strange looking fruits and vegetables at lower prices has increased from 47.2% in 2021 to 64.6% in 2022. On the other end there is a significant decrease in the percentage of participants who are not at all or not so willing to buy strange looking fruits and vegetables at discounted prices from 40.6% in 2021 to 25.4% in 2022. A clear improvement is evident in the trends from 2021 to 2022.



Question 2: At the end of each day, several vegetables and fruits that are left unsold are discarded by retailers since they always want to offer the freshest products to their customers. To what extent would you be willing to buy good quality, but not perfectly fresh vegetables and fruits at significantly reduced prices at the end of each day?

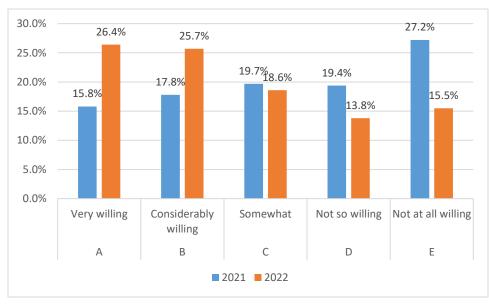


Figure 30: Willingness to buy not as fresh fruits and vegetables at lower prices

#### Sample size: 1105 (2021) / 1643 (2022)

The results of the second question show that more than half of the participants, 52.1%, are very or considerably willing to buy good quality, but not absolutely fresh vegetables and fruits at significantly reduced prices. Compared to 2021 results, in 2022 it appears that the public is much more willing to try out this food waste reduction practice. In 2022, 52.1% of participants were very or considerably willing to buy fruit and vegetables which are not completely fresh at significantly reduced prices, while the corresponding percentage in 2021 was 33.6%. On the other end, there was a decrease in the percentage of participants who are not at all or not so willing to buy these fruits and vegetables from 46.6% in 2021 to 29.3% in 2022. The differences in percentages between the two years, whether in positive or negative responses, are notable. As in question 1 we also see a clear improvement in trends from 2021 to 2022.



Question 3: Many households throw away leftover food or food that is close to or has passed its use-by date. To what extent would you be willing to participate in a network through which you can offer this food to other people in need for free?

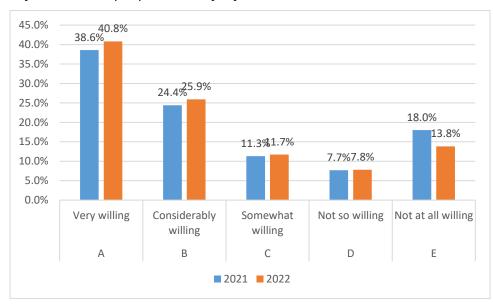


Figure 31: Willingness to participate in a network to give away food you don't need

#### Sample size: 972 (2021) / 1466 (2022)

The results of the 3<sup>rd</sup> question indicate that quite a lot of people are very or considerably willing to participate in food donation platforms, namely 66.7%. Although the dispersion of responses is similar to the 2021 poll results, there appears to be a slight improvement in the public's positive intention as the percentage who are very or considerably willing has increased from 63% in 2021 to 66.7% in 2022, while the percentage that is not at all and not so willing has decreased from 25.7% in 2021 to 21.6% in 2022.





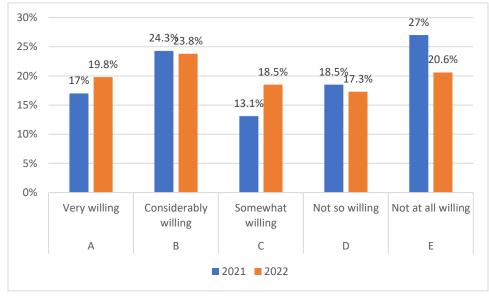


Figure 32: Willingness to purchase packs with complete ingredients for specific meals

## Sample size: 922 (2021) / 1388 (2022)

Although an almost unknown practice for Cypriot consumers (unlike in some other EU countries where it is a known practice), it seems that a significant percentage of the public, 43.6%, is interested in buying packages with everything necessary to prepare a meal. Compared to 2021, there is more interest in purchasing such a product in 2022, although some percentages remain at similar levels or have marginally decreased, such as the percentage of participants who are "considerably" interested in purchasing such a product decreased from 24.3% in 2021 to 23.8% in 2022. However, looking at the overall positive responses there seems to be a greater positive intent. The percentage of participants who are very or considerably interested in purchasing such a product has increased from 41.3% in 2021 to 43.6% in 2022, while the percentage who are not at all and not so willing has decreased from 45.5% to 37.9%.

Overall, the results in all questions show positive trends since in 2022 the public appears more willing to try out or adopt habits that contribute to reducing food waste, compared to 2021. Although the sample of participants is not the same, the questionnaires were carried out during the same period of the year (July-August) so we cannot attribute any differences to seasonality. Due to the fact that both polls were conducted in the same season, results are more comparable. We can appreciate that the FOODprint project has also contributed to the formation of positive trends in public opinions through its public awareness campaign. Within the framework of the FOODprint project, several information campaigns have been carried out in the media/social media in Cyprus regarding food waste and ways to reduce food waste. It could even be said that the dominant communication locally on this issue has come from the FOODprint programme. The FOODprint campaign on food waste will continue with the aim of raising the



awareness of as many Cypriot citizens as possible about the issue of food waste.

## 10<sup>th</sup> online poll

The  $10^{\text{th}}$  online poll was conducted end of September to early October (30/09 - 03/10/2022) and concerned habits and beliefs about food waste.

# *Question 1: Compared to other action you can take, how important do you consider the reduction of food waste to protect the environment?*

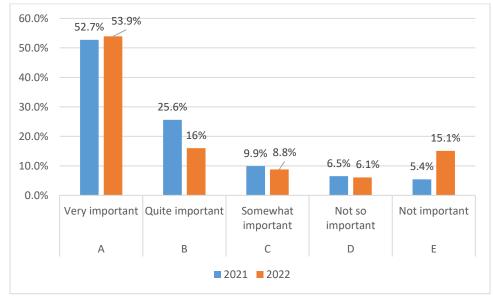


Figure 33: Importance of reducing food waste for environmental protection

## Sample size: 943 (2021) / 1764 (2022)

In the 2022 survey, 70% of participants consider reducing food waste very or quite important to protect the environment, while the corresponding percentage in 2021 was 78%. Comparing the results between 2021 and 2022 we see a deterioration in public opinion on the importance of reducing food waste to protect the environment. The participants who support the opposite view, i.e. that it is not important or not so important to reduce food waste for the protection of the environment has increased and is equal to 21% in 2022 and correspondingly to 12% in 2021. It is evident that there is a change in opinions, where fewer citizens believe that reducing food waste is linked to environmental protection. As has become clear from previous questionnaires, food waste and the damage it causes to the environment, is not widely understood and does not act as an important motivator for reducing food waste. Other than the loss of valuable resources used to produce food (energy, soil, water), food waste contributes significantly to the climate change problem. Based on a 2013 UN FAO study<sup>1</sup> food waste accounts for 7% of total greenhouse

<sup>&</sup>lt;sup>1</sup> Food Wastage Footprint - Impacts on Natural Resources". 2013. Fao.Org. <u>https://www.fao.org/3/i3347e/i3347e.pdf</u>



gas emissions. Food has an environmental footprint, not only when it biodegrades in landfills but throughout the entire food supply chain. In fact, the greatest environmental impact of food occurs at the food production stage. Therefore, preventing food waste becomes important at all stages of the food value chain.



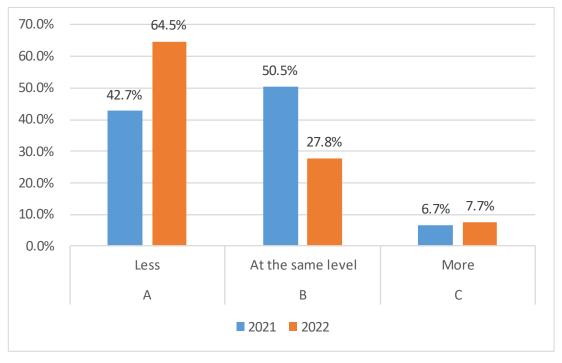


Figure 34: Estimation of the percentage of food waste in the household

## Sample size: 1009 (2021) / 1384 (2022)

Compared to 2021, in 2022 a significantly larger percentage of participants consider their food waste to be less than the average Cypriot household (64.5% in 2022 and 42.7% in 2021). Also, far fewer consider their food waste percentage to be the same as the average household (27.8% in 2022 and 50.5% in 2021) while those who consider it greater are at the same level between the 2 surveys (7- 8%). Our results show that the underestimation of the problem of food waste is bigger than it appeared to be in the 2021 survey and has significant upward trends. Most consumers consider that they waste less food than the average Cypriot household. Although it is difficult for each consumer to calculate the exact percentage of waste, the fact that the problem is underestimated affects all other parameters (such as whether they consider it an important environmental problem (question 1)), but mainly it limits the motivation to solve the problem. Similar results, however, are also found in international surveys comparing corresponding views in different countries, where in most countries consumers underestimate the magnitude of the food



waste problem. The magnitude of the problem can be better understood through the use of the online food waste calculator which was created as part of the actions of this project (can be found at: <a href="https://foodprintcy.eu/calculator/">https://foodprintcy.eu/calculator/</a>) which allows the calculation of food waste and the indication of the potential costs they have on the environment, the society and the consumer's pocket.

Question 3: Many of us, while shopping, buy more than enough to keep stocks at home that will last for some time. While shopping, do you consciously think that this might be a practice/habit causing harm to the environment?

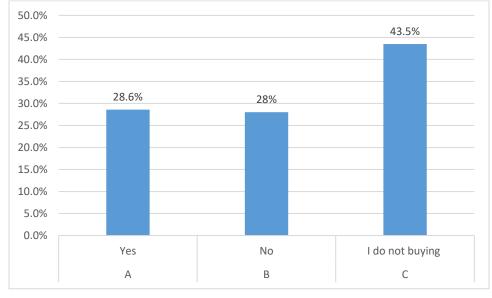


Figure 35: Shopping and environmental concerns

## Sample size: 1159

The 3<sup>rd</sup> question investigates whether consumers associate food waste and its impact on the environment with the practice of buying more than necessary quantities of food. The main conclusion is that about half of the participants (43.5%) state that they do not buy additional quantities. This is a common opinion even though we have high rates of food waste in Cyprus (in comparison to other EU countries), a fact that may be possibly linked to the underestimation of the problem by the public. The remaining participants are divided between those who do not realize that the tactic of buying surplus food contributes to food waste and those who do. Overall, it can be concluded that a significant percentage of participants do not believe they buy more food than they need, while half of those who believe that they buy more, do not associate it with food waste. Both results are a problem for the effort to reduce food waste.

It is evident, from previous surveys, that the Cypriot consumer is used to buying more food than needed and has a preference to keep food stocks in the household. Food waste starts with what we buy, therefore changing this habit can also change the amount of food waste produced. Some good habits to follow are a) preparing the shopping list before visiting the supermarket and avoid impulse buying, b) avoid

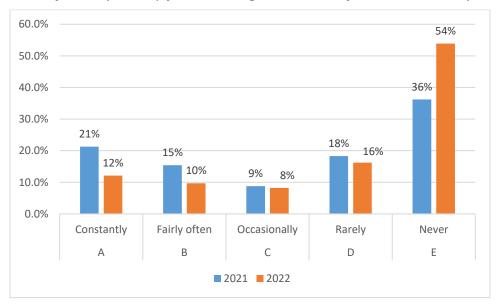


purchasing pre-packaged fruits and vegetables, buy only the quantities you need, c) avoid going to the supermarket on an empty stomach.

One of the main pillars of the communication campaigns of Life FOODprint project is the development of better habits in the food market in order to limit unnecessary purchases that create surpluses. At the same time, an effort is being made through messages and tools developed by the project to better understand the magnitude of the problem of food waste and the environmental consequences it has.

## 11<sup>th</sup> online poll

The 11<sup>th</sup> online poll was conducted in November (24-27/11/2022) and concerned management and knowledge of surplus food.



*Question 1: How often do you keep fruits and vegetables in the freezer so that they do not spoil?* 

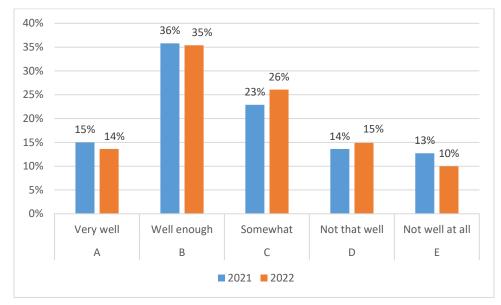
Figure 36: Frequency of keeping fruits and vegetables in the freezer

## Sample size: 930 (2021) / 2005 (2022)

Compared to 2021, the results of 2022 show a worsening picture regarding the habit of storing fruits and vegetables in the freezer. In 2022, 70% of participants answered that they "rarely" or "never" keep vegetables and fruits in the freezer, compared to 54% in 2021. As for the positive answers, they also show a deterioration since only 22% keep fruits and vegetables in the freezer "constantly" and "fairly often" compared to 36% in 2021. The reason for these changes is not known however it is possible that with the passing of the coronavirus pandemic people may have overcome the disruptions caused in their daily routine. They therefore have the ability to visit the food stores more often and hence the need for long-term food storage has decreased. It is a fact that people in Cyprus know that certain types of food can be



preserved in the freezer, such as grape leaves, broccoli, carrots and olives, but with the right preparation there are also many other types of fruits and vegetables that can be preserved in the freezer. For example, zucchini, beans and tomatoes (as long as they are scalded), and fruits such as apples, bananas, grapes, oranges and others can be sliced and stored in special containers or freezer bags.



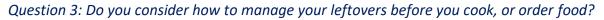
Question2: How well do you know the proper way to store food in order to maximise its shelf life?

Figure 37: Knowledge of proper way to store food

## Sample size: 742 (2021) / 1510 (2022)

Comparatively the results of 2021 and 2022 have very small differences. The total percentage of participants who know "very well" or "well enough" the correct way to store food in the 2021 survey was 51% while in the 2022 survey it is 49%. Accordingly, the percentage of participants who do not know at all or not so well of the correct ways to store food was 27% in 2021 and is 25% in 2022. The answer "well enough" has the highest percentage of responses in both instances. The answers to this specific question, however, concern the knowledge of storage methods and do not necessarily mean they are translated into actions. Examples of good food storage methods are referred to in the guide "Good practices to reduce food waste" which has been created in the contect of the LIFE FOODprint project and can be found at the link <u>https://www.foodprintcy.eu/wp-content/uploads/PCS-COMPORST-FLYERompost-flyer.pdf</u> (only available in Greek language).





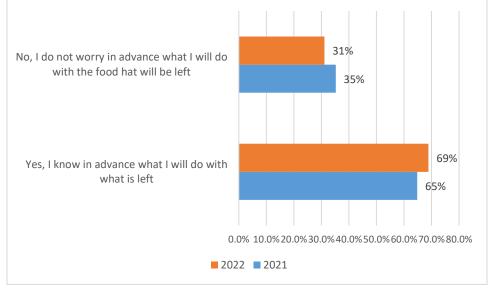


Figure 38: Knowledge on how to manage the excess food

## Sample size: 716 (2021) / 1433 (2022)

Comparing 2021 and 2022 results, there appears to be a potential improvement in food surplus management, as the percentage of participants who know in advance how to manage food surplus has increased. The answer, of course, does not determine whether the way of storing/disposing of leftover food will helps to reduce waste, but the fact that the percentage of participants who state that they are aware of this issue has increased, improves the possibilities of reducing food waste.





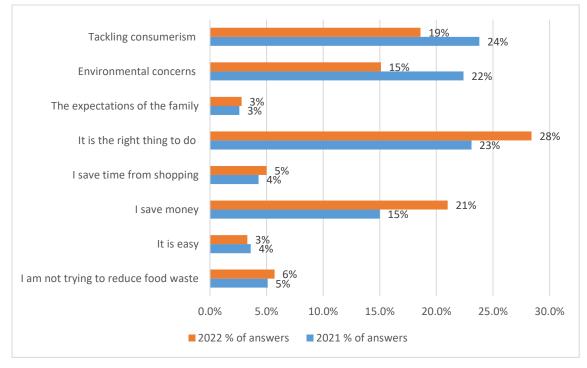


Figure 39: Reasons to try reducing food waste

#### Sample size: 1821 (2021 % of answers) / 2141 (2022% of answers)

In 2022, the answers with the highest percentage were "It's the right thing to do" (28%), "I save money" (21%) and "Tackling consumerism" (19%). In 2021, the largest percentage was recorded for the responses "Tackling consumerism" (24%), "It is the right thing to do" (23%) and "Environmental concerns" (22%). We see that there is a significant increase in the answer "I save money" from 15% in 2021 to 21% in 2022. A possible reason for this differentiation is likely to be the inflation in prices occurring internationally and in Cyprus. As a result, the economic benefit from any reduction in food waste becomes more important and obvious. There was only a slight difference in the percentage of people who don't try to reduce food waste (a slight decrease from 6% in 2021 to 5% in 2022), which is positive, but unfortunately there was a large decrease in the percentage for "Environmental Concerns" (from 22% in 2021 to 15% in 2022).

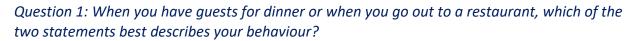
Food waste does not only result in the loss of valuable resources, but also has a significant contribution to climate change, as the biodegradation of food waste is associated with high greenhouse gas emissions. According to the UN's Food and Agriculture Organization (FAO), food waste has a global carbon footprint of around 8% of all global human-caused greenhouse gas emissions. The benefits of preventing food waste, measured in any form, far outweigh any environmental benefits of recycling food waste. That is why the main objective of the European Union is to reduce food waste at the end of the food chain, i.e.



in households, restaurants and retail trade. For more information on the environmental cost of food waste you can follow the link below <u>https://www.foodprintcy.eu/wp-content/uploads/xartografisi-ekthesi.pdf</u>.

## 12<sup>th</sup> online poll

The  $12^{\text{th}}$  online poll was conducted during the period 27/03/2023 - 06/04/2023 and comprised of 4 questions one of which is a repetition from previous polls.



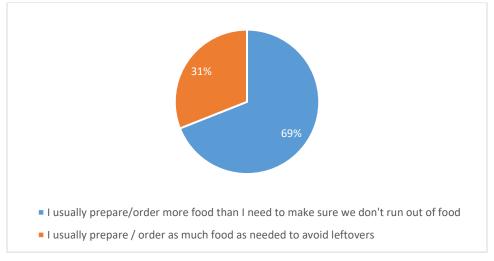


Figure 40: Preparing/ordering food

#### Sample size: 1639

As shown in Figure 1, 7 out of 10 consumers said that they tend to prepare or order more food than they actually need to make sure they don't run out of food. These results are not surprising as having plenty of food on the table is a cultural characteristic of the Cypriot people. This is also an expectation or criterion many times for hospitality and catering venues, i.e. the more food available, the better. Unfortunately, this perception increases the possibility of excess food and the likelihood of food waste creation. The need to have plenty of food is a perception that needs to change in order to achieve a reduction in food waste.



*Question 2: While you are out in restaurants and cafes, how often do you take surplus food with you at home?* 

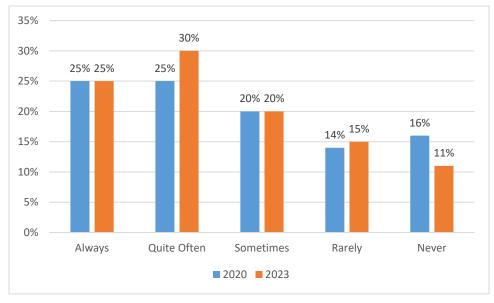


Figure 41: Take away surplus food

#### Sample size: 1104 (2020 % of answers) / 1449 (2023% of answers)

The answer with the highest percentage was "Quite often"(30%), with a 5% increase compared to the 2020 results. While the second most popular response (25%) is "Always" taking leftover food from outings at home, a percentage that shows no change between 2020 and 2023. There was a significant decrease in the percentage of "Never" responses from 16% in 2020 to 11% in 2023. We can therefore conclude that this positive habit seems to have become more popular between 2020 and today.



Question 3: In your household, in terms of food management, how often do you apply the practice of 'First Come, First Served'? That means I consume first what I buy first. I would say that in my household this is what happens...

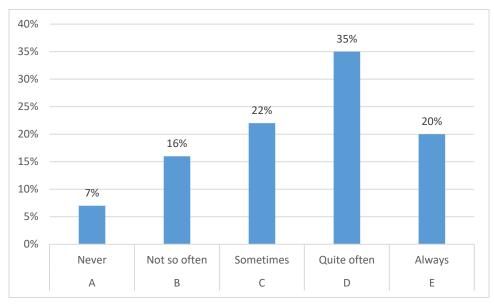


Figure 42: Use of 'First Come, First Served' practice

#### Sample size: 1353

Responses are skewed towards "Quite often" with the highest percentage at 35%, while 22% practice this practice "sometimes" and 20% "always". Overall, it seems that the results are positive in terms of applying the practice "First come, first consumed" since the majority of respondents (55%) state that they apply this practice quite often or always.





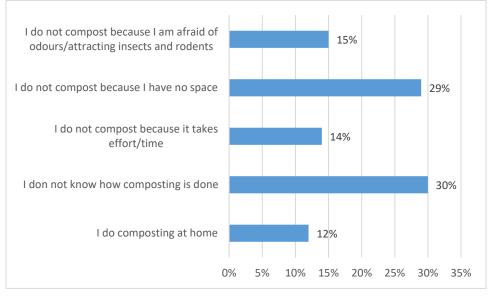


Figure 43: Composting practice

## Sample size: 1289

The results on household composting are particularly negative as 88% of respondents say they do not compost at home. An important result is that 30% of respondents have answered that they do not know how composting is done. This indicates a gap in people's knowledge and may be a topic that needs to be given more emphasis in future campaigns to reduce food waste in households. Also there exist solutions to issues such as little space, odours and attracting insects and rodents. Today there are many composters available on the market, in various sizes and technologies that reduce odours and close in a way that do not allow rodents or insects to enter the composter.

In a similar survey conducted in June 2022, 62.3% of respondents said that reducing food waste through composting is "Very" or "Quite important" for environmental protection. Based on this percentage one would expect that the habit of composting would be more widespread, but the fact remains that the actions to promote it in Cyprus are limited and fragmented.

The results of this survey show that there is significant space for improvement in household food management habits and perceptions. More substantial changes need to be made in the habits of Cypriot consumers, such as reducing the unnecessary amounts of food prepared or ordered, more systematic takeaway of surplus food from restaurants and greater adoption of composting. In view of the mandatory universal implementation of "Pay as I Throw" systems in Cyprus in 2024, but also in order to achieve the European target of reducing landfilling of municipal waste to 10% or less by 2030, more intensive efforts need to be made by all stakeholders to inform more and more citizens about the problem of food wastage and the practices to reduce it.



## Summary of results and conclusions

## 3<sup>rd</sup> survey summary of results and conclusions

Since the beginning of the FOODprint project all actions aimed to pass on messages in order to improve people's awareness regarding food waste and ways to decrease food waste. The actions were targeting several different groups and were conducted by several means to maximize their effectiveness. The project included TV campaigns, online events, consultations with businesses, public authorities, educational programmes for kids, for professionals in the sector and the general public and many more actions. The 3 consumer surveys aimed to capture whether there are any changes in consumers' behaviours and perceptions regarding food waste and thus indirectly point to the success or not of the FOODprint project. Even though we cannot directly attribute with certainty any behaviour changes to the project's actions there is a good likelihood, given that this project was the first of its kind in Cyprus. What is important is that overall and throughout the span of the 3 surveys we do observe certain improvements in behaviours even though small and this is a step forward in reducing the impact of food waste on our society and the environment. The 1<sup>st</sup> quantitative research survey was conducted in October 2020, the 2<sup>nd</sup> in May 2022 and the 3<sup>rd</sup> in Feb-March 2023. The following paragraphs provide a summary of the 3<sup>rd</sup> survey results and conclusions we can draw throughout this research.

Over the timespan of the 3 surveys, there is an increase in the percentage of consumers adopting positive actions related to the purchase and management of food. Examples are actions such as "we take care how we preserve/store food" (2020:87%, 2022:90%, 2023:91%) and "we consume the food left over in the next few days" (2020:79%,2022:86%, 2023:91%). As observed in Question 1, all positive behaviours show improvement whereas negative behaviours such as, "when we have fresh ones, we throw away the old ones" show a decrease in their adoption over time (2020:35%, 2022:31%, 2022:26%).

Regarding the food purchasing habits of Cypriot consumers (Question 2), not much seem to have changed unfortunately. Consumers tend to buy more food than needed mainly because they want to keep stocks in case of an emergency (44%) and to have food in case they have guests at home (36%). Starting from the 1<sup>st</sup> to the 3<sup>rd</sup> survey, an increasing trend is observed for the 2 reasons above but with small differences. The percentage of consumers who declare that they do not buy more than the necessary quantities has remained stable in the 3 surveys (26-27%). The results of this question show a contrast with the results of the first question where 69% of respondents stated they buy only what is needed. The habit of buying more and keeping stocks at home is a cultural characteristic of the Cypriot population. Good hospitality and prosperity are intertwined with ample food. We cannot, however, ignore other factors and events that occurred during the FOODprint project. About half of the project's duration coincided with the COVID-19 pandemic and since February 2022 was the beginning of the Russo-Ukrainian war. These events may have caused an increase in the tendency to store food at home. In addition, both events caused price inflation resulting in additional changes in purchasing habits.

As was mentioned in the introduction regarding the process followed for the 3 surveys, certain questions were repeated only in the 3<sup>rd</sup> survey (from the 2<sup>nd</sup> survey) therefore we have results only for the 2<sup>nd</sup> and 3<sup>rd</sup> survey. Comparing the last two surveys the results show a decrease in the percentage of households



that prepare/order more food than needed when they have guests or out in restaurants, from 61% to 52% (Question 3). At the same time, there is an increase in consumers taking leftover food from restaurants with them from 44% to 52% (Question 5). Both behaviours show improvement compared to the 2<sup>nd</sup> survey.

Regarding the actions undertaken by households in relation to food waste management, the results, although with small differences, move in the right direction for most actions (Question 4). Most fluctuations in percentages are observed between the 1<sup>st</sup> and 2<sup>nd</sup> survey while the differences between the 2<sup>nd</sup> and 3<sup>rd</sup> surveys are less prominent. The percentage of consumers who "often/always" throw leftover food in the trash is marginally decreasing (2020: 18%, 2022: 15%, 2023: 16%). The habits that show an increase in frequency over time (observed almost always and quite often) are "consumption in the following days" (2020: 64%, 2022: 72%, 2023: 73%) and "use for the preparation of other foods" (2020: 18%, 2022:25%, 2023:28%). On the contrary, those that show a decrease in frequency over time (they are observed almost always and quite often) are the following habits: "giving surplus food to pets" (2020:36%, 2022:35%, 2023:33%) and composting (2020: 8%, 2022: 9%, 2023: 6%). Other actions have shown an increase in frequency between the 1<sup>st</sup> and 2<sup>nd</sup> survey and a decrease between the 2<sup>nd</sup> and 3<sup>rd</sup> survey. For example, keeping leftovers in the freezer (2020:23%, 2022:32%, 2023;30%) and using leftovers as feed for farm animals (2020:18%, 2022:21%, 2023:19%).

Good food management habits for consumers were promoted throughout the project via TV campaigns (https://www.foodprintcy.eu/el/polymesa/foodprint-tv-spots/) but also through the sharing of leaflets (https://www.foodprintcy.eu/wp-content/uploads/PCS-COMPORST-FLYERompost-flyer.pdf) and also other events and actions. Composting was heavily promoted, however there might be difficulty in adopting this habit as many people may not have the incentive to do so or are not convinced that this is a practical way of dealing with food waste. The Pay as You Throw system will soon be implemented in Cyprus, by mid-2024 in all municipalities, therefore it is expected that this system will provide the incentives needed to promote the adoption of composting.

In all 3 surveys by a wide margin, the main reason food spoils and is thrown away (Question 7) is that it is not consumed before its expiry date (2020: 49%, 2022: 44%, 2023: 47%). This is followed by, in descending order, that leftover food spoils and is not safe to eat (2020:31%, 2022:24%, 2023:31%) and that some members of the household do not consume all their food (2020:26 %, 2022:27%, 2023:28%). There are several changes in the rates between the three surveys for the reasons given for why food spoils. For example, a large increase is observed in the 3<sup>rd</sup> survey of the percentage for "improper food storage" (2020:20%, 2022:21%, 2023:28%). The results to this question indicate that better storage methods are needed (such as methods to consume close to expiry products first by positioning them at the front of the cupboard) and better preservation methods (for example better knowledge of best storage for different types of foods and more use of the freezer).

Although the percentage of households that declares that they do not throw away food, fruit or vegetables shows a marginal increase over time (2020:12%, 2022:15%, 2023:17% - Question 7), on average each household declares that they throw away garbage about one-fifth (22%) of food and fresh fruit/vegetables they buy, a percentage that does not differ significantly between the three waves





(Question 6). At the same time, although the participants in the last two surveys are informed that in the average Cypriot household 50% of the waste is food waste, the majority of households remain convinced, as last year, that in their household food waste is less (2022: 78%, 2023: 83% - Question 9). Therefore, underestimating the problem of food waste remains a significant problem as about 8 out of ten respondents estimate that their food waste is lower than the average. The fact that the problem is underestimated, limits the motivation to solve the problem. Similar results, however, are found in international surveys comparing attitudes in different countries, where in most of the countries the consumers underestimate the magnitude of the food waste problem.<sup>2</sup> The scale of the problem might be better understood by the citizens through the use of the online calculator that was created as part of the actions of this project (Action D.1 and can be found at: <a href="https://foodprintcy.eu/calculator/">https://foodprintcy.eu/calculator/</a>).

Nearly eight out of ten survey participants link the reduction of food waste to environmental protection. 41% believe reducing food waste is very important for the protection of the environment and 36% believe it is quite important (Question 10). However, when asked what they feel when they throw food in the trash (Question 8), the feeling of causing damage to the environment is third in line (30%), while first in line is the feeling of "guilt" (65%) and second is wasting money (50%). There is an increase in the percentage of consumers reporting the feeling of guilt over time (2020:56%, 2022:59%, 2023:65%), so it seems that consumers associate food waste more strongly with negative feelings and this can act as a disincentive to waste. Similarly, when asked to rank motivations for reducing food waste (Question 11), concern for the environment does not appear to be the main motivator. The most important motivators are "it's the right thing to do" (51%), "saving money" (47%) and third in line is the "concern for the environment" (40%). Overall, we can conclude that even though most consumers understand that food waste reduction leads to environmental improvements, this is not the main incentive driving the reduction of food waste in consumers' households. The environmental issue might be less well understood given that food is a natural product that will eventually decompose in nature. However, the environmental cost is not only related to what happens to food after it is thrown away but also the environmental cost of production. Much of the food that reaches our table has travelled thousands of miles and was processed several times before it reached the consumer. Therefore, it may be equally important that consumers better understand where food comes from, the processes involved in its production and how these may contribute to greenhouse gas emissions. According to the UN's Food and Agricultural Organization (FAO), food waste has a global carbon footprint of about 8% of all global greenhouse gas emissions caused by humans.<sup>3</sup> More information regarding the environmental cost of food waste can be found in the FOODprint Baseline report, November 2020, that was written as part of this project.<sup>4</sup>

The new questions included in the 3<sup>rd</sup> survey are additional questions that were deemed relevant for the project on the topics of composting, use of online food delivery applications and people's willingness to participate in initiatives to reduce food waste.

<sup>&</sup>lt;sup>2</sup> 50% estimate from Life - FOODprint's "Project Baseline Report", November 2020

<sup>&</sup>lt;sup>3</sup> "Food Wastage footprint & Climate Change". FAO. https://www.fao.org/3/bb144e/bb144e.pdf

<sup>&</sup>lt;sup>4</sup> Life - FOODprint's "*Project Baseline Report*", November 2020 <u>https://www.foodprintcy.eu/wp-content/uploads/1-erevna-pliris-ekthesi-EN.pdf</u>



The responses show that composting is not widespread in households - in 2023 only 14% say they compost at home (Question 16). The main reasons why households do not compost at home are lack of knowledge of how to compost (39%) and lack of space (27%). Conversely, 10% of households stated they do not compost either because of the effort/time required (10%) or because of fears of attracting insects and rodents (10%). Unfortunately, and as seen in previous questions, even though composting was promoted throughout the project it is still not a popular habit among Cypriot consumers. It might be an issue of misinformation, lack of incentives or simply the lack of exposure to the habit.

In the past 2-3 years, online food delivery applications have become very popular in Cyprus and this habit may have had an impact on the production of food waste. When participants were asked what the effect of food delivery on food waste production is, 26% responded that it has caused an increase in the quantities that are discarded, while 19% believe that it has caused a reduction. 39% believe it has not affected the amount of food waste while 24% are not sure if it has caused any change (Question 15). Regarding certain food waste reduction initiatives, it is evident that Cypriot consumers are very willing to participate in them (Questions 12-14). The majority of participants state that they are very or quite willing to participate in initiatives to reduce food waste. Specifically:

- a) 68% of consumers are very or quite willing to participate in a network through which they will be able to offer food that is left over as a donation for consumption to people in need,
- b) 57% of consumers are very or quite willing to buy good-quality, but "ugly" looking fruit and vegetables at discounted prices, and
- c) 44% of consumers are very or quite willing to buy good quality, but not so fresh fruits and vegetables at significantly reduced prices.

What emerges as important information here is that, at least at the level of intention, the choice of the public to participate in actions to reduce food waste that would be undertaken in an organized manner is very high but is largely lacking in our country. The LIFE FOODprint project has contributed to the development of solutions through which consumers and businesses will be able to donate food to people in need, such as the LIFE FOODprint collaboration platform (https://foodprintcy.eu/collaboration-platform/el/). At the same time, the results give out a strong message for food retailers that citizens are willing to buy "ugly" looking fruits and vegetables but also good quality, but not so fresh fruits and vegetables at significantly reduced prices, thus contributing to reducing food waste. These practices are common abroad and it is important that food retail businesses know that consumers would welcome them in Cyprus too. It is a practice that can be undertaken by businesses and can potentially make a significant contribution to reducing food waste.

Lastly, consumers were asked to answer whether they have seen on TV or other media campaigns regarding the reduction of food waste in the past 3 months (Question 17). There has been a slight increase in the people who responded positively from 20% in 2022 to 22% in 2023.



## Online Polls 8<sup>th</sup> - 12<sup>th</sup> summary of results and conclusions

The online polls followed a different methodology than the surveys. The online polls were answered by visitors of the Dias websites (Sigmalive, Sportime.com.cy, I love style, City.com.cy, Check In, Economy today, MyCyprusTravel.com) and the sample comprised of people living in Cyprus but also from abroad (Greece, UK and EU). Given the nature of online polls, there are no data about the sample's characteristics other than the total number of respondents with an average of 1710 people participating in the polls. The main objective of these online polls is to further investigate issues that cannot be explored in the main surveys due to the limited number of questions. The following paragraphs are a summary of results and conclusions for the last series of polls ( $8^{th} - 12^{th}$  polls) during the period June 2022 to April 2023. Some questions were repeated from previous polls, and some were new questions. The questions which were repeated had a much larger number of respondents in the polls 8-12 than in the previous series of polls 1-7.

Overall, the results of polls 8-12 are mixed, where in certain cases we see a better picture regarding habits and perceptions contributing to the reduction of food waste and in other cases we see a worsened situation.

The 8<sup>th</sup> online poll, conducted in June 2022, concerned the perception that people have of certain habits and their importance for the protection of the environment. These habits were "buying food with a longer shelf life", "eating leftover cooked food either later or the next day, or to use it to prepare other foods" and "composting". In all three cases more than half of the respondents consider these habits to be very or quite important for the protection of the environment. The same questions were included in a corresponding poll in November 2020. Even though the results in 2022 are encouraging they show a worsening situation in the importance given to these actions regarding their effect on environmental protection.

The 9<sup>th</sup> poll was conducted in July 2022 and concerned the public's willingness to try or adopt specific initiatives to reduce food waste. More than half of the respondents are very willing or considerably willing to try these initiatives: i) buying good quality but ugly looking vegetables and fruits at discounted prices, ii) buying good quality, but not perfectly fresh vegetables and fruits at significantly reduced prices at the end of each day, iii) participate in a network through which you can offer unwanted food to other people in need for free. Of lower interest is the practice of buying pre-packed food ingredients that contain everything needed to make a certain meal. The same questions were included in a corresponding poll in August 2021. Comparing the results, we see that there is more willingness or more intent to adopt these practices in 2022 than in 2021.

The 10<sup>th</sup> poll was conducted in October 2022 and comprised of 3 questions, 2 of which were also included in a corresponding poll in January 2021. The poll results show that more than half of the respondents believe that reducing food waste is very important for the protection of the environment (the same stands in 2021 results). The 2<sup>nd</sup> question of the poll emphasises the problem of the underestimation of the food waste problem. In 2022, 64.5% of the participants believed that their food waste is less than 50% of their total waste (even though the average of a Cypriot household is 50% and this is stated in the question).



Comparing this result to 2021 we see a worsening situation in 2022 as the equivalent percentage in 2021 was 42.7%. The 3<sup>rd</sup> question indicated that a significant percentage of respondents did not believe they buy more food than they need while shopping, while half of those who believe that they buy more, do not associate it with food waste.

The 11<sup>th</sup> online poll was conducted in November 2022. All questions were included in previous corresponding polls during in 2021. The results show that a relatively low percentage of respondents regularly use the freezer to store fruits and vegetables and compared to 2021, the results of 2022 show a worsening picture regarding this habit. In addition, about half of the respondents (2021:51%, 2022:49%) know "very well" and "well enough" the correct way to store food. These are encouraging results even though, 'knowing' how to store food does not necessarily translate into actions. An important outcome of the 11<sup>th</sup> poll is understanding what motivates people to reduce food waste and how these motivators change between 2021 and 2022. In 2022, the answers with the highest percentage were "It's the right thing to do" (28%), "I save money" (21%) and "Tackling consumerism" (19%). In 2021, the largest percentage was recorded for the responses "Tackling consumerism" (24%), "It is the right thing to do" (23%) and "Environmental concerns" (22%). We see that there is a significant increase in the answer "I save money" from 15% in 2021 to 21% in 2022. A possible reason for this differentiation is likely to be the inflation in prices occurring internationally and in Cyprus. As a result, the economic benefit from any reduction in food waste becomes more important and obvious.

The 12<sup>th</sup> poll was conducted in March/April 2023. Only one question was a repetition from previous surveys. The results indicate that a high percentage of respondents (69%) tend to prepare or order more food than needed so that they will not run out of food. This result is not surprising as having plenty of food on the table is a cultural characteristic of the Cypriot people. In addition, it is prevalent that the habit of taking away surplus food from restaurants at home is becoming a more common practice. In 2023, 55% of respondents stated they take-away food either always or quite often, whereas in 2020 the corresponding percentage was 50%. As regards the food management practice so called "First come, first consumed" the results seem to be positive since the majority of respondents (55%) state that they apply this practice quite often or always. The last question concerned the practice of composting at home. The results are particularly negative in this case as 88% of respondents stated that they do not compost at home. An important result is that 30% of respondents have answered that they do not know how composting is done. This indicates a gap in people's knowledge and may be a topic that needs to be given more emphasis in future campaigns to reduce food waste in households.

## Conclusions

The research conducted throughout the project has collected a lot of useful information on habits and perceptions regarding food and food waste. Some habits have changed during the span of the FOODprint project while other habits have not. Given that the surveys carry more weight in understanding the changes of habits and perceptions over time (in contrast to the polls that do not have a controlled sample) the overall conclusion is that there is an overall improvement, albeit small. Key points of the research conducted are found below:



- Cypriot consumers tend to shop more food than needed and no significant changes have been observed in the duration of the project.
- Cypriot consumers tend to order or prepare more food than needed, however a slight decrease of this habit is observed in the duration of the project.
- Cypriot consumers understand that reducing food waste is important for the protection of the environment, however it does not act as the main motivator to reduce food waste. The most important reasons to reduce food waste are: i) "it is the right thing to do" and "saving money".
- During the project's duration more Cypriot consumers associate the action of throwing food in the trash with negative feelings such as guilt, wasting money and harming the environment.
- During the project's duration more Cypriot consumers adopt good habits such as
  - consume food surplus in the following days
  - use the freezer for food surplus storage
  - use food surplus to prepare other meals
  - give surplus food to other people
  - take away surplus food while out in restaurants
- Composting is not at all popular in Cyprus and there seem to exist a knowledge gap as to how composting is done at home.
- There is gross underestimation of the scale of the food waste problem. 8 out of 10 believe their food waste is less than Cypriot average.
- Cypriot consumers are very willing to participate in food waste reduction initiatives such as buying "ugly" fruits and vegetables at discounted prices, buying not as fresh fruits and vegetables at discounted prices and participating in give-away/donation platforms.



## Annexes

## Annex A – 3<sup>rd</sup> Quantitative Survey Questionnaire

## Στοιχεία επαφής:

'Ωρα ἑναρξης	Ώρα λήξης	Διάρκεια						
Ημερομηνία	Μέρα	Δευ.	Τρ.	Τετ.	Πεμ.	Παρ.	Σαβ.	Κυρ.
		1	2	3	4	5	6	7

## ΕΙΣΑΓΩΓΗ:

Καλημέρα / καλησπέρα. Αυτή την περίοδο κάνουμε μια έρευνα κοινής γνώμης για διάφορα θέματα που αφορούν τις συνήθειες αγοράς και χρήσης φαγητού στο σπίτι. Θα θέλαμε να συζητήσουμε για λίγο μαζί σας για να ακούσουμε και τις δικές σας απόψεις. Η επιλογή σας στο δείγμα έγινε εντελώς τυχαία και οι απαντήσεις σας θα παραμείνουν απολύτως εμπιστευτικές. Δεν θα πάρουμε πάνω από 10 λεπτά από τον χρόνο σας.

Φ1. Ξεκινώντας, θα ήθελα να σας ρωτήσω κατά πόσο συμμετέχετε στην αγορά τροφίμων (ψώνια) για το νοικοκυριό σας;

Ναι, Αποκλειστικά	1
Μοιράζομαι την ευθύνη με άλλο μέλος του νοικοκυριού	2
Δεν ασχολούμαι καθόλου	3

Φ2. Συμμετέχετε στην ετοιμασία του φαγητού στο νοικοκυριό σας

Ναι, Αποκλειστικά	1	
Μοιράζομαι την ευθύνη με άλλο μέλος του νοικοκυριού	2	
Δεν ασχολούμαι καθόλου	3	ΕΑΝ Φ1=3 ΚΑΙ Φ2=3 ΤΕΡΜΑΤΙΣΤΕ ΣΥΝΕΝΤΕΥΞΗ

## ΚΥΡΙΟ ΕΡΩΤΗΜΑΤΟΛΟΓΙΟ:

 Ξεκινώντας, θα θέλαμε να μάθουμε πόσο συχνά κάνετε τα πιο κάτω σε σχέση με φαγητό που περισσεύει στο σπίτι:

#### ΜΙΑ ΑΠΑΝΤΗΣΗ ΓΙΑ ΚΑΘΕ ΔΗΛΩΣΗ RANDOMISE STATEMENTS.

	Σχεδόν πάνσοτο	Αρκετά	Κάποιες	Σχεδόν
	Πάντοτε	συχνά	φορές	ΠΟΤΈ
<ol> <li>Το καταναλώνετε τις επόμενες μέρες</li> </ol>	4	3	2	1



2. Το φυλάτε στην κατάψυξη για μελλοντική κατανάλωση	4	3	2	1
3. Το χρησιμοποιείτε για ετοιμασία άλλων φαγητών	4	3	2	1
4. Το δίνετε σε άλλα άτομα (φίλους, συγγενείς, ιδρύματα)	4	3	2	1
5. Το δίνετε για τροφή για κατοικίδια ζώα	4	3	2	1
6. Το πετάτε στα σκουπίδια	4	3	2	1
7. Το κομποστοποιείτε	4	3	2	1
8. Το δίνετε για τροφή σε ζώα εκτροφής (κότες, πάπιες, κουνέλια (κτλ)	4	3	2	1

 Σε μία τυπική/ συνηθισμένη εβδομάδα, εάν όλα τα τρόφιμα, φρούτα και λαχανικά που αγοράσατε αντιστοιχούν με 10 μονάδες, πόσα από αυτά πετάξατε στα σκουπίδια;
 USE SLIDING SCALE FROM 0 TO 10.



5. Από τους ακόλουθους, ποιοι είναι οι 3 κυριότεροι λόγοι που πετάτε στα σκουπίδια τρόφιμα, φρούτα και λαχανικά στο νοικοκυριό σας; ΣΗΜΕΙΩΣΤΕ ΜΕΧΡΙ 3 ΛΟΓΟΥΣ. RANDOMISE STATEMENTS. ITEM 1 ALWAYS 1<sup>st</sup> AND CANNOT BE CODED WITH OTHER ITEMS

Δεν πετάμε φαγητά και τρόφιμα <b>(EXCLUSIVE ITEM)</b>	1
Κάποια μέλη του νοικοκυριού δεν καταναλώνουν όλο το φαγητό τους	2
Το φαγητό που περισσεύει και φυλάγεται δεν είναι εύγεστο μετά	3
Το φαγητό που περισσεύει και φυλάγεται χάνει από τη θρεπτική του αξία	4
Το φαγητό που περισσεύει και φυλάγεται χαλά και δεν είναι ασφαλές για	5
κατανάλωση	
Η οικογένεια επιθυμεί πάντα φρέσκα τρόφιμα, φρούτα, λαχανικά	6
Ετοιμάζεται περισσότερο φαγητό από ότι υπάρχει ανάγκη για κατανάλωση	7
Αγοράζονται περισσότερα από τις πραγματικές ανάγκες του νοικοκυριού	8
Περνά η ημερομηνία λήξης/κατανάλωσης	9
Τρόφιμα, φρούτα και λαχανικά δεν αποθηκεύονται ορθά και αλλοιώνονται	10

 Εδώ είναι κάποιες ενέργειες σχετικά με την αγορά και κατανάλωση τροφίμων. Ποιες από αυτές κάνετε εσείς στο νοικοκυριό σας;
 ΜΙΑ ΑΠΑΝΤΗΣΗ ΓΙΑ ΚΑΘΕ ΔΗΛΩΣΗ RANDOMISE STATEMENTS.

	Nai	'Охі
Ελέγχουμε τι έχουμε στο ψυγείο πριν αγοράσουμε κάτι	1	2
Κάνουμε λίστα για το τι χρειαζόμαστε πριν πάμε για αγορές	1	2
Προγραμματίζουμε τι θα μαγειρέψουμε	1	2



Αγοράζουμε μόνο ότι χρειαζόμαστε	1	2
Ελέγχουμε την ημερομηνία λήξης/κατανάλωσης	1	2
Προσέχουμε για το πως διατηρούμε/αποθηκεύουμε το φαγητό/τρόφιμα στο ψυγείο	1	2
Μαγειρεύουμε την ποσότητα που χρειαζόμαστε	1	2
Χρησιμοποιούμε τα υπολείμματα φαγητού για ετοιμασία άλλων φαγητών	1	2
Καταναλώνουμε το φαγητό που περισσεύει τις αμέσως επόμενες ημέρες	1	2
Όταν έχουμε φρέσκα πετούμε τα παλιά	1	2
Μας αρέσει να διατηρούμε αρκετά αποθέματα στο σπίτι	1	2
Παίρνουμε μαζί μας το φαγητό που περισσεύει από εξόδους σε εστιατόρια	1	2

 Για ποιους λόγους αγοράζετε περισσότερες από τις απαραίτητες ποσότητες τροφίμων και φαγητού;

## ΣΗΜΕΙΩΣΤΕ ΟΣΑ ΙΣΧΥΟΥΝ.

## RANDOMISE STATEMENTS. ITEM 1 ALWAYS $1^{\mbox{st}}$ and cannot be coded with other items

Δεν αγοράζω περισσότερες από τις απαραίτητες ποσότητες (EXCLUSIVE ITEM)	1
Νιώθω ασφάλεια όταν υπάρχει πολύ φαγητό/τρόφιμα στο σπίτι	2
Θέλω να τηρώ αποθέματα σε περίπτωση που τύχει κάτι	3
Θέλω πάντα να είμαι προετοιμασμένος/η για επισκέπτες στο σπίτι	4
Δεν μπορώ να υπολογίσω τις ποσότητες που θα χρειαστώ	5
Δεν τρώνε όλα τα μέλη της οικογένειας το ίδιο φαγητό	6
Νιώθω `φτωχός' εἁν δεν υπάρχει πολύ φαγητό στο σπίτι	7

8. Όταν απορρίπτετε στα σκουπίδια φαγητά και τρόφιμα αισθάνεστε: **ΣΗΜΕΙΩΣΤΕ ΟΣΑ ΙΣΧΥΟΥΝ.** 

Αδιαφορία/τίποτα (EXCLUSIVE ITEM)	1
Τύψεις	2
Ότι σπατάλησα άδικα τα χρήματα μου	3
Ότι κάνω ζημιά στο περιβάλλον	4

 Στο μέσο Κυπριακό νοικοκυριό, το 50% των αποβλήτων είναι απορρίμματα τροφίμων. Στο νοικοκυριό σας τα απορρίμματα τροφίμων είναι...
 ΜΙΑ ΑΠΑΝΤΗΣΗ.

Λιγότερα	1
Στο ίδιο επίπεδο	2
Περισσότερα	3



 Συγκριτικά με άλλες ενέργειες που μπορείτε να κάνετε, πόσο σημαντική θεωρείτε τη μείωση απορριμμάτων τροφίμων για προστασία του περιβάλλοντος;
 ΜΙΑ ΑΠΑΝΤΗΣΗ.

Καθόλου σημαντική	1
Όχι και τόσο σημαντική	2
Κάπως σημαντική	3
Αρκετά σημαντική	4
Πολύ σημαντική	5

 Ποιοι δύο, εάν κάποιοι, από τους ακόλουθους λόγους είναι οι σημαντικότεροι λόγοι για τους οποίους προσπαθείτε να μειώσετε τα απορρίμματα φαγητού;

#### ΜΕΧΡΙ ΔΥΟ ΑΠΑΝΤΗΣΕΙΣ.

## RANDOMISE STATEMENTS. ITEM 1 ALWAYS $\mathbf{1}^{st}$ AND CANNOT BE CODED WITH OTHER ITEMS

Δεν προσπαθώ να μειώσω τα απορρίμματα φαγητού (EXCLUSIVE ITEM)	01
Είναι εύκολο	02
Γλυτώνεις λεφτά	03
Γλυτώνεις χρόνο από ψώνια	04
Είναι το σωστό πράγμα να κάνει κάποιος	05
Οι προσδοκίες της οικογένειας	06
Ενδιαφέρον για το περιβάλλον	07
Αντιμετώπιση υπερκαταναλωτισμού	08

 Όταν έχετε καλεσμένους στο σπίτι για φαγητό ή όταν βγαίνετε σε εστιατόριο, ποια από τις δύο δηλώσεις ανταποκρίνεται καλύτερα στη συμπεριφορά σας;

#### MIA AΠΑΝΤΗΣΗ. RANDOMISE STATEMENTS.

Συνήθως ετοιμάζω/ παραγγέλνω περισσότερο φαγητό από αυτό που χρειάζεται για 1 να βεβαιωθώ ότι δεν θα ξεμείνουμε από φαγητό Συνήθως ετοιμάζω/ παραγγέλνω όσο φαγητό χρειάζεται για να μην περισσέψει 2

 Κατά τις εξόδους σας σε εστιατόρια και καφέ, όταν περισσεύει φαγητό, πόσο συχνά το παίρνετε μαζί σας για κατανάλωση στο σπίτι;
 ΜΙΑ ΑΠΑΝΤΗΣΗ.

Ποτέ	1
Σπάνια	2
Κάποτε	3
Αρκετά συχνά	4
Πάντα	5



16. Τους τελευταίους 6 μήνες έχετε δει στην τηλεόραση ή ακούσει στο ράδιο ή σε άλλα μέσα ενημέρωσης καμπάνιες ή ενημέρωση σχετικά με τη μείωση σπατάλης τροφίμων; ΜΙΑ ΑΠΑΝΤΗΣΗ.

Ναι	1
Όχι	2
Δεν θυμάμαι	3

17. Αρκετά λαχανικά και φρούτα, αν και καλά στην ποιότητα, λόγο άσχημης εμφάνισης απορρίπτονται από τους παραγωγούς και δεν φτάνουν στον καταναλωτή. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/ η να αγοράσετε καλά σε ποιότητα, αλλά άσχημα σε εμφάνιση λαχανικά και φρούτα σε μειωμένες τιμές;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

18. Στο τέλος κάθε ημέρας, αρκετά λαχανικά και φρούτα που μένουν απορρίπτονται από καταστήματα που θέλουν να προσφέρουν πάντα ότι πιο φρέσκο στους πελάτες τους. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/ η να αγοράσετε καλά σε ποιότητα, αλλά όχι τόσο φρέσκα λαχανικά και φρούτα σε σημαντικά μειωμένες τιμές;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

19. Αρκετά νοικοκυριά απορρίπτουν φαγητό που περισσεύει και τρόφιμα που κοντεύει ή έχει περάσει η ημερομηνία κατανάλωσης τους. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/ η να συμμετάσχετε σε ένα δίκτυο/πλατφόρμα μέσω του οποίου μπορείτε να προσφέρετε τα τρόφιμα αυτά ως δωρεάν για κατανάλωση από άτομα που το έχουν ανάγκη;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

20. Θεωρείτε ότι η χρήση της υπηρεσίας διανομής φαγητού στο σπίτι μέσω διαδικτυακών εφαρμογών έχει αυξήσει ή μειώσει τα απόβλητα τροφίμων στο νοικοκυριό σας;



Έχει αυξήσει τα απόβλητα τροφίμων	1
Έχει μειώσει τα απόβλητα τροφίμων	2
Δεν έχει επηρεάσει τα απόβλητα τροφίμων	3
Δεν είμαι σίγουρος/η	4

 Σχετικά με την κομποστοποίηση στο σπίτι, ποια από τα ακόλουθα ισχύουν στην περίπτωση σας; Σημειώστε 1 απάντηση.

22.

Κάνω κομποστοποίηση στο σπίτι	1
Δεν γνωρίζω πως γίνεται η κομποστοποίηση	2
Δεν κάνω κομποστοποίηση γιατί χρειάζεται κόπος/χρόνος.	3
Δεν κάνω κομποστοποίηση γιατί δεν έχω χώρο.	4
Δεν κάνω κομποστοποίηση γιατί φοβάμαι πιθανές οσμές/προσέλκυση εντόμων και τρωκτικών	5



## ΔΗΜΟΓΡΑΦΙΚΑ:

S1.	Φύλο	Άντρας Γυναίκα	1 2	
S2. П	οια χρονολογία γεννηθήκατε;	Χρονολογ	ia	
S3.	Επαρχία	Λευκωσία Λεμεσός	1 2	
		Λάρνακα Αμμόχωστος	3	
		Πάφος	5	
S4.	Περιοχή	Αστική	1	
		Аүротікή	2	
S5. Υψηλότερο επίπεδο μόρφωσης που ολοκληρώσατε		Πρωτοβάθμια Δευτεροβάθμια / τεχν	1 /ική σχολή 2	
		Τριτοβάθμια (πτυχίο) Τριτοβάθμια (μεταπτι	3	
			Shake)	
S6.	Ποια από τις ακόλουθες δηλώσεις περιγράφει καλύτερα την οικονομική κατάσταση του νοικοκυριού σας;	Άνετη ζωή, υπάρχουν απρογραμμάτιστες αγ ψυχαγωγία	ορές / έξοδα και	1
		Διατηρούμε ένα καλό στερούμαστε τίποτα		2
		Σταθερό εισόδημα, αλ περιορισμούς στα έξο	δα	3
		οι οποίοι έχουν επιβά		4
		Πολύ δύσκολη οικονα δύσκολο να τα βγάλο	ομική κατάσταση, είναι υμε πέρα	5
S7.	Σύνθεση νοικοκυριού			
		Ένα άτομο		1
		Ζευγάρι χωρίς παιδιά		2
		Ζευγάρι με παιδιά		3 4
		Συγκατοίκηση με ενή	νικες, μιζουγγενείς	Т



IF S7=3 OR 4				
S8. Αριθμός μελών στο νοικοκυριό:	Αριθμός ανήλικων στο νοικοκυρ	ιό		
	Αριθμός ενήλικων στο νοικοκυρι	ò		
S9. Είδος οικίας				
	Σηίτι			1
	Διαμέρισμα			2
	demonstration and a			3
	Φοιτητική εστία			5
S10. Στην κατοικία σας διαθέτετε:		Ναι	Όχι	]
S10. Στην κατοικία σας διαθἑτετε:	Ψοιτητική εστιά	Nai 1	Όχι 2	]
S10. Στην κατοικία σας διαθἑτετε:		Nai 1 1		
S10. Στην κατοικία σας διαθέτετε:	Ψυγείο	Nai 1 1 1	2	



## Annex B - Online Polls Questionnaires

## 8<sup>th</sup> online poll

 Συγκριτικά με άλλες ενέργειες που μπορείτε να κάνετε για προστασία του περιβάλλοντος, πόσο σημαντική θεωρείτε την μείωση των απορριμμάτων φαγητού μέσω της αγοράς τροφίμων με μεγαλύτερη διάρκεια ζωής;

Πολύ σημαντική	1
Αρκετά σημαντική	2
Κάπως σημαντική	3
Όχι και τόσο σημαντική	4
Καθόλου σημαντική	5

 Συγκριτικά με άλλες ενέργειες που μπορείτε να κάνετε για προστασία του περιβάλλοντος, πόσο σημαντική θεωρείτε την κατανάλωση μαγειρεμένου φαγητού που σας έχει μείνει είτε αργότερα ή την επόμενη μέρα, ή τη χρήση του για ετοιμασία άλλων φαγητών;

Πολύ σημαντική	1
Αρκετά σημαντική	2
Κάπως σημαντική	3
Όχι και τόσο σημαντική	4
Καθόλου σημαντική	5

3. Συγκριτικά με άλλες ενέργειες που μπορείτε να κάνετε για προστασία του περιβάλλοντος, πόσο σημαντική θεωρείτε την μείωση των απορριμμάτων φαγητού μέσω της κομποστοποίησης;

Πολύ σημαντική	1
Αρκετά σημαντική	2
Κάπως σημαντική	3
Όχι και τόσο σημαντική	4
Καθόλου σημαντική	5

 Τους τελευταίους 3 μήνες έχετε δει στην τηλεόραση ή ακούσει στο ράδιο ή σε άλλα μέσα ενημέρωσης καμπάνιες ή ενημέρωση σχετικά με τη μείωση σπατάλης τροφίμων; ΜΙΑ ΑΠΑΝΤΗΣΗ.

Ναι	1
Όχι	2
Δεν θυμάμαι	3



## 9<sup>th</sup> online poll

 Αρκετά λαχανικά και φρούτα, αν και καλά στην ποιότητα, λόγω μη ικανοποιητικής εμφάνισης απορρίπτονται από τους παραγωγούς και δεν φτάνουν στον καταναλωτή. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/η να αγοράσετε καλά σε ποιότητα, αλλά παράξενα σε εμφάνιση λαχανικά και φρούτα σε μειωμένες τιμές;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

2. Στο τέλος κάθε ημέρας, αρκετά λαχανικά και φρούτα που μένουν απορρίπτονται από τα καταστήματα λιανικής πώλησης που θέλουν να προσφέρουν πάντα πιο φρέσκα προϊόντα στους πελάτες τους. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/η να αγοράσετε καλά σε ποιότητα, αλλά όχι απόλυτα φρέσκα λαχανικά και φρούτα σε σημαντικά μειωμένες τιμές στο τέλος κάθε μέρας;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

3. Αρκετά νοικοκυριά απορρίπτουν φαγητό που περισσεύει και τρόφιμα που κοντεύει ή έχει περάσει η ημερομηνία κατανάλωσης τους. Σε ποιο βαθμό θα ήσασταν διατεθειμένος/η να συμμετάσχετε σε ένα δίκτυο μέσω του οποίου μπορείτε να προσφέρετε τα τρόφιμα αυτά ως δωρεάν για κατανάλωση σε άτομα που το έχουν ανάγκη;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

4. Σε ποιο βαθμό θα σας ενδιέφερε να αγοράζετε συσκευασίες συστατικών ετοιμασίας φαγητού, μέσα στις οποίες υπάρχουν όλα τα απαραίτητα για να φτιάξετε ένα συγκεκριμένο φαγητό;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4



5

## 10<sup>th</sup> online poll

1. Συγκριτικά με άλλες ενέργειες που μπορείτε να κάνετε, πόσο σημαντική θεωρείτε την μείωση των απορριμμάτων φαγητού για προστασία του περιβάλλοντος;

Πολύ σημαντική	1
Αρκετά σημαντική	2
Κάπως σημαντική	3
Όχι και τόσο σημαντική	4
Καθόλου σημαντική	5

 Στο μέσο Κυπριακό νοικοκυριό, το 50% των αποβλήτων είναι απορρίμματα τροφίμων. Στο νοικοκυριό σας τα απορρίμματα τροφίμων είναι...

Λιγότερα	1
Στο ίδιο επίπεδο	2
Περισσότερα	3

3. Αρκετοί από εμάς όταν ψωνίζουμε, σε κάποιες κατηγορίες τροφίμων αγοράζουμε αρκετά για να διατηρήσουμε αποθέματα που θα μας κρατήσουν για αρκετό καιρό. Εσείς, όταν τυγχάνει να το πράττετε αυτό περνά συνειδητά από το μυαλό σας ότι αυτή πιθανό να είναι μια λανθασμένη πρακτική για προστασία του περιβάλλοντος ή όχι;

Ναι	1
Όχι	2
Δεν αγοράζω επιπλέον ποσότητες	3

## 11<sup>th</sup> online poll

1. Πόσο συχνά φυλάγετε στην κατάψυξη φρούτα και λαχανικά για να μην χαλάσουν;

Συνέχεια	1
Αρκετά συχνά	2
Μέσα-μέσα	3
Σπάνια	4
Ποτέ	5



 Πόσο καλά γνωρίζετε τον ορθό τρόπο φύλαξης φαγητού και τροφίμων για μεγιστοποίηση της διάρκειας ζωής τους;

Πολύ	1
Αρκετά	2
Κάπως	3
Όχι και τόσο	4
Καθόλου	5

 Μαγειρεύετε ή παραγγέλνετε φαγητό, έχοντας υπόψη τι θα κάνετε ότι μείνει ώστε να μειωθούν τα απορρίμματα;

Ναι, ξέρω από πριν τι θα κάνω με το φαγητό που θα μείνει	1
Όχι, δεν προβληματίζομαι από πριν τι θα κάνω με το φαγητό που	2
θα μείνει	

4. Ποιοι δύο, εάν κάποιοι, από τους ακόλουθους λόγους είναι οι σημαντικότεροι λόγοι για τους οποίους προσπαθείτε να μειώσετε τα απορρίμματα φαγητού;

Δεν προσπαθώ να μειώσω τα απορρίμματα φαγητού	1
Είναι εύκολο	2
Γλυτώνεις λεφτά	3
Γλυτώνεις χρόνο από ψώνια	4
Είναι το σωστό πράγμα να κάνει κάποιος	5
Οι προσδοκίες της οικογένειας	6
Ενδιαφέρον για το περιβάλλον	7
Αντιμετώπιση υπερκαταναλωτισμού	8

## 12<sup>th</sup> online poll

 Όταν έχετε καλεσμένους στο σπίτι για φαγητό ή όταν βγαίνετε σε εστιατόριο, ποια από τις δύο δηλώσεις ανταποκρίνεται καλύτερα στη συμπεριφορά σας;

Συνήθως ετοιμάζω/ παραγγέλνω περισσότερο φαγητό από αυτό που χρειάζεται για να βεβαιωθώ ότι δεν θα ξεμείνουμε από φαγητό	1
Συνήθως ετοιμάζω/ παραγγέλνω όσο φαγητό χρειάζεται για να μην περισσέψει	2

 Κατά τις εξόδους σας σε εστιατόρια και καφέ, όταν περισσεύει φαγητό, πόσο συχνά το παίρνετε μαζί σας για κατανάλωση στο σπίτι;

1.	Πάντα	1	



2.	Αρκετά συχνά	2
3.	Κάποτε	3
4.	Σπάνια	4
5.	Ποτέ	5

3. Στο νοικοκυριό σας, σε ότι αφορά τη διαχείριση των τροφίμων, πόσο συχνά εφαρμόζετε την πρακτική του 'Πρώτο Έρχεται, Πρώτο Καταναλώνεται'; Δηλαδή καταναλώνω πρώτο αυτό που αγοράζω πρώτο. Θα λεγάτε ότι στο νοικοκυριό σας αυτό συμβαίνει...

1.	Ποτέ	1
2.	Όχι τόσο συχνά	2
3.	Κάποτε	3
4.	Αρκετά συχνά	4
5.	Πάντα	5

4. Σχετικά με την κομποστοποίηση στο σπίτι, ποιο από τα ακόλουθα ισχύει στην περίπτωση σας;

1.	Κάνω κομποστοποίηση στο σπίτι	1
2.	Δεν γνωρίζω πως γίνεται η κομποστοποίηση	2
3.	Δεν κάνω κομποστοποίηση γιατί χρειάζεται κόπος/χρόνος	3
4.	Δεν κάνω κομποστοποίηση γιατί δεν έχω χώρο	4
5.	Δεν κάνω κομποστοποίηση γιατί φοβάμαι πιθανές οσμές/προσέλκυση εντόμων και τρωκτικών	5