

THE INVISIBLE LIFE OF FOOD WASTE THE CASE OF LJUBLJANA HOUSEHOLDS

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In recent years, food waste has become an important issue that attracts attention from scientists, consumers, and activists. According to the World Bank, one third of food produced for human consumption is wasted. In Slovenia, almost 131,800 tons of food waste were generated in 2017, or 64 kg per person on average. This article presents the findings of a study on household food waste in Slovenia and, more specifically, its capital, Ljubljana. The authors studied food waste management using a combination of quantitative and qualitative approaches (i.e., a survey and an ethnographic study). These approaches were combined in order to obtain a broader picture of waste management and explain how, when, and why people “transform” food into waste.

Key words: food waste, sustainability, ethnography, survey, Ljubljana

V zadnjih letih so odpadki hrane postali pomemben problem, s katerim se ukvarjajo znanstveniki, porabniki in aktivisti. Po podatkih Svetovne banke ljudje zavržejo tretjino hrane, pridelane za prehrano. V Sloveniji je leta 2017 nastalo skoraj 131.800 ton odpadkov oziroma v povprečju 64 kilogramov na osebo. V članku so predstavljeni izsledki raziskave o odpadkih hrane v gospodinjstvih, ki so jo izvedli v Sloveniji in podrobneje v Ljubljani. Avtorja prispevka sta ravnanje z odpadki preučila s kombinacijo kvantitativnih in kvalitativnih pristopov (tj. z anketiranjem in etnografijo). S kombiniranjem pristopov sta skušala pridobiti širšo sliko o ravnanju z odpadki in razložiti, kako, kdaj in zakaj ljudje »pretvorijo« hrano v odpadke.

Ključne besede: odpadki hrane, vzdržnost, etnografija, anketa, Ljubljana

INTRODUCTION

Globally, the amount of waste is expanding at an alarming rate. According to the World Bank (2013), global solid waste will rise from 3.5 million tons per day in 2010 to 6 million in 2025. In Europe, for example, a single individual uses 16 tons of material per year, 6 tons of which will become waste. Only 36% of the waste is recycled, and the rest is incinerated or placed in landfills. Each person in Europe currently produces, on average, half a ton of household waste alone, of which only 40% is reused or recycled. In some countries, more than 80% of waste is directed to landfills (EDCW 2020).

Waste quantities are in close correlation with wealth, consumption, and production. Today's consumers have many more choices, and products are designed to have shorter lifespans. More single-use and disposable products are being purchased, and advances in technology mean that people buy, own and use many more personal devices than in the past. These lifestyle changes may have—at least provisionally—increased our quality of life, but they also mean we are generating more waste than ever before. It should be noted, however, that such global and European trends and statistical averages are only broad estimates, because rates vary considerably by region, country, city, and even within cities. In general, the rule is that the higher the income level and rate of urbanization, the greater

the amount of solid waste production. OECD countries, for example, produce almost half of the world's waste, while regions in Africa and South Asia produce the least waste (Hoornweg and Bhada-Tata 2012: 8–12).

What about food waste? According to the World Bank, one third of food produced for human consumption is lost or wasted, with the direct global costs being estimated at €670 billion per year. In Slovenia, almost 131,800 tons of food waste were generated in 2017, or 64 kg per person on average (Žitnik and Vidic 2016). In this paper, we focus on food waste in Slovenia, especially in its capital city of Ljubljana, and present the situation with regard to households. We use the theoretical framework presented in the next section to explain why people dispose of food and what the underlying reasons are for their behavior and habits connected to food waste.

THEORETICAL FRAMEWORK

Social scientists have examined human relationships with “stuff” in detail (Miller 2010), “home possessions” (Miller 2001), and the “social life of things” (Appadurai 1986). Less attention has been paid to the things we throw away: waste, trash, garbage, or rubbish. In her work *Purity and Danger*, Mary Douglas (1966) identified the role of these “matters-out-of-place” in different locales, and clarified the differences between the sacred, the clean, and the unclean. Other researchers have either virtually put their hands into waste bins (Royte 2005), focused on historical components of waste (LaPorte 2002; Rathje 2001; Strasser 1999), studied “digital rubbish” (Gabrys 2013), or theorized about the fluctuating value of everyday objects (Thompson 1979). An important formulation about the value of waste came with John Scanlan, the author of *On Garbage*, who explored the connection between the “variety of hidden, forgotten, thrown away, and residual phenomena that attend life at all times” (2005: 8). In doing so, he demonstrated that metaphorical garbage is omnipresent and even central to Western ways of thinking about the world (Evans 2014).

The theoretical framework of this article and the methodology of our study were influenced by the approach of Robin Nagle, who spent a decade doing fieldwork with New York's sanitation workers to learn what it takes to manage city garbage. In her book *Picking Up* she offered an insider's perspective on the hierarchies, rules, and language unique to this mostly invisible world of waste and presented the “permanently liminal” status of the sanitation workers cleaning the city streets (Nagle 2013). Similarly relevant for presenting and explaining the situation in Slovenia and Ljubljana is the book *From the Cult of Waste to the Trash Heap of History* (Gille 2007), which combines social history, cultural analysis, and environmental sociology in the study of waste management in state socialism and post-Cold War capitalism. In our research and writing we also rely on *Comfort, Cleanliness and Convenience*, by Elisabeth Shove (2003), which brings together the sociology of consumption and technology to investigate the evolution of social practices connected to housekeeping.

What about food waste? An excellent overview of the topic was prepared by David M. Evans (2014). In the book *Food Waste* he presented why and how households end up wasting food that they have purchased for consumption. The most important contribution to this article is his explanation of how “food” eventually becomes “waste.” He presents the process with ethnographic examples and describes how the decision is actually made—either consciously or subconsciously—and why, for example, people may decide to clean out their refrigerators and throw away a piece of food that is still edible.

THE SITUATION IN LJUBLJANA

Slovenia’s capital Ljubljana, with approximately 300,000 residents, is the first European capital to accept the Zero Waste goals that dictate that all products be reused and no trash be sent to landfills or incinerators. Reducing the quantity of waste is the result of infrastructure innovations (containers for separate waste collection in every household), a revised pricing policy, and intense sustainable waste management awareness campaigns in recent years. In 2012, the annual quantity of waste per capita was reduced by 31 kg (385 kg in 2011, 354 kg in 2012). In less than a decade, Ljubljana has managed to join leading EU countries in the recycling and reuse of waste and is currently 20% above the EU average. In 2018, 61% of municipal waste in the city was separately collected, and the city generated only 121 kg of mixed waste per capita. In less than ten years, Ljubljana has managed to rank among the leading cities in the EU in the proportion of reused waste. This significantly helped Ljubljana obtain the 2016 European Green Capital Award.

How did Ljubljana arrive at its current situation and international recognition? After the Second World War, the City of Ljubljana was characterized by rapid economic development that affected the entire structure of society and households as its fundamental building block (cf. Gille 2007, where the situation in Hungary is presented). Accelerated industrialization stimulated migration from the countryside to the city, where people looked for opportunities to improve their socioeconomic status (Šantl 2002). From 1948 to 1981, the population grew rapidly, after which its growth tapered off and gradually began to stagnate. The urban population accounted for 36.1% in 1961, 44.6% in 1971, and 48.9% in 1981 (Rebernik 2000). After 1981, the process of population concentration gradually decreased on account of the urbanization of the wider area (Rebernik 1999). Despite today’s continued stagnation, the number of households is increasing, primarily due to more complex lifestyles and increasing demands for comfort, whereas the number of household members is decreasing. From 1948 to 2018, population in the City of Ljubljana more than doubled and the number of households tripled according to the Statistical Office of the Republic of Slovenia.

An increase in the number of households has been typical especially over the past two decades, which leads to more non-sustainable consumer patterns and contributes to a greater demand for housing, infrastructure, electricity, and water, and also generates more

waste. In addition, the City of Ljubljana is characterized by an increase in the number of small and especially one-person households. From 1991 to 2018, the number of one-person households increased – according to the census – by more than half (56.2%) and the number of four-person households decreased by approximately a third (31.5%). One-person households are most common among the elderly, which results from the difference in the average life expectancy between men and women. An important feature of consumption in the study area is population aging. The number of singles living in their own households is on the increase. The reasons for this situation can be found in increased individualization and intense housing development, which made it possible for many young residents to become independent from their primary households, buy or rent an apartment, and create new households. As shown in Figure 1, from 1991 to 2018 the average household size decreased by over a sixth (14.8%), specifically from an average of 2.7 persons to 2.3 persons per household, whereas the number of households increased by a fourth (25.7%). The population in the City of Ljubljana remained practically the same in this period.

Increased material wealth in the past two decades is connected with increased household consumption of goods, energy, and water, and waste generation. For example, on average one-person households consume 38% more products, produce 42% more packaging waste, and use 55% more electricity per person than four-person households (Household Consumption and the Environment 2005). Similar trends are typical of Ljubljana. Simultaneously with accelerated industrialization and urbanization during the postwar period, rapid economic growth, and increased purchasing power of all social classes, the amount of waste began to rise, but the issue remained unregulated for a long time (Končan 2010). More significant progress was made during the process of Slovenia's accession to the European Union. In 1998, the Waste Management Rules (Uradni list ... 84/1998) were adopted, providing the first proper legal regulation of relationships between waste generators, collectors, processors, and removal services (Keuc et al. 2005). Together with the Snaga public utility company, the City of Ljubljana began addressing waste management more seriously in 2001, when the 2001–2005 Waste Management Operational Program was adopted (Eberl and Tavzes 2001; Staničič et al. 2008).

Ljubljana began introducing separate collection of paper, glass, and packaging waste in 2002. Containers of three different colors are used to separately collect three different waste fractions: paper and cardboard, plastic and composite material packaging, and glass. In 2005, a system for separately collecting organic household waste was introduced, which was a key step because separating this waste allows further recycling (Oblak 2000). The share of waste collected separately increased from year to year, but the mixed communal waste containers still contained large quantities of waste that could have been separated. Research conducted by Snaga showed that the separate waste collection system was mainly used by well-informed users. Sieve analyses namely showed that the waste fractions collected separately were exceptionally pure, and that as much as three quarters of the waste in the mixed municipal waste containers actually belonged to one of the three separate fractions.

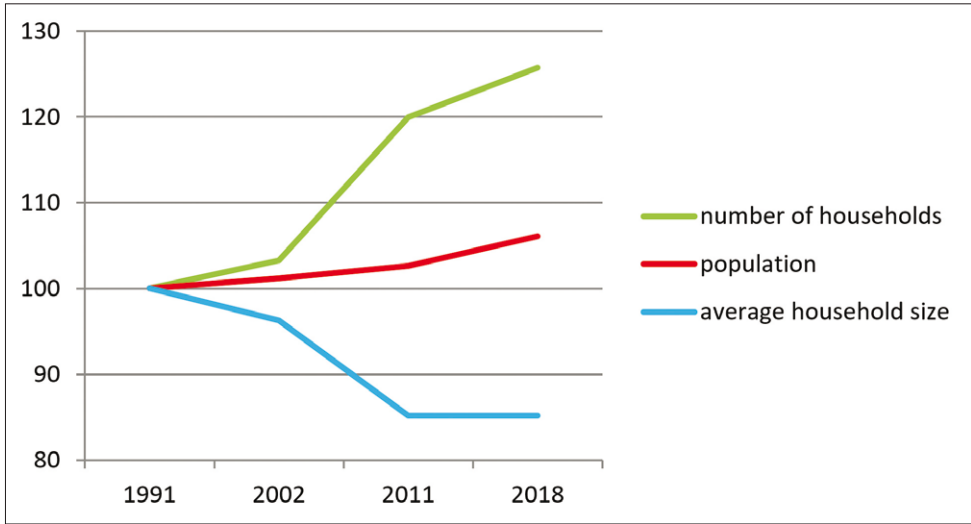


Figure 1: Changes in the population, the number of households, and average household size in the City of Ljubljana (source: SiStat 2019)

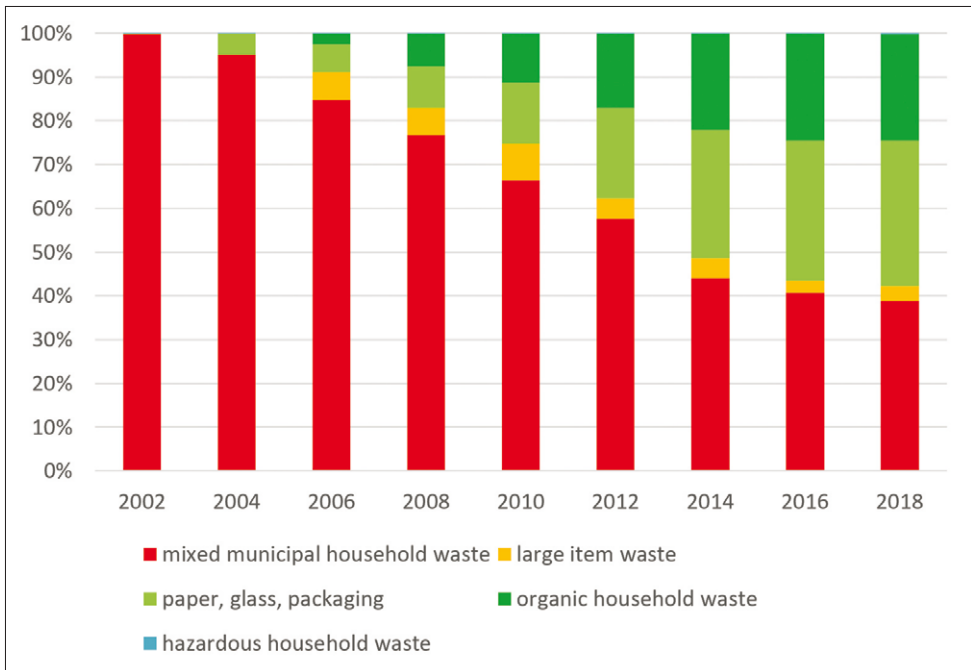


Figure 2: Municipal household waste collected in the City of Ljubljana (source: Snaga Annual Report 2003–2018).

In 2008, Snaga started addressing the issue of insufficient waste separation more seriously in terms of infrastructure modernization, informing residents and raising their awareness, and updating the waste management service charges so that they would more effectively nudge people toward separating waste. Updated legislation formed the main basis for these changes: in 2008 the European Commission adopted the Waste Framework Directive, according to which by 2020 all member states must have in place a system that makes it possible to reuse or recycle at least half of their municipal waste. In 2012, a system for collecting packaging, paper, and organic waste in every household was thus introduced, which encouraged people to start separating waste.

Up to 2009, the quantity of household waste collected was increasing due to modern consumer patterns and lifestyles, and to a lesser degree also population growth in the City of Ljubljana. In 2008, which can be viewed as a watershed, the largest amount of municipal household waste was collected: 141,192 tons. The quantity continually decreased thereafter, accounting for 111,629 tons in 2018. As shown in Figure 2, from 2008 to 2018 the quantity of household waste collected decreased by more than a quarter (26.5%) and the quantity of waste collected separately more than doubled (107.8%).¹

METHODOLOGY

Anthropologist Daniel Miller (2001) has pointed out that research on contemporary societies should go “behind closed doors” and engage with the spaces in which “most of what matters in people’s lives takes place.” The household is the primary site of an individual’s consumption; thus, waste management research also needs to orient itself in this direction. In researching this article, we followed Miller’s recommendations and began our study “in the midst of the private domain” (2001: 239). Both quantitative and qualitative studies were conducted in order to gain information about waste management in households.

The survey was conducted in 2019 using the 1ka online tool, an open-source application developed by the Centre for Social Informatics at the Faculty of Social Sciences, University of Ljubljana. Respondents were approached by e-mail and online social media. The survey lasted four months and the total number of respondents from the City of Ljubljana was 234. To obtain as many voluntarily completed questionnaires as possible, results were not filtered for the average population in the City of Ljubljana. Hence, as established during the analysis, the respondent were mainly those that are interested in environmental protection and behave accordingly. They included 81.2% women and only 18.8% men. One of the reasons for this unbalanced gender structure may be the fact that women are the ones that usually handle waste within the household. In terms of age, most respondents were between twenty-five and forty-four (60.6%), followed by those between forty-five and

¹ Source: Snaga Annual Reports 2008–2018.

sixty-four (27.7%), fifteen and twenty-four (8.1%), and older than sixty-five (3.4%). In terms of education, respondents with a university or college degree predominated (86.3%), followed by those with a secondary-school degree (11.5%) and those with a vocational degree or completed primary school (2.1%). Of the total, 81.6% of respondents had a family or a partner and 37.1% had children. In terms of housing, 78.6% lived in apartment buildings or multi-family houses. It was primarily employed and relatively young people that responded to the survey. It can be assumed that those that responded often use the internet as a means of communication.

The ethnographic study was carried out in micro-locations of Ljubljana, specifically the Vič district, located in the western part of Ljubljana, which consists of individual houses and smaller apartment buildings (Figure 3). In addition, there is a sport center in the area, which includes a soccer stadium and a gymnastics center, and student dormitories. Our long-term study in the area, carried out from 2017 to 2019, was later supplemented with a survey on a broader scale (Podjed and Polajnar Horvat 2017). The ethnographic approach proved to be important, because it allowed the local waste management practices to be followed more in detail and offered the opportunity to get familiar with people living in specific, smaller areas. Studying the micro-location provided us more in-depth insights into the relationship between people, waste management practices, and physical settings.

In our ethnographic study, we carried out participant observation in the specified location: for a year (January–December 2019) we observed habits and practices connected to food waste, and participated in daily processes of waste separation, reuse, and recycling. In addition, we carried out semi-structured interviews with household residents of the case study area living in different types of housing (e.g., detached houses, multi-family houses, apartment buildings) and adopting diverse waste production and reuse practices: from Zero Waste households to those that practice minimal recycling and waste separation. In the interviews, we tried to determine how our interviewees manage food waste in their households and what measures they use to minimize their waste production.

SURVEY FINDINGS

The survey mainly looked at why so much food is wasted and how that amount can be reduced. The first results of the analysis showed that people most often buy food at large stores (41%). They also produce it themselves or obtain it from relatives and acquaintances, but this percentage is considerably lower than all the food used. The respondents, however, throw away a small amount of food, most of them less than 20%. They throw away mostly inedible and spoiled fruit and vegetables or bread and cereal products. Most respondents re-use leftover food or freeze it for later use. At first glance, results show that respondents have a very attentive attitude towards food management, but it is necessary to draw attention to the problem of such online surveys, which are mainly responded to by

the most interested members of the public; that is, people that are well aware of this topic and are also committed to solving it.

It turned out that respondents most often buy food at large and small stores (41% and 24%, respectively), followed by markets (19%) and shopping centers (4%), which is encouraging from the environmental-protection point of view. Specifically, big shopping centers still largely tend to use longer transport chains and import foreign, often cheaper products. Shopping at smaller stores that prioritize local products reduces the amount of waste and the carbon footprint, and the produce they sell remains fresh and retains its nutritional value because it is harvested when it is fully ripe and the time between harvesting and cooking and serving is short.

It is even more encouraging that nearly three quarters of respondents either produce food on their own or obtain it from relatives and acquaintances. This way they additionally contribute to less waste because the food arrives in their households without packaging. It can be assumed that this also improves the quality of meals, because when people grow their own vegetables, they do so with greater care.

Respondents report that they waste a minimal amount of food; 93% only throw away one fifth or even less. When asked about the amount of food they threw away, as many as 87% of respondents replied that they did not throw away any at all or hardly any food. The reason for this may be that this is a highly motivated group of respondents that handles waste responsibly. Respondents most often throw away inedible or spoiled food, expired items, and table scraps. They mostly throw away fruit and vegetables, which go bad quickly, bread, and other grain-based products. Even though in Slovenia bread has exceptional symbolic meaning, people worship it more in word than in deed and throw it away easily. Of course, it is also possible that people simply buy too much of this simple, but diverse and perishable foodstuff.

Respondents largely throw away food because it is visibly inedible; this is practiced by nearly a tenth of the respondents. This is followed by food that gets thrown away because it is expired (26%), because too much was cooked (12%), and because too much was bought (6%). Others throw it away because there is too much in the package (4%) or because it does not taste good (5%). If there are any leftovers, people often heat them up later (42%), nearly a quarter (23%) freezes them, 21% of respondents use them to make a new dish, 6% give them to their pets or domestic animals, and 6% throw them away. Respondents most often throw organic waste into the organic waste container (63%), 14% compost it (14%), and 12% throw it in the toilet. A surprisingly high share of respondents (9%) continues to throw organic waste in the mixed municipal waste container.

Meals are frequently or very frequently planned ahead by 41% of respondents, who always stick to their shopping lists. As many as 55% regularly buy smaller quantities of food instead of in bulk, which would be more prudent. As many as 85% use all the food they buy and 69% plan the quantity ahead and only cook or use the amount needed. As many as 62% always try the food that has already expired. These results show that people claim to have high environmental awareness, but in fact their motivation dwindles.



Figure 3: Map of the ethnographic study area in Ljubljana.

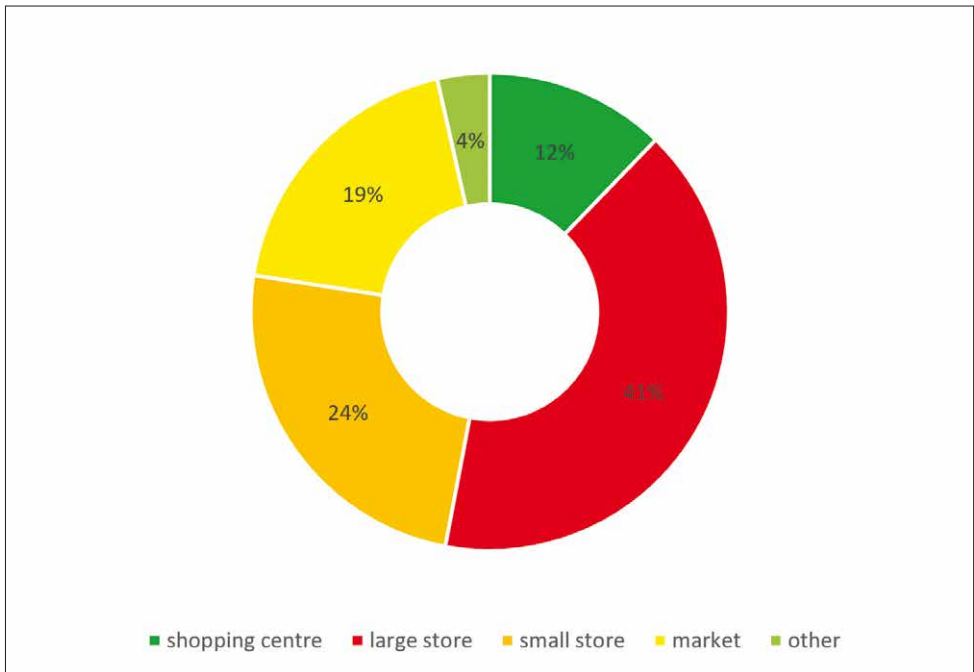


Figure 4: Places where people shop for food (source: Invisible Life of Food Waste survey).

As many as 92% of respondents feel guilty if they buy food they do not end up using. It is interesting that they do not yet feel guilty when buying the products, with 74% reporting that they think well before and during shopping about how much food they are going to use. The same share always checks the expiry dates while shopping. The statement “It makes no sense for me to buy and use food wisely if no one else does it” was used to establish whether people are aware of the importance of their own actions in the absence of active involvement of others. A negative statement was used here in order to avoid socially desired answers. Nonetheless, respondents feel it makes a lot of sense (94%) to buy and use food wisely even if others do not do it. The motivation to handle food wisely is associated more with the desire to reduce the amount of waste and take care of the environment than with money; this is reported by 79% of respondents. Nonetheless, 54% of them also prepare and buy food wisely in order to save money.

ETHNOGRAPHIC FINDINGS

In parallel with the survey, an ethnographic study was conducted at a micro-location in Ljubljana in order to find the deeper reasons for why people waste so much food. Of special interest was the discrepancy between the answers obtained in the survey and the situation recorded by the Slovenian Statistical Office and the company in charge of the city’s waste management. Its findings showed that on average every resident of the study area wastes 91 kg of food a year, which accounts for 23.9% of all the waste disposed. In addition, it is alarming that as much as over 48% of food waste is produced by households (Žitnik and Vidic 2016). On the other hand, the respondents participating in the survey reported they waste less food than actually ends up in the trash.

Interviews with household members showed that people often feel guilty about the food that they throw away and ends up in the trash. When replying, they also often considerably reduced the amount of food they throw away for various reasons. For example, a woman who lives in a one-bedroom apartment in the study area together with her husband and whom we visited at home told us that she only throws away a small amount of vegetables she buys. When asked how much food they throw away every week, she indicated a small pile with her hands, which would correspond to a kilo or two. She also explained that there are more scraps whenever she gets most vegetables from her mother-in-law, who grows them in her garden. This is when they usually produce more scraps, even though they also try to distribute this food among their friends and acquaintances.

Similar food-related habits were also reported by members of other households we visited: in principle, people pay attention to how much food they buy and what they throw away. They also report that they save the leftovers and only rarely throw away food. If they do throw it away, they often feel guilty. The study also revealed significant differences between the behaviors described and the actual behavior patterns and long-term habits.

When household members were observed longer, keeping an eye on how much food they actually threw away, the quantities were considerably larger than the ones described.

It also turned out that it is difficult to determine the amount of food that is thrown away because people do not always throw it in the organic waste containers. They often throw spoiled food that is still wrapped in packaging in containers intended for mixed waste or they even throw it in the organic waste together with the packaging. As shown by the field study, this causes considerable conflict between the neighbors because some strictly separate their waste, whereas others think that is unnecessary and pointless. In the interviews, these people often mentioned the fact that when collecting waste the garbage men mix the separate waste fractions anyway, thereby nullifying their efforts, as the reason for their own lack of sorting. They reported personally seeing a garbage truck arrive and the garbage men emptying all the containers into it, regardless of their content.

The study also showed that people claim to be willing to significantly reduce waste and also believe that their behavior is economical and environmentally responsible, but in reality they still waste considerably more food than they are prepared to admit to themselves and others. The problem is not only their waste management practices, but also and primarily their shopping habits and the fact that they buy too much food. Mitigating the cognitive dissonance (Festinger 1957; Harmon-Jones et. al. 2015) between actual behavior and perceptions of one's own habits and practices can clearly be an important research and development challenge.

The ethnographic study also revealed another important topic: neighborly supervision. This can be significantly more effective than the "top-down" supervision enforced by the city authorities and the state. Specifically, neighbors in the residential communities in the study area watch and supervise one another, and also disseminate information on the waste sorting methods, prescribed fines, and similar topics among their neighbors. They post notifications of improperly sorted waste at community collection points on bulletin boards in their apartment buildings and send messages by e-mail or social media reporting the situation in "their" containers in front of the building. Such "lateral" supervision systems based on people's personal contacts have proven to be an important factor that affects the habits and practices in urban communities and complements the activities and systems provided by the city authorities and the state.

CONCLUSION

One of the main findings of this article is that despite people's considerable claimed willingness to behave in a sustainable manner in relation to food waste demonstrated by our survey, still (too) few people are truly willing to engage in environmentally friendly behavior in practice. On the other hand, a positive finding is that there are also only a few people that show no interest whatsoever in reducing food waste; people tend to be aware of the issue and dedicate increasingly more attention to it. A further important finding is

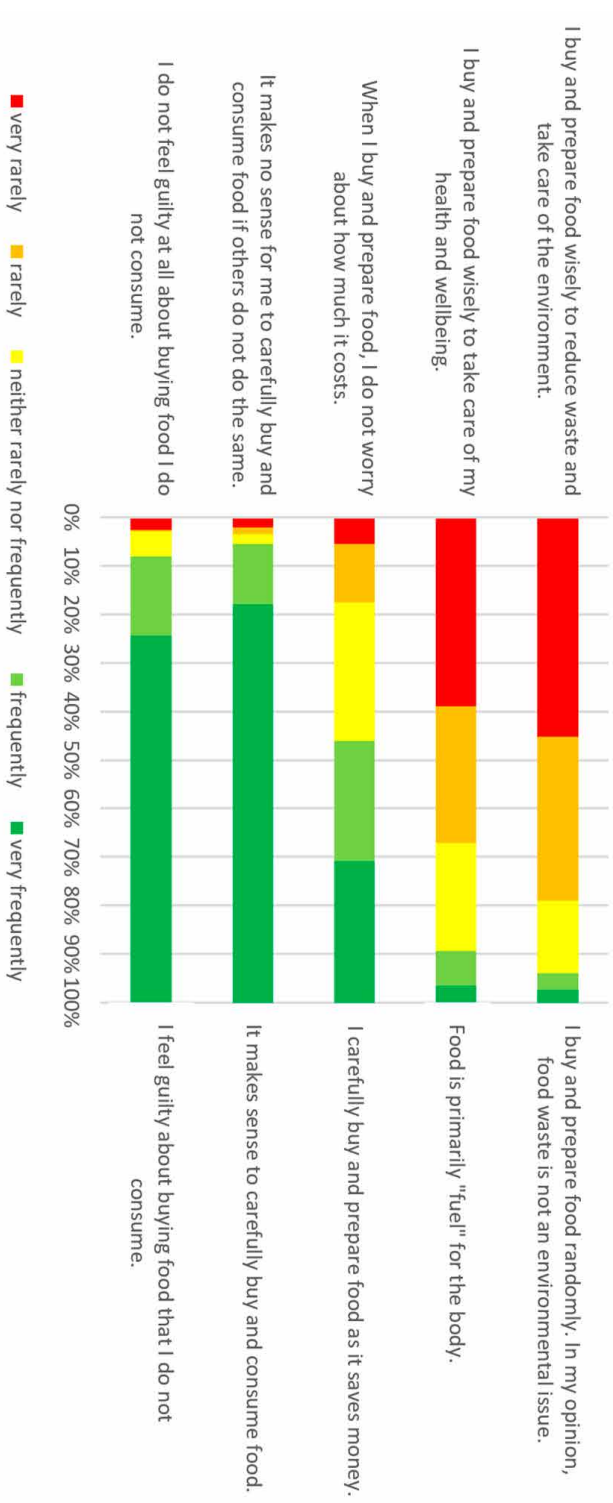


Figure 5: Reasons to handle food wisely (source: Invisible Life of Food Waste survey).

that the authorities use various measures and directives to influence individuals' behavior, which has been established based on the situation in household waste management to date.

These study results lead to the recommendation that a "bottom-up" approach be promoted using small-step policy. One of the recommendations is to implement the social impact method in the educational system and curricula. Targeted information dissemination, education, and other practical social impact methods can improve people's understanding and awareness, resulting in appropriate changes in practice. At the same time, as the study shows, young people are more susceptible to new approaches and are the most effective medium for transferring such ideas and practices to older people (Polajnar Horvat 2015).

Wider social progress in food management also requires consumer education and training, so that consumer choices can affect the retailers' decisions about reducing and preventing food waste. Communication between producers, processors, and retailers must be enhanced in order to reduce the quantity of household waste. Another important measure is to promote initiatives adapted to local specifics, not only at the national and city levels, but also at micro-locations, such as the study area in Ljubljana, and in households. The study presented in this article showed that waste-related problems can be completely specific and therefore cannot be resolved only through universal approaches; instead, solutions must be adapted to the selected sociocultural environment and people's actual needs.

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NEVIDNO ŽIVLJENJE ZAVRŽENE HRANE: PRIMER GOSPODINJSTEV V LJUBLJANI

V zadnjih letih so odpadki hrane postali pomembno vprašanje, ki vse pogosteje pritegne pozornost znanstvenikov in tudi širše javnosti. Po podatkih Svetovne banke zavržemo tretjino hrane, ki jo proizvedemo za prehrano ljudi. V Sloveniji je v letu 2017 nastalo skoraj 131.800 ton živilskih odpadkov ali v povprečju 64 kg na osebo. V tem članku so predstavljeni izsledki raziskave o prehranskih odpadkih v Sloveniji, najpodrobneje zbrani v glavnem mestu. Avtorja sta preučila ravnanje z odpadki hrane z uporabo kombinacije kvantitativnih in kvalitativnih pristopov. Pristope sta združila, da sta pridobila širšo podobo ravnanja z odpadki in pojasnila, kako, kdaj in zakaj ljudje »spreminjajo« hrano v odpadke.

Kot je pokazala raziskava, je kljub precejšnji deklarativni pripravljenosti za trajnostno ravnanje s hrano še vedno (pre)malo ljudi pripravljenih ponotranjiti okolju prijazno vedenje in ga izvajati v praksi. Po drugi strani je pozitivna ugotovitev, da je le malo ljudi, ki ne bi pokazalo nikakršnega zanimanja za zmanjšanje količine zavržene hrane; ljudje so pretežno seznanjeni s problemom in mu posvečajo vse več pozornosti. Nadaljnja pomembna ugotovitev je, da državne in mestne oblasti izvajajo različne ukrepe in smernice, ki očitno vplivajo na ravnanje posameznikov in spodbujajo bolj trajnostno ravnanje s hrano.

Avtorja prispevka sta v sklepu pripravila priporočila, ki poleg uradnih ukrepov spodbujajo ljudi k spreminjanju vedenja in navad po načelu majhnih korakov. Eno od priporočil je uporaba metode socialnega vpliva v izobraževalnem sistemu in učnih načrtih. Ciljno razširjanje informacij, izobraževanje in druge metode socialnega vpliva lahko izboljšajo razumevanje

problema in ozaveščenost ljudi, to pa vpliva na družbene spremembe. Pomembno je še, da so mladi dovtetnejši za nove pristope in so zato najučinkovitejši medij za prenos novih zamisli in praks v širšo družbo.

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