

Situation of Food Waste in the Hostelry Sector in San Sebastian

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Abstract: This is a study made to evaluate if the initiative “San Sebastian sin desperdicio” is effective or not. First, a research about the topic and the initiatives to fight food loss and waste have been done, followed by one in-depth interview to restaurants’ managers and a survey to consumers to obtain the results. The most important conclusion is that the citizens are not aware of this initiative, so more visibility would be convenient.

Key words: food waste; sustainability; restaurants; Basque country

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1. Introduction

It is well known that the world is facing a very alarming issue that affects to all living beings and threatens our lives. This problem is known as climate change. As time goes by the concern about environment is rising and worlds like sustainability or circular economy are gaining importance in almost every aspect of our lives, but are we ready to change our lifestyles to face this?

One of the points where we, as first world citizens, can come into play to reduce our lives’ environmental impact is the way we feed and consume. According to the report established by the FAO in 2013, the total agricultural production is 6 Gtonnes of which 1.6 Gtonnes are wasted (1.3 Gtonnes of edible parts of food). In medium- and high-income countries the average of food waste per person and year in 2011 was between 95 and 115 kg (the majority is food at consumption stage), while in low-income countries it decreased to 6 to 11 kg (the majority at early and middle stage of food supply chain) (FAO, 2011). This food’s life cycle (without accounting emissions from land use change) generated 3.3 Gtonnes of CO² in 2007. This means that if food waste was a country, it would be the third top Greenhouse Gas emitter after USA and China (FAO, 2013).

If we focus on Europe, the food waste quantity arises to 0.88 Gtonnes per year (about 173 kg per person), which produces 1.7 Gtonnes of CO² and 143 billion euros of associated costs (European Commission, 2016). It is estimated that about 53% of the food waste is originated in households, followed by processing (19%), food services (12%), production (11%) and wholesale and retail (5%) (European Commission, 2016). Spain is the 7th in the European food waste ranking producing a total 0.77 Gtonnes per year. Here the average of domestic food waste comes to 1.4 kg per week and household (MAPA, 2017).

On the other hand, there is a clear upward trend in eating out. In Spain, the volume of restaurant consumers increased 1.9% between 2017 and 2018, and the consumptions volume increased 3.5% (MAPA, 2019). This

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means that food waste will also follow that trend and restaurants and food establishments should take measures to reduce or eliminate it. The initiatives that aim to give solutions to this issue have been increasing during the last years and we can see companies, such as Too Good to Go or Winnow Solutions, which are constantly gaining demand and popularity due to the public concern about environmental problems.

In the Basque Country, and especially in San Sebastian, the tourism is been growing very fast during the last years. Its most attractive and typical activity is going to “pintxo bars” where a very large quantity and variety of tapas are arranged on the bar counter and customers choose and take the ones they want. As these bars have to meet health standards, they cannot keep the tapas for a long time and, in most bars, they are thrown away. Apart from this tradition, many restaurants in the city have to meet the growing demand and do not take actions to solve or reduce the food waste problem.

1.1 Initiatives

To cope with this situation, many cities and companies have taken measures. There are initiatives in different lines of action, such as educating the citizens, connecting different agents through platforms and meetings (Too Good to Go), measuring the food waste (FLW)...but all have the same objective: food waste reduction.

One of the most known initiatives is the Milan Urban Food Policy Pact. It was created by 41 cities along with an advisory group of leading international organizations and international experts in dealing with food-related issues. It was signed on 15 October 2015 by 113 cities in Milan and currently 209 cities from all over the world (29 from Spain) are committed to meet the requirements established in the MUFPP. The objectives of this pact are to develop and implement sustainable food systems and strategies and facilitating the exchange of ideas and experiences. This initiative also includes a monitoring framework created by the MUFPP secretariat, the FAO and RUAF (global partnership on sustainable urban agriculture and food systems) to identify food-related policy and program priorities and to measure the progress with 44 indicators divided into categories: food governance, sustainable diets and nutrition, social and economic equity, food production, food supply and distribution and food waste. They also have an annual gathering in one of the member cities where they can participate in activities and talks and the best practices are rewarded.

As seen above, many Spanish cities are taking part in this action. In Madrid there are initiatives such as ReFood, in the Tetuan neighbourhood, whose mission is to eliminate food waste and end hunger involving the full community. This movement was born in Lisbon and the activities in Spain started in October 2019 with 20 donors, giving to more than 20 people food for six days each week. Since then they have rescued 2K servings and avoided 1.1 tons of food waste. The city council also funds an NGO for development cooperation called “Yo no desperdicio” which consists on a platform to connect people that wants to share surplus food with those who want to receive food. This platform works in the whole national territory and Madrid is the most active city.

But the most active city in Spain fighting against food waste is Barcelona. Recently they have approved a law that establishes some requirements to all the operators of the food chain such as food distribution companies, catering sector enterprises or public administration (BOE, 2020).

There three capital cities of the Basque Country have are members of the MUFPP, which is a good indicator of the relevance of food waste in the area. But even so, more than 350,000 tons of food waste are thrown away each year (Basque Government, 2019). In fact, one of the lines of action of the strategic plan of the Basque Government is to reduce food waste by awareness campaigns, saving and eco-efficiency guides for catering sector and formation on solution creating and good practices for all the food chain agents. Other measures, with the

objective of consolidating an environmentally friendly agricultural model, were also mentioned on the IV Environmental Framework Program published on 2014 as part of the 5th key project “Circular Food” (Elika, 2020). It established actions to carry out between that year and 2020 and defined middle and long term objectives.

The 3rd October 2018 the Basque Government launched an initiative, called “No al despilfarro alimentario en Euskadi”, with the objective of decreasing by 50% the food waste in 2030 (Basque Government, 2019). To achieve this they have developed an action plan with six lines of action:

- Information and data sources
- Awareness, disclosure and formation
- Support and promote supportive networks
- Guideline creation
- Analyze and propose the regulation development
- Support and promote investigation

In this context, they have created a platform called “Zero Despilfarro” where they propose challenges to reduce food waste, provide audiovisual and informative material to citizens and tools such as serving size calculator and connect the different food chain agents. They also give to organizations and particulars the option of joining the platform by signing a declaration. In addition to this, the Basque Government is carrying out other five initiatives:

- Encourage short track commercialization and distinguish local food products
- Define and prioritize investigation lines about sustainable food production
- Incorporating local products in collective canteens
- Ecologic Production Promotion Plan (FOPE)
- “Nirea” initiative, to promote the reactivation of the primary sector and the revitalizing of rural and coastline areas through sustainable development

In Gipuzkoa, the County Council is collaborating with the Impact Hub to fight against food waste with a broad proceeding program. In 2017 they made a study to describe the food loss and waste and the hunger in Gipuzkoa, create a map with the focal points and the involved agents and define indicators and provide tools to generate a positive impact.

For this they took the FUSIONS manual, made by the European Commission in 2010, as reference. They define the difference between food loss (elimination of foods or part of foods which are not suitable for human consumption, such as rotting fruits or vegetables, processing reminders...) food waste (throw away food that can be eaten, which is usually made by retailers or consumers) and food loss and waste (all the food discarded due to rotting or lose). The last one is the target of the study. The results obtained from research, deep interviews and statistics from official sources where these:

- In the hostelry sector generates 17% of the total food loss and waste in Gipuzkoa (21.241 tons). The European average is 12%. The food loss in this sector is 20% and the food waste is 9% of the total.
- 70% of the total food loss and waste is generated in the consumption stage (at home or in restaurants), and 32% of the food consumption is out of home.
- Of the total food loss and waste in the hostelry sector, 12% is loss and 88% is waste, usually from the rests of the consumers plates.
- 33% of the food loss and waste in the hostelry sector are fruits and vegetables, 21% meat and fish, 14% cereals, 7% dairy and 26% are drinks and other ingredients.

- The food waste management in Gipuzkoa generates 24.717,17 tons CO² e.

Apart from this results, they carried out some actions such as measuring the food waste and where and why it was rejected and the “Gourmet Bag”, a biodegradable box to take the surplus food away in restaurants. In 2018 they made a pilot test in 12 bars in San Sebastian during three months and when it ended 10 of these establishments decided to remain using these boxes. The second pilot test will be done in San Sebastian and five more towns from Gipuzkoa.

In San Sebastian there is another initiative to reduce food waste in food establishments called “San Sebastian sin desperdicio”. This strategy consists on six approaches:

- Analysis of the lifestyle of the citizens of San Sebastian and promoting healthy diet
- Reduction of the food waste
- Promotion of local and ecological agriculture
- Improvement of distribution of local products
- Sensibilization and awareness-raising
- Governance, participation and food policies

To obtain the award “San Sebastián Sin Desperdicio” the establishment has to meet at least these requirements:

- 1) Implement at least one measure that generates a clear impact on food loss prevention
- 2) Divide properly all the waste types
- 3) Educate and inform the staff about all the measures taken

There are two guides on the website, one for restaurants and other for food establishments where good practices are shown and explained.

2. Objectives

The main objective of this research is studying the situation of food waste in the restaurant and hostelry sectors in San Sebastian, exploring how the initiatives carried out are making impact on this problems’ reduction and identifying the points of the value chain where the food waste is higher.

3. Methodology

We first collected information related to the subject, which we have set out in section 1. Then, then continued the study by collecting first-hand information. We first called to some of the restaurants where the initiative “San Sebastián sin desperdicio” is being carried out to make a deep interview. Due to the actual situation, many of them were not available and the list of respondents got shortened and we only talked with the proprietaries of 9 restaurants from which 7 are fighting against food waste carrying out the initiative. Even though, the answers were very similar so we can expect that the other restaurants would answer something similar.

Then we launched a questionnaire to general public to complete the information obtained from the restaurants through a survey. We use the snowball method. In total 166 people answered.

4. Results

4.1 Restaurants

These are the questions and the answers we received from the restaurants:

1) Are you carrying out this initiative for personal motivation or for economic/marketing reasons?

All the managers agreed on having a personal motivation to reduce food waste. Most of them were grown in families that made the most of food to avoid throwing it away.

2) Have you had any difficulty to carry out the initiative?

According to the managers, the city council has helped rather than make it difficult. They provide bags for organic waste and trash cans for glass, but comparing to other towns such as Tolosa, they don't provide rubbish bins to recycle inside the establishments.

3) Do you think that it provide additional benefits?

It is a common opinion that being one of the restaurants that carry out this initiative does not provide economic benefit.

4) Do you think that the customers value the initiative?

The consumers value the steps taken to reduce food waste because they are getting more conscious about this problem. As the general public is more concerned about sustainability they value more the actions that the restaurants take to reduce the environmental and social impact. Even though, the fact of being a member of "San Sebastian sin desperdicio" and the seal to tag the establishment is not important when choosing where to eat. Stickers such as gluten-free options, free Wi-Fi or even having a terrace are more important to make this decision.

4.2 Consumers

After launching the questionnaire for consumers 166 responses were received. This table shows how many people know the amount of food wasted in the world each year, the amount of CO² eq. generated from this and the number of people who already know the initiative "San Sebastian sin desperdicio".

Table 1 Results About the Food Waste Awareness

Age	Number of respondents	About the food wasted	About the CO ² eq. generated	About the initiative
19 or less	4	1	1	0
From 20 to 24	37	24	10	3
From 25 to 39	20	9	3	2
From 40 to 59	81	25	8	11
60 or more	24	3	0	5
Total %		37.3%	13.3%	12.7%

The second table shows the number of people that perceive the initiative as an added value and how many of the interviewed citizens would accept higher prices or less extensive menus.

Table 2 Results About Consumers' Acceptance of the Initiative

Age	Number of respondents	Perceive an added value	Disposed to accept higher prices	Disposed to accept shorter menus
19 or less	4	4	4	4
From 20 to 24	37	36	25	32
From 25 to 39	20	20	12	17
From 40 to 59	81	78	40	71
60 or more	24	22	11	19
Total %		96.4%	55.4%	86.1%

5. Conclusions

To sum up the gathered data, it is a fact that people is more concerned about sustainability and the need of taking care of the environment, yet they are not very familiar with the relationship between the food loss and waste and the climate change. The restaurants' managers are aware of this problem and some of them are taking measures to reduce it, on their own or helped by the City Council.

The initiative "San Sebastián sin desperdicio" is not distinguishing because consumers don't know about it, as the results obtained clearly show. This is why one of the steps that the City Council should take would be publicizing and familiarizing citizens with the food loss and waste problem first and then with the initiative. If people get to know this global issue they will be more aware of the initiatives carried out and they will support them, but if it is only known by a few people then the benefits obtained will not be noticeable. Besides, if citizens promote the consumption in this establishments the initiative will gain more importance and the business that take part on it will have remarkable benefits and, for those restaurants that are not carrying out the initiative, this would be an incentive to join it and to take measures to fight against food loss and waste. In the results of the consumers questionnaire the percentage of people disposed to pay more or to have a less extensive menu is high, so the restaurants should take this into account and make efforts to improve their practices.

To conclude the study, the most important action to raise the awareness in this theme should be making responsible consumption campaigns from City Council and spreading information about the initiatives that are being carried out. An example to do this would be advertising it through the local media. They could also make events such as "Feeding the 5,000", from Feedback, which consists on feeding a large amount of people in a communal feast with food that would otherwise have been thrown away.

This study has limitations such as small sample size and risk of bias. Further and more extensive research would be needed.

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