

# Chapter 3

## Food Policies to Tackle Food Waste: A Classification



**Abstract** Food waste definitely represents a threat for the sustainability of our food systems. Recently governments are starting to be aware of it and are implementing promising food policies. Indeed, in this chapter we will seek to highlight the most relevant international policies put forward to curb the phenomenon and to classify them, according to the most effective food policy measures.

**Keywords** Food waste · Food waste policies · Policy measures  
Sustainable food systems

### 3.1 Policy Tools in the Food Sector to Enhance Sustainable Behaviours

In order to reduce food waste, therefore reducing its impacts and ensuring the sustainability of our resources, it is fundamental to have the commitment of Governments and Institutions that could enact food policies in order to reduce or redistribute it, along with promoting information based campaigns to make individuals more aware of the phenomenon.

According to Lorek et al. (2008) food policies aimed at preserving food system sustainability are based on three major types of measures: information-based, market-based, and regulatory. Besides these classical policy instruments, there are the so-called “nudging” tools, in which indirect suggestions can positively influence individuals to achieve a non-forced compliance (Reisch et al. 2013; Thaler and Sunstein 2008; Sunstein and Reisch 2014).

Sustainability labels, certifications and sustainable dietary guidelines represent an approach to promote sustainable consumption from an information-based point of view. Those labels raise consumer awareness about the healthiness and environmental impacts of food and enable informed decision-making (Eberle et al. 2011).

Market-based policies include subsidies for healthier food and taxation of certain type of unsustainable foods (e.g. junk food) or food components (e.g. certain fats) (Nicholls et al. 2011).

Regulatory policies include a general development of well-defined sustainability targets in the food area, such as land-usage objectives and greenhouse gas emissions (Reisch et al. 2013; EEA 2008). At consumption level we have to mention the advertising limitations for vulnerable population (especially children), and some other regulation- based policies, as the reformulation of school nutrition programs for children.

Concerning the “nudging” tools, examples include sustainable choice default environments, such as in the public canteens putting the healthiest food at consumer sight level, or presenting them in a more appealing way; and improving the availability and affordability of more sustainable meals for the low-income population (Wahlen et al. 2012; Reisch and Gwozdz 2013). These solutions are proven to be more effective than simply banning unhealthy foods from dining facilities (Downs et al. 2009; Just and Wansink, 2009; Taber et al. 2012).

Moreover, governments could and should also influence food companies and other organizations by encouraging and investing in voluntary self-commitment.

Up until now, both in Europe and United States the prevalent policy measures in the food sector are information-based and education-oriented ones that focus on raising awareness and are often accompanied by voluntary strategies (Reisch et al. 2013).

Food waste definitely represents a threat for the sustainability of our food systems. Recently, governments are starting to be aware of it and are implementing promising food policies, based on the tools we have just seen. Indeed, in this chapter we will seek to highlight the most relevant international policies put forward to curb the phenomenon and to classify them according to the food policies background.

## 3.2 Conceptual Framework

As we have just seen, according to the most relevant literature (Reisch et al. 2013; Thaler and Sunstein 2008; Sunstein and Reisch 2014; Lorek et al. 2008) the main measures adopted to enhance the sustainability of our food systems are: information-based, market-based, regulatory ones, along with the so-called “nudging” tools. That is why I decided to categorize the main food waste policies according to these measures. In addition to these, I added the so called “self-regulatory” measures, that are represented by voluntary agreements between organizations and governments in order to tackle food waste on a self-committing base.

In the introductory Sect. 3.1 defined the measures according to the literature and made some examples focusing on healthy eating and sustainable consumption in general, let us see how each of them can be declined to deal with the food waste

issue. Information-based policies are mainly represented by social campaigns promoted by the governments in order to raise citizen's awareness on the phenomenon, but they can also be addressed to different target population like companies or local communities.

Market-based instruments related to food waste specifically encompass fiscal incentives for those organizations who donate surplus food to people in need, but also the developing of monitoring programs to ensure voluntary agreements are followed (Reisch et al. 2013).

Regulatory policies include a general development of well-defined anti-food waste targets, like reducing food waste of a certain percentage by a certain year, or similarly set the rate of recycling of household food waste.

Voluntary agreements involve for instance the commitment of the food industry in signing a pact with the institutions to reduce its food waste.

To finish, among the "nudging" tools we can comprise cooking classes sponsored by the governments to instil to individuals' culinary skills in order to avoid waste and reuse them if they happen. Or also the incentive to use the doggie bag at restaurants level in order to reuse the leftover at a later time.

### 3.3 Research Methodology

In order to classify sharing models within the food industry, the first stage of our research was the selection of policies to be included in the list. The following research procedure was used:

- a search of major academic journals, EBSCO, Elsevier, Google Scholar, Scopus, Emerald databases using the following keywords: "food waste", "food waste policies", "food policies", "anti-waste policies";
- the following keywords were entered in search engines: "food waste", "food waste policies", "food policies", "anti-waste policies".

The policies were selected from the pool on the basis of two main criteria:

- extent of the relevant information;
- homogeneity throughout the sample, for example, trying to select policies that are putting forward at national level and not single community or local policies;
- policies effectively implemented and not policy drafts or proposals.

Indeed, this process led to the identification of 30 policies, which represent the sample for investigation, and which are listed in Appendix 1.

After selecting the sample, I classified them according to the policy measures previously depicted. The classification was made after a deep analysis of the selected policies. It is worth saying that some policies encompass different measures, and some are halfway between one instrument or another (like voluntary agreements and nudging). In this case we selected two measures, or we went on what for us was the most representative measure of the policy in question.

### 3.4 Results and Discussion

The years of implementation of these policies span between 1996 (with the American Good Samaritan Food Donation Act, a legislative form which encourages the donation of food to not-for-profit organizations for helping people suffering from hunger), and 2017. If we exclude the far away 1996, all the other policies refer to a earlier year, with the United Kingdom as a forerunner in the battle against food waste with the funding of Waste Resources Action Programme (WRAP) in 2005, and the Courtauld Commitment in 2005, a voluntary agreement under by Westminster, Scottish, Welsh and Northern Ireland governments in conjunction with WRAP, that target the UK grocery sector with the goal of improving resource efficiency and reducing food waste. Signatories of this agreement are the main English food distributors like Tesco and Sainsbury as well as big food companies like Unilever and Nestlé. The Courtauld Commitment has been acknowledged by the European Union as best practice to follow.

Concerning the distribution of the policies, we have to say that the majority is distributed in the regulatory measures (11), followed by the nudging tools (8), and the voluntary agreements (7). If we look inside the policies we can see that the majority of them do not consist in legal obligations. That is why we can definitely say that the most powerful rule coming from France, which as the first country in the World, in 2016, promulgated a promising law that bans big supermarkets (from 400 sq. m. upwards) from throwing away or destroying unsold food, forcing them instead to donate it to charities and food banks. Those retailers that do not respect the law can be fined up to € 75000 and incur up to two years in prison. The same law imposes on restaurants, serving between 150 and 200 meals a day, an annual maximum waste of 10 tonnes, and a more demanding recycling protocol.

It is interesting to notice that the majority of policies come from Europe, confirming that this Continent is a step forward in the fight of food waste. Indeed, different governments in Europe have fixed ‘ad hoc’ policies or programs regarding food waste. A big part of these initiatives is local and based on voluntary participation (EU Commission 2014). Overall the government agencies in Europe have created information and participation programs aiming to boost the knowledge of food waste between European citizens. In fact, the recommendations given by the European Union are not enforceable laws, but lead to voluntary national and local government programs. In particular, the ‘Waste Framework Directive’ (2008), has defined the waste hierarchy, to be taken into account from all the governments of the EU Commission: prevention; reuse; recycling, recovery, disposal. Moreover, in 2008, the EU Commission, have also established a new regulation, eliminating the aesthetic requirements for the sizes of fruits and vegetables, in order to prevent the discard of perfectly edible food. As an interesting nudging initiative, we should mention the Bruxelles Environment Agency, which in Belgium in 2009 launched anti-waste training workshops, where they offer free cooking classes with the goal of reducing food waste while cooking. Over 1000 people attended the classes, improving their culinary skill and the ability to reuse leftovers into new meals.

United States, Latin America, Australia and Asia have also carried out promising policies against the phenomenon. In the US, where food waste is very common, there are still no mandatory regulations at federal level. While some States and municipalities are actively planning some initiative to fight food waste. In particular, two federal programs targeting food waste are implemented by the USDA and EPA. Indeed, they created two programs, namely the ‘Food Waste Challenge’, and ‘Food Recovery Challenge’, with the goal to help organizations to waste less food, by giving technical assistance in managing the excess food; and the aforementioned ‘The Federal Bill Emerson Good Samaritan Food Donation Act’.

Another important project is the food waste awareness campaign, called ‘Save Food’, which works in collaboration with several regional partners, in Europe, North America, Africa, Asia, Australia and other countries, and aims to develop regional strategies adjusted to the specific need of the region, actively involved in reducing food waste. Thanks to Save Food, numerous initiatives have been developed at a worldwide level, with a strong participation in 2015, where several international conferences addressing food waste reduction were planned and executed, with the support of this network.<sup>1</sup>

### **BOX 3.1—A sketch on two interesting anti-food waste policy proposals**

It is worthy to see two interesting and brave policy proposals in order to highlight which specific problems they are targeting.

One of those is certainly the one promoted by the German Minister of Food and Agriculture in 2016 that wants to abolish the expiration date on packaging in favour of more scientific and effective alternatives.

Or again, during the huge economic downturn that affected Greece, in 2015 one of the ideas was to take unsold food from shops and restaurants, headed for the bin, and to use it to feed the growing number of Greeks going hungry as the financial crisis took hold.

### **BOX 3.2—The Food Sustainability Index**

An interesting and recent tool to assess how the single countries are dealing with food waste is the Food Sustainability Index (FSI) developed by the Economist Intelligence Unit with the BCFN Foundation. The FSI analyses the sustainability of the countries food systems taking into account three parameters: sustainable agriculture, nutritional challenges, and food losses and waste. For every pillar they also provide a specific ranking to see how the countries are performing according to the single key performance indicator. The index, now in its second edition, took into consideration 34 States, it is not done to be judgmental regarding the performances of the single countries,

<sup>1</sup>Conferences such as: ‘Food losses and waste initiatives’ in Abu Dhabi; ‘Agritech, facing challenges in postharvest losses’ in Tel Aviv; ‘Fight food waste, feed the planet’ in Milan.

but it is interesting to monitor the progress over the time and to highlight benchmarking policies and data. In particular, concerning food waste, it is interesting to notice that apart from France, that thanks to its powerful legislation jumps first in the rank, Italy upgraded its result from 9th position in 2016 to 4th position in 2017. This is due to a good law implemented in 2016 that encourages food donation and the use of the doggie bag respectively at retail and restaurant level, thanks to fiscal incentives and a bureaucratic simplification. Therefore, although the law does not have the mandatory aspect that the French one has, it is proving to be effective in the fight against waste and in particular in facilitating the redistribution of it.<sup>2</sup>

## Appendix—Main Policies Against Food Waste: The Final Classification

COUNTRY	Target population	Policy name/ Promoter	Year	Information based	Market based	Regulatory	Voluntary agreements	Nudging
EU	All	European Parliament voted to introduce farm-to-fork targets to reduce EU food waste	2017			X		
Belgium	All	Bruxelles Environment Agency began anti-waste training workshops	2009					X
Denmark	All	“Denmark without waste”	2016			X		
Finland	All	“Towards a recycling society—The national waste plan for 2016”	2016			X		
France	All	The ADEME created an information campaign in 2005 with the goal of informing citizens about food waste	2005	X				
France	Consumer	Grenelle II	2016			X		X
France	Retailers/ Food banks/ Not-for-profit	“Lutte contre le gaspillage alimentaire”	2016			X		
Germany	All	Too good for the bin	2012			X		
Greece	All	National waste prevention strategic plan	2016			X		
Ireland	All	SI 508	2009			X		
Italy	All	Law 19 August 2016, n. 166	2016		X			X

(continued)

<sup>2</sup>For more information, please check: <http://foodsustainability.eiu.com/>.

(continued)

COUNTRY	Target population	Policy name/ Promoter	Year	Information based	Market based	Regulatory	Voluntary agreements	Nudging
Malta	All	Waste Management Plan for the Maltese Islands 2014–2020	2014			X		
Norway	All	Agreement to reduce food waste	2017				X	
Netherlands	Food companies	No waste network	2013				X	
Portugal	All	Portugal creates commission to tackle food waste	2017	X				
UK	All	Courtauld commitment	2005				X	
Sweden	Distribution companies	Reducing food waste through social innovation—National strategy on food waste prevention	2016				X	
USA	All	The federal bill emerson good samaritan food donation act	1996					X
USA	All	US food waste challenge and food recovery challenge	2013				X	
USA	Food banks/ Not-for-profit consumer	U.S. 2030 food loss and waste reduction goal	2015					X
Brazil	All	Save food brazil: brazil wastes 41 tonnes of food a year	2016	X			X	
Canada	All	National food waste reduction strategy	2017		X		X	X
Australia	All	Working together to reduce food waste in Australia	2016					
China	Consumer	Clean your plate	2013	X				X
Hong kong	All	Food waste free for a better environment	2017					
Hong kong	All	Blueprint for sustainable use of resources 2013–2022	2014			X		
Israel	Food companies	Jewish state's agriculture ministry program	2017		X			
Russia	All	"Guidelines for the calculation of regulated tariffs in the treatment of municipal solid waste management	2017			X		
Singapore	Youths	Singapore's National Environment Agency (NEA)	2017					X
Latin america/ Caribbean	All	Save food	2017	X				

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