

An Assessment of Food Waste Management Campaign

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ABSTRACT

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Every year, about one-third of all the food created in the world is wasted or lost, which is bad for the environment, the economy, and society. This essay looks at real-life studies of food waste management programmes to see how well they work at lowering food waste and encouraging people to eat in a more environmentally friendly way. During the study time, different projects were carried out to make people more aware of food waste, teach people about it, and encourage people from all walks of life to work together to solve the problem. The dependent variable is the amount of food that is wasted less, and the independent variables are things like campaign tactics and interventions. Demographic factors and natural changes are examples of control variables. The paper uses an empirical review method to look at current literature and data. It brings together results from academic studies, government reports, and industry magazines. The real-world findings show that public awareness campaigns, educational programmes, and group efforts that work together can help cut down on food waste in many areas. These results show how important it is to deal with food waste in a variety of ways. They also show where more study and new ideas can be found in this area.

Keywords: campaigns to reduce food waste, general education, collaboration, and awareness.

<H1> Introduction

Food waste is a problem that needs to be fixed right away because it threatens the environment, the economy, and food security. Every year, the United Nations says that about 1.3 billion tonnes, or one-third of all the food that is made in the world, is wasted or lost (United Nations, 2024). The business and the environment both lose a lot because of this. They hurt the earth a lot because they waste water, put out greenhouse gases, and use land for too long, all of which make climate change worse. It costs a lot of money to throw away food. A lot of money is lost every year, like jobs, energy, and other resources (World Bank Group, 2020).

Because of how complicated this problem is, attempts to manage food waste have become very important. To cut down on food waste, they want to teach people, make people more aware, and do things. The goal of these efforts is to cut down on food waste in homes, stores, and along the supply chain. The end goal is to get people to eat in ways that are better for the environment and have less of an effect on it generally. There are many reasons why people want to waste less food. Their main goal is to cut down on food waste because it is good for the business and the environment. It was possible for this drop to happen because people and groups shared knowledge and tools that help them act in cleaner ways. Another important goal is to make people more aware of what happen when food is thrown away. People need to learn about the many bad things that happen when food is wasted.

People need to change how they act before they can do anything about wasting food. To protect the earth over time, people are being told to change how they store, use, as well as buy things (Guarnieri *et al.*, 2021). People should learn how to plan their meals, keep food fresh longer, and use leftovers in fresh ways. Also, people who work to deal with food waste back rules that make trash less common. They must attempt to get laws passed that support composting as well as other ways to cut down on waste. They also need to improve date labels and get more people to give food. There are different ways that programmes deal with food waste. A public awareness effort may use TV, social media, as well as neighbourhood events, among other things, to reach a large group of people. Antón-Peset *et al.* (2021) say that schools and towns have programmes that try to teach kids important things and good habits from a young age. When businesses, non-profits, and government agencies work together, they can share resources and information to make the effect bigger. Also, using new technology and ideas, like apps that help keep track of and cut down on food waste, is a big part of these efforts.

<H1> Literature review

<H2> Understanding the Scope of Food Waste

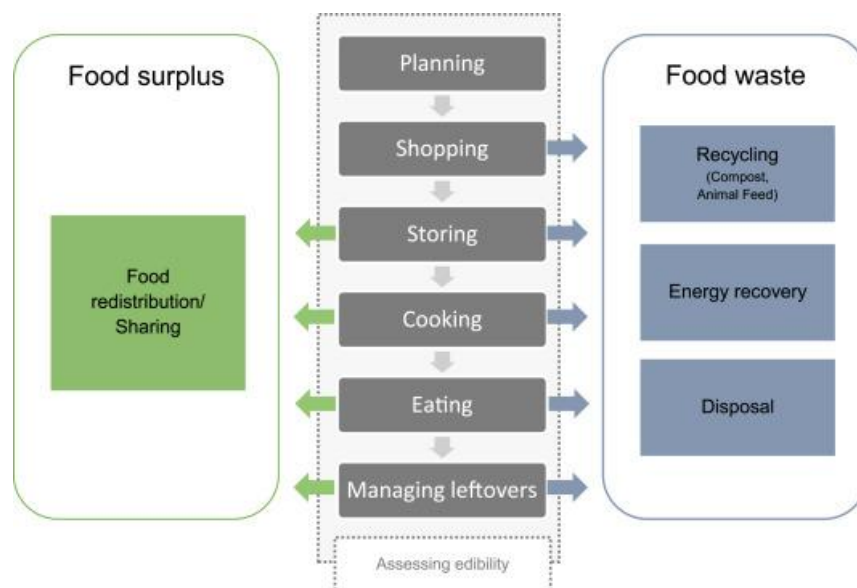


Fig 1. Food waste

Food waste includes a lot of different actions and inefficiencies all along the food supply chain, from growing the food to eating it. When the crops are being grown, things like bad weather, pests, and inefficient harvesting methods can cause them to be left unharvested or judged unfit for sale. During the processing and distribution steps, problems with logistics, ordering too much, and quality standards all add to the waste (Guarnieri *et al.*, 2021). At the customer level, a lot of food is thrown away because people buy too much, don't store it properly, or don't understand the dates on the food. Restaurants, organisations, and stores also waste food by making too much prepared food, keeping inventory that doesn't sell, and not managing portions well. To make successful interventions that target the different parts of the supply chain and consumer behaviour, it's important to know what food waste is all about. Finding the main reasons and drivers behind food waste will help partners come up with plans to fix specific areas of inefficiency and lower waste across the whole food system.

<H2> Strategies and Approaches in Food Waste Management Campaigns

Food waste management campaigns use a range of methods and strategies to deal with the complicated problem of food waste at different levels of society. Public awareness efforts teach people

about the effects of food waste and how important it is to cut down on it through a variety of media, such as social media, TV, and community events (Jenkins *et al.*, 2022). Most of the time, these ads use strong words and pictures to get people's attention and make them act. Programmes that teach people long-lasting habits and ways to eat less and throw away less food are very important (Jin and Nichols, 2020). People can find these shows at work, in towns, and in schools. They give people useful tools and tips for cutting down on waste in their daily lives. There might be classes on how to plan meals, cooking lessons, and talks on how to store food and keep it fresh. For programmes to deal with food waste to work, businesses, non-profits, government agencies, and other involved parties must work together as partners. Partners in these groups share data, tools, and contacts that make projects better and reach more people. People who have a stake in the food system need to work together to change how things are run and find new ways to deal with food waste.

<H2> Evaluating the Impact of Food Waste Management Campaigns



Fig 2. Food waste impact on people

People need to be able to see how well programmes that deal with food waste work and also think of ways to make them better. It is very important to keep track of how much food is thrown away at different points in the supply chain and while it is being eaten. People can do a comparison to find out how much trash was there before and after the project. If people are looking at effects, it is also important to see how people and groups change how they act. Surveys, talks, and observations with other people can help people figure out how much campaign actions change the things they buy, store, and use (Haynes-Maslow *et al.*, 2020). It is also helpful to keep track of what the campaign's target audience knows and can remember. This way, people can tell how well the campaign is teaching. People may ask users what they know, how they feel, and what they think about the problems that come alongside food waste before and after a campaign. There is a lot of useful information about how well the effort is working and what is needed to make it better that can be gotten from people who are already involved in it. With this information, people can make sure that the next efforts have the most impact and permanently change how people act. It is important to create a thorough evaluation framework that includes both quantitative and qualitative metrics so that people can figure out how well efforts are working to reduce food waste and keep pushing for more development.

<H1> Data and variables

<H> Study period and sample

The study period is the time frame in which data is gathered in addition to investigate the subject matter. It might be different based on the research's goals and the resources that are available. For example, this study that looks at the long-term effects of a food waste management programme might last for months or even years. The sample size and make-up are also very important things to think about. Researchers usually choose a sample of people, households, businesses, or other relevant units that is representative of the whole community they want to study.

<H2> Dependent variable

The reduction in the volume of food waste generated by participants before and after exposure to the food waste management campaign.

<H2> Independent variable

In order to see how it affects the dependent variable, experts change or control the independent variable. What makes a food waste management campaign independent is the campaign itself, which includes its messages, tactics, and actions. To see how changes in the independent variable affect the results of interest, researchers may make the campaign look different or focus on certain groups of people. Researchers can find the best ways to cut down on food waste by comparing the results of campaigns that were run under different situations.

<H2> Control variables

Control variables are things that researchers keep the same or take into account to make sure that there aren't any other possible reasons for the results they saw. If people are doing research on efforts to reduce food waste, some of the things that could be used as control variables are things like age, income, education, access to recycling centres, and changes in seasonal patterns like holiday and harvest times. By taking these factors into account, researchers can focus on the campaign's affects and lessen the impact of other factors on the desired outcomes.

<H1> Methodology and model specifications

As part of the study's method, an empirical review of current literature and data on food waste management campaigns is being carried out. This review will look at academic studies, government reports, and trade magazines to find out how well different marketing strategies and approaches work. Some of the most important things to look into are how public awareness campaigns, training programmes, and group efforts can help cut down on food waste at different points in the supply chain and during consumption. The empirical review will also look at the methods that were used in earlier studies to figure out how effective efforts were at reducing food waste (Read and Muth, 2021). This means looking at the kinds of data that were gathered, the study designs that were used, and the statistical models that were used to figure out how campaign interventions affected outcomes. The results of several studies are put together in this review to help choose the best methods and model specs for this study. This study will also find research gaps and places that need more study to help people learn more about how to reduce food waste in a useful way.

<H1> Empirical results

<H2> Impact of Public Awareness Campaigns

It's very important to run campaigns to make people more aware of how food waste hurts the earth, people's lives, and the economy. Different real-life studies have looked at how these kinds of shows could help people change the way they eat and find out how much food they throw away. Elmada et al. (2020) did a study on how well a multimedia effort to get people to waste less food at home worked. The plan used TV ads, local events, and social media posts to get people to waste less food. People learned how to do it in real life as well. There was a lot more that the people who helped us learn about how food waste hurts the earth. Because of these things, each home wasted less food. According to Jin and Nichols' (2020) study, a city-wide project to raise awareness also looked at how restaurants and other food service companies tried to waste less food. Restaurant owners and staff were sent messages that explained how reducing food waste through donation programmes, amount control, and making the most of the menu can save money and be good for the environment. Before anything can be done about food waste, people need to change the way they act. People are being told to change how they buy, use, and store things in order to protect the earth in the long term (Anón-Peset *et al.*, 2021). To keep food fresh longer and find new ways to use leftovers, people should learn how to plan their meals. Also, those who work to deal with food waste support rules that make trash less frequent. They need to work to pass rules that support composting and other ways to avoid making as much trash. Also, the date signs need to be better, and more people need to give food. Programmes deal with food waste in a number of different ways. Places that took part in the study wasted a lot less food. Many of them said they saved money and had happy customers after they took steps to reduce waste. These real-life examples show that raising knowledge about food waste does work to make people more aware of it and change how they act when it comes to it. By giving people and businesses knowledge and helpful hints, these campaigns help them take action to reduce food waste and make the food system more sustainable.



Fig 3. Food waste reduction campaign

<H2> Impact of Educational Programs

There are also educational programmes as part of food waste management campaigns that try to teach people how to waste less food in their everyday lives. Studies have looked at these kinds of projects in

places like schools, neighbourhoods, workplaces, and more to see how they work. Hubinger, (2022), did a study on how well a plan in schools taught kids and their families to waste less food. Through hands-on games, interactive lessons, and materials they could take home, students and their parents could learn about how food waste hurts people and the earth. People who took part in the study learned new things and became more aware. People who took part also wasted less food. Antón-Peset *et al.* (2021) also looked at how a training plan at work affected cutting down on food waste in the office. As part of the plan, workers who changed how they did things, like using reusable containers and learning how to control how much they ate, would get training, brochures, and prizes. There are many ways to reach a lot of people with a public awareness campaign. Some of these are TV, social media, and town events. The towns and schools have programmes that try to teach kids from a young age important things and good habits. When businesses, non-profits, and the government work together, they can share knowledge and resources to make things even better. It's also important to use new technology and ideas, like apps that help people keep track of food waste and cut it down. The plan helped workers waste much less food, and they liked how useful and effective it was, the study found. This shows that classes are a good way to help people understand food waste and change what they do when it happens. Through these shows, people can learn how to live in a way that is better for the wildlife. That way, they can pick items that are better for the earth, and everyone can help throw away less food.

<H2> Impact of Collaborative programmes

Business, non-profits, the government, and other interested groups are working together on projects to make the food system more sustainable and cut down on food waste. It has been looked at how these kinds of projects affect the company, how much food is wasted, and how resources are employed. Kennard (2020) shows that grocery shops, food banks, and local government offices all worked together on a project to reduce food waste. It was planned for grocery shops to give food banks their extra food. This will help people in the area who don't have enough food and make less trash. Scientists looked into the plan and found that shops that used it wasted a lot less food. They also saved money because they were able to keep more of their goods and bought things for less money. In the same way, Filimonau *et al.*'s (2020) study looked at what happened when city leaders, businesses, and food recovery groups worked together. People asked places that had extra food to give it to food rescue groups so that it could be given to people who need it. Productions that took part in the study wasted a lot less food, according to the people who did the learning. It was also found that giving extra food to others was good for society and the commerce.

<H1> Conclusion

Researchers can acquire a lot about how well different plans and methods work to get people to eat in ways that don't hurt the environment by looking at how they were used in the real world. Making people more aware, teaching them, and giving them group projects have all been shown to help people at all levels of society change their habits and make less trash. These real-world results can help people make the food system more stable and long-lasting for future generations. They can do this by coming up with new ways to deal with food waste.

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