

REDUCE WASTE AT HOME

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ABSTRACT

Both the beginning of life and the growth of civilization ultimately lead to an increase in the amount of garbage that is produced. It is a substance that has been discarded or left behind after it has served its primary purpose because it is thought to be worthless, flawed, or of no use. It is referred to as undesirable or useless material. The trash that is produced by animals is similar to that which is shed by plants; however, the rubbish that is produced by humans may take on an unlimited variety of shapes as a result of their day-to-day activities. The generation of human waste has increased by a factor of one thousand, which is equivalent to a 1000% increase, during the course of the last century. Because of accelerated industrialization, excessive consumerism, and increased individual purchasing power, we now find ourselves in a situation in which our land, oceans, and air are being indiscriminately terrorised by the junk that we produce. This condition has contributed to a problem that affects the environment on a worldwide scale. Humans alone are to blame for the production of rubbish composed of man-made products, which upsets the delicate ecological balance of the natural world. Because of this, we are not only required but also compelled to think of innovative solutions to the problem of how to dispose of the rubbish that we generate. Adapting Simple alterations that any of us may do in order to cut down on the quantity of garbage that is created in our home

KEYWORDS: Waste Disposal, Waste Management, waste food

INTRODUCTION

According to the findings of the Food and Agriculture Organization of the United Nations (FAO), each year approximately 1.3 billion tonnes of food, which is equivalent to more than one third of everything produced, is either lost or wasted throughout the food supply chain, beginning with primary production and continuing all the way through to final consumption. This figure represents more than one third of everything produced. This number accounts for more than a third of all that is manufactured. The Food Sustainability Index reveals that (FSI), the three components that make up a sustainable food system are a nutritional challenge, sustainable agriculture, and food loss and waste. It's interesting to note that households in industrialised countries are the ones that contribute the most to the problem of wasted food. According to the findings of Gustavsson, Cenderberg, and Sonesson, food is lost or thrown away at every stage of the food production and distribution

process. This includes the agricultural level, which serves as the beginning of the chain, as well as the consumer level, which serves as the very end of the chain. In countries with intermediate and high incomes, a substantial quantity of food is wasted because it is abandoned after being consumed, despite the fact that it may still be edible by people. This is the reason of the waste. In the meanwhile, food is lost or squandered throughout the production and processing stages of the food supply chain in countries where the average income per person is quite low. Despite the fact that it is connected to consumer behaviour, very little study has been undertaken on the topic of food waste. Despite this, the subject has been ignored, and the studies that have been carried out on the matter have not been successful in providing a clearer and more complete picture of the problem.

Human actions have an effect on the quantity of food that is wasted in a number of different ways during the process of food coming into and moving through the home. Consider, for example, the required procedures of planning, acquiring, storing, cooking, and eating food; they are all components of the whole process. The authors of the research that was conducted by Quested et al. looked at the quantity of methane gas and other greenhouse gases that were produced as a consequence of the disposal of 95% of food waste in landfills. They found that these gases contributed to climate change. As a consequence of this, reducing the amount of food that is wasted may help relieve some of the interrelated issues that are associated with sustainability, such as concerns about the safety of food, the impact of climate change, and the strain placed on natural resources. In addition, Hebrok and Boks point out that solving the issue of food waste seems to be one of the most significant difficulties connected with sustainable development. This article provides ideas on how to decrease the creation of food waste at the home level by using six different tactics. These recommendations are included in this article. These strategies include behaviour regarding the separation of food waste or the composting of food waste, eating behaviour, cooking behaviour, consumer awareness of environmental issues related to food waste, consumer knowledge of environmental issues related to food waste, and government policy regarding the management of household food waste with the aim of achieving sustainable development are some of the behaviours that need to be addressed in order to achieve sustainable development."

The only things in life that can really be called certain are passing away, change, and squandering one's life; these are the three things that come to mind first." No one can stop these things from occurring in our lives, and there is nothing anybody can do about it. Yet, if we are able to better manage our resources, we will be able to become ready. In the following paragraphs, we will talk about the management of waste as well as garbage. Every single one of us has the right to take in fresh air, consume pure water, and nourish our bodies with nutritious food. This right may be

achieved by ensuring that the conditions in the surrounding region are kept clean and healthy at all times. Therefore, let's start with the most fundamental question: what precisely constitutes garbage? If the owner of the substance, the maker of the material, or the processor of the substance no longer has a use for the substance, then the substance is deemed to be garbage. In most situations, the term "waste" refers to the leftovers of a product after it has been used for its original use. These leftovers are often disposed of in landfills. The vast majority of businesses define waste as "everything that does not provide value," and this is the definition most often used (BSR, 2010). In the viewpoint of the common man, everything that is unwanted or not beneficial might be considered garbage or trash. This definition encompasses everything. On the other hand, the most recent findings in scientific research suggest that there is no such thing as rubbish in the planet. Almost all of the components that go into making up solid trash have the potential to be useful in some capacity if the rubbish is transformed in some way or if it is approached in a way consistent with scientific principles. As a result of this, we are able to define solid waste as consisting of: "Organic or inorganic waste materials produced out of household or commercial activities, that have lost their value in the eyes of the first owner but which may be of great value to somebody else." Solid waste can be defined as "Organic or inorganic waste materials produced out of household or commercial activities." "Organic or inorganic waste materials created out of domestic or business activity" is one definition of what is known as "solid waste." (Robinson, W.D.1986). There is no way around the fact that human occupancy results in the generation of trash; this is the case regardless of the size of the community. From the dawn of civilization, people have gradually moved more and further away from the natural world. Recently, there has been a substantial change in the way that contemporary human society lives its life.

The garbage produced by a community may serve as a direct indicator of the changes that have taken place inside it, both in terms of the types of waste it produces and the amount of trash it generates. We are able to get rid of the rubbish, we are able to repurpose the waste, and we are able to generate money off of it all thanks to responsible management. Indian towns that are swiftly competing with economies around the globe in their desire for rapid economic expansion have, up until this point, been unable to adequately manage the large quantity of rubbish that is created. This is a problem since Indian cities produce a lot of trash. In India, there are more than 593 districts and more than 5,000 individual towns spread out over the country. The findings of the Census that was conducted out in the year 2001 reveal that around 27.8 percent of India's total population of over one billion people resides in urban regions. It is anticipated that 33.4% of the total population will be residing in urban areas by the year 2026. This figure was derived using current demographic projections. Both the rise in the country's gross domestic product as well as the rise in the number of people living in India's towns and cities are variables that are contributing to the rise in the amount of garbage that is being produced in the country. Since 1947, the quantity of solid garbage

that is created annually in Indian cities has climbed from six million tonnes to 48 million tonnes, showing an annual growth rate of 4.25 percent. This represents a significant increase from the initial amount of rubbish that was generated in 1947. It is estimated that this quantity would increase to 300 million tonnes by the year 2047. (CPCB, 1998). The rapid increase in the country's population, combined with people's generally higher standards of living, has led to an increase in the amount of solid trash that is produced in both urban and rural areas of the country. This increase has led to an increase in the amount of trash that is collected in landfills. There is a definite gap in India, just as there is in other nations and industries, between the sorts of rubbish that is created in urban and rural areas. This is the case in India as well.

However, the divide between urban and rural areas is starting to narrow as a result of a number of factors. These include the urbanisation of formerly rural areas at an ever-increasing rate, the rapid propagation of the "use and throw mentality," and the equally rapid communication between urban and rural areas. The overwhelming bulk of the solid waste that was produced is created in rural areas is of a biodegradable kind, but the rubbish that is produced in urban areas is made up of a higher number of components that are not biodegradable, such as plastics and packaging. Despite this, both of these businesses have an abysmal mindset when it comes to the treatment of solid trash and it's something that has to change. The custom that is followed the majority of the time is "keeping waste out of sight," which is a way that has been generally embraced. In metropolitan areas of India, it is the duty of the local authorities to oversee the administration of activities that are related to public health. Municipal corporations or city councils are common names for these urban-based local governing organisations. On the other hand, management of solid waste is starting to receive the attention that it deserves as a consequence of increasing public and government awareness of the problem, as well as the new possibilities made available as a result of increased economic activity. This is a positive development. Throughout the most recent few decades, there has been a considerable rise in the number of distinct projects that have been launched independently by various levels of people from all walks of life, including the government, non-governmental organisations (NGOs), private businesses, and members of the general public. In spite of this, land filling is the method that is most often used for the management of solid waste not only in the United States but also in a significant number of other nations, including India, all over the globe. This is the case both in the United States of America as well as in India. It is common knowledge that the present waste management rules, in the form they are now implemented, cannot be maintained over the course of a very long time.

As a direct consequence of this, waste management is undergoing significant transformations in order to give more options that are friendlier to the environment. We are investigating these possibilities in the hope that we will be able to give the waste management industry a solution that

is both economically doable and socially acceptable to a greater degree than the one that is now on the table. This article offers a concise summary of the several recent advancements that have been made in the subject of waste management. It places an emphasis on modern practises that are linked to the various waste management procedures that India has put into place. In addition to that, it discusses a variety of initiatives that were started in the United States by commercial organisations, state governments, and the federal government. The goals of this research are to get an awareness of the many initiatives that are currently being carried out in both countries and to identify areas in which there is space for development in the management of waste.

OBJECTIVES:

- To study Waste reduction at home
- To study Food waste reduction strategies

FOOD WASTE

Food that was produced with the intention of being consumed by humans but is then discarded or left uneaten by those humans after it has been cooked is an example of food waste. This included food that had already gone bad prior to being thrown away as well as food that was still edible after having been thrown away. In addition, food waste can include a portion of edible food as well as non-edible food components that have been removed from the food supply chain for the purpose of being recovered, disposed of, composted, crops tilled and harvested, anaerobic digestion, bioenergy production, cogeneration, incineration, disposal to sewage, landfill, or ocean recovered, disposed of, composted, crops tilled and harvested; All of these scenarios are examples of possible consequences that may occur as a result of the removal of food waste from the food supply chain. On the other side, research conducted by the Environmental Protection Agency of the United States reveals that (USEPA), the term "food waste" refers to uneaten food as well as wastes from the production of food that come from residential, commercial, and institutional settings. This waste can be a problem because it contributes to climate change.

Food scraps coming from households, grocery shops, restaurants, bars, industrial lunchrooms, and business cafeterias are all included in this category as a direct result of this fact. On the other hand, preconsumer food waste, which is produced during the manufacture and packing of food, is not included [20]. [Preconsumer food waste] refers to trash that is made before the food reaches the consumer. [More citation is required] Food waste, on the other hand, can be distinguished from food losses due to the fact that food losses are described as an edible food mass throughout a portion of the supply chain that specifically leads to edible food for human consumption. Food

waste, on the other hand, can be distinguished due to the fact that food losses are described as an edible food mass throughout a portion of the supply chain that specifically leads to Food waste, on the other hand, can be distinguished from food losses due to the fact that it is possible to distinguish between food waste and food losses. On the other side, the term "food waste" refers to the act of discarding food that is still edible. Both food waste and food losses pertain to food items that were intended for human consumption, and both categories of waste include preventable and unavoidable waste that is also connected to behaviour. Food waste and food losses refer to food products that were intended for human use. Losses of food could include food that was not preserved in the appropriate manner. According to the conclusions of the study that was carried out by Thyberg and Tonjes, food waste is not the result of a single activity; rather, it is characterised as the result of combinations of a number of various acts.

Reasons of a cultural, political, economic, geographical, and socio-demographic nature, among others, may be at play here. accountable for the behaviours are discussed; however, the preferences, beliefs, and attitudes of individuals may also have a part in the behaviours. The results of a research that was carried out by Porpino, Parente, and Wansink indicate that the key reasons why food is wasted in homes are inefficient food conservation while it is being stored leftovers after a meal, overeating, excessive preparation, and unnecessary purchases while stocking up and shopping. Picture 1 illustrates these points of consideration well. The phrases "donations from home-grown food," "retail," and "takeout" are all examples of the many sorts of food waste that may occur in private residences. Other examples include "retail" and "takeout." The sources of food and beverages that are consumed inside the confines of a private dwelling are referred to as "home food waste," and the phrase "home food waste" was used to describe this kind of waste. According to Graham-Rowe, the consumer is the source of the largest share of the wasted food that happens in countries that have high levels of income. Losses in the early stages of the food chain are more widespread in countries where the average income per person is lower. This occurs as a result of the absence of expert support in the management of crops, a lack of structure for the storage of products, and insufficient infrastructure for the delivery of goods are all issues that need to be addressed.

IMPACT OF CLIMATE

Change Methane (CH₄), the hydrocarbon gas that is found in the atmosphere that is both the most abundant and the most stable, plays an important role in the photochemistry of the background troposphere. Methane is the hydrocarbon gas that is found in the atmosphere that is both the most stable and the most abundant. Methane is the hydrocarbon gas found in the atmosphere that is both the most abundant and the most stable. According to Graham-Rowe significant shifts have occurred in the management of household garbage as a consequence of developments in techniques

and technology for the management of household waste, as well as an increased consciousness on the effects of climate change and the release of carbon. These new innovations are responsible for the alterations that have taken place. The shifts that have occurred may be attributed to the interaction of a number of different factors. The United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as a change in the status of the climate that is greater than the natural climate variability that is observed over a comparable period of time. This definition was derived from the work of the United Nations Intergovernmental Panel on Climate Change (IPCC). This variance is attributed to a change in the composition of the global atmosphere that is either directly or indirectly induced by human activity. This change may be traced back to industrialization and other human activities. In other words, climate change is a change in the status of the climate that is greater than the natural climate variability that is observed over a comparable period of time. According to the findings of research that was carried out by Karim Ghani and other individuals, food scraps are thrown away in landfills. There, they experience anaerobic degradation and, as a consequence, release methane, which is a potent greenhouse gas. When food waste is buried in landfills, it may produce methane gas, which contributes 21 times more to the acceleration of global warming than carbon dioxide does. In addition, the contribution of the waste management sector to the anthropogenic emission of methane is one of the components of the effects of municipal solid waste management that is considered to be one of the most important parts of the impacts. Methane is a powerful greenhouse gas (GHG) that contributes to global warming in a manner that is around 25 times more pronounced than that of carbon dioxide. This impact is brought on by the anaerobic breakdown of the organic component of trash that occurs in landfills and other disposal sites.

STRATEGIES TO REDUCE FOOD WASTE

The most efficient strategy to get rid of unwanted food at home while also helping the environment is to reduce the amount of food that is thrown out in households. This will also help reduce the amount of greenhouse gas emissions. This is due to the fact that lowering the quantity of food that is thrown out in private residences has a beneficial effect on the natural world. To begin things rolling, one of the things that can be done that is one of the things that can be done that is one of the most vital things that can be done for the environment is to reduce down on the amount of food that is wasted. This is one of the things that can be done. According to the findings that Qusted and colleagues came up with, cutting down on the amount of food that is wasted can simultaneously cut down on the amount of energy, water, and other resources that are required to cultivate, harvest, transport, process, and sell the food, as well as the emissions that are associated with storing food and preparing meals in the home. This is according to the findings that Qusted and colleagues came up with.

CONCLUSION

The mitigation of interconnected sustainability concerns, such as the reduction of food waste and the improvement of food safety, climate change, and the alleviation of pressure on natural resources, may be assisted by limiting food waste. For example, the reduction of food waste and the improvement of food safety; the climate change; and the alleviation of pressure on natural resources. Consider, for instance, the mitigation of climate change, the enhancement of food safety, the decrease of wasteful food consumption, and the release of strain on the world's natural resources. There are many different approaches that may be taken in order to reduce the quantity of food that is wasted in families, and any policy measures that are implemented in order to address this problem need to be tailored in some kind. For instance, any policy measures that are taken to address this issue ought to require participation from each particular circumstance, integrate the requirements of the community, and involve values, skills, and logistics. [Citation needed] [Citation needed] [Citation needed] [Citation needed] [Citation needed] There are a variety of approaches one may take in order to reduce the quantity of discarded food in residential kitchens. As a result of this, the author of this study gets to the conclusion that ideas need to be made about how to minimise the quantity of food that is thrown out in households by using a total of six different approaches in order to achieve this goal. These strategies include the behaviour of composting or separating food waste, eating habits, cooking habits, environmental knowledge of food waste among consumers, environmental awareness among consumers, and government policy on the management of household food waste in the direction of sustainable development. Ultimately, the goal of these strategies is to reduce the amount of food that is thrown away.

REFERENCES

1. Aleluia J and Ferrão, P 2016 Characterization of urban waste management practices in developing Asian countries : A new analytical framework based on waste characteristics and urban dimension *Waste Management* 58 pp 415–429
2. Ali N and Abdullah M 2012 The food consumption and eating behavior of Malaysian urbanites issues and concerns *Malaysian J. of Society and Space* 3(1) pp 44–53
3. Evans D 2012 Beyond the Throwaway Society: Ordinary Domestic Practice and a Sociological Approach to Household Food Waste *Sociology* 46(1) pp 41–56

4. Garcia-Garcia G, Woolley E, Rahimifard S, Colwill J, White R, and Needham L 2017 A Methodology for Sustainable Management of Food Waste Waste and Biomass Valorization 8(6) pp 2209–2227
5. Graham-Rowe E 2014 No Time to Waste: Applying Social Psychological Methods and Theories to Household Food Waste Reduction Thesis for Doctor of Philosophy University of Sussex
6. Gustavsson J, Cenderberg C and Sonesson U 2011 Global Food Losses and Food Waste: Extent, Causes and Prevention (Rome Italy: Food and Agriculture Organization of the United Nations)
7. Hebrok M and Boks C 2017 Household food waste: Drivers and potential intervention points for design – An extensive review J. of Cleaner Production 151 pp 380–392
8. Jörissen J, Priefer C, and Bräutigam K R 2015 Food waste generation at household level: Results of a survey among employees of two European research centers in Italy and Germany. Sustainability 7(3) pp 2695–2715
9. Karim Ghani W. A, Rusli I F, Biak D R A, and Idris A 2013 An application of the theory of planned behavior to study the influencing factors of participation in source separation of food waste. Waste Management 33(5) pp 1276–1281
10. Landon M 2006 Environment, Health and Sustainable Development (New York: Open University Press McGraw-Hill) p 7
11. LESTARI 2012 Sustainable Development, Sustainability and Indicators: Models and Measures M Mokhtar (Bangi Malaysia: Institut Alam Sekitar dan Pembangunan (LESTARI)) p 15
12. Mat Saad N F, Nadrah Ma'min N, Md Zain S, Ahmad Basri N E, and Md Zaini N S 2013 Composting of mixed yard and food wastes with effective microbes J. Teknologi (Sciences and Engineering) 65(2) pp 89–95