

FOOD WASTE MANAGEMENT A ROADMAP TO REDUCE FOOD POVERTY AND FOOD LOST WITH RISE IN CLIMATE CHANGE AND POVERTY

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ABSTRACT

Food squander has emerged as a major problem across the globe which has equally contributed to the greenhouse gases , it is evaluated that food squander produce the maximum amount of greenhouses gases . Food squander would include food loss and food thrown which means the food is wasted at two levels, during the process of production and transportation and second the food that we waste about cooking or keeping it form prolonged period at our homes . Food squander needs to be reduced , as millions of people don't have access to food and majority of the people today are dying due to hunger or climate change issue , we produce more than the requirement , purchase more and eat less , in fact in America 40% of the food produced in not eaten , in India every household waste 50 Kg of food annually . We need to end the problem of food squander , the food squander can be used for a number of productive purpose even like as manure for plants , for the production of natural fabrics in the textile industry and food squander can also be used for the production of petrol and diesel which can also reduce our dependency on natural resources and reduce climate change .

Keywords: Food waste, greenhouses gases, climate change , hunger , food loss , food thrown , natural fabrics

INTRODUCTION

Every year tons of food is produced , out of which half of them gets wasted . Food is wasted at very phase from production to consumption , transportation to distribution. Food is the most important product for our survival , millions of people die across the world due to hunger .

America waste around 40% of the food , in the world 1/3 of the food is wasted in some or the other form. This food squander is responsible for the production of maximum amount of greenhouse gas . Food squander does not only involve wastage of food , but also energy and water , where food wastage equally has an impact on water wastage , the crop , fertilizers , soil all are used in the production of food , in fact huge amount of energy is required to save food for so many days in the cold storage . Well , the amount of food squander differs from country to country , everything depends upon the eating habits of a community followed by how countries have adopted different measures to control food squander . Food squander not only has an impact on the environment but also on the economy of a country . In America 350 pounds of food is wastage every day ,in India 50 Kg of food is wasted per year by every household , the problem is not just in the production system , the problem is also with the human nature , people purchase more than the required item for their homes , they are kept in the fridge for days and people don't eat , thus the food becomes rotten and we cant consume it anymore , this is a case in America , the second reason behind the size of the plate , humans keep on adding the food to their plates until it is filled and ultimately half of the food is wastage due to their inability to consumer . Majority of the food is wastage in the cafes , hotels and restaurants .People live half of the food on the plate which is thrown into the dustbin , whereas the extra food cooked is also most of them thrown into the bins , it is now that some of the countries have started disturbing those left over food among the poor people , in many countries we have machines and fridge at the road side , so that people can keep the extra food , so that the hunger and poor people can avail it , the super markets also waste a lot of vegetables and fruits after the day end , however in France the super markets can no long thrown them instead there are given to the needy , Food squander is a major problem in the world , where in much developed countries food is highly wasted and in developing countries half of the population waste food and more than half of the population don't have access to food .

RESEARCH METHODOLOGY

For the purpose of this exploration , I have used a amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellants in a methodical and convenient way . Question were asked to the common youth , public policy Analyst , urban people ,farmers , interviews – consisting of several interrogation which were dispersed among representative of each contender group .

OBJECTIVE OF THE RESEARCH PAPER

The main areas of exploration in this paper incorporates

- 1.Food squander and the reason behind the rise in food squander .
- 2.How food squander contributes to climate change , its impact on the economy .
3. What can be done to reduce food squander in the world.
4. An analysis on food squander in different countries and issue of hunger in the world .

LITERATURE REVIEW

High production of food: In developed nations the rate of production of food is higher due to technological innovation in agricultural sector in compared to the rate of consumption due to lower population resulting in the wastage of ample quantities of food after crossing the expiry date. Consumer behaviour: People has wide range of taste of foods that differs in larger extent. Hence, the restaurants and food stores have to maintain abundant quantities of different types of foods in stock which ultimately increases the quantity of food waste. Lack of appropriate planning: It is one of the top contributor to food squander as normal people do not have planning while purchasing food from the market. Now a days, due to globalization the barrier between the developed and developing nations became thinning. The technological advancement in agricultural sector in Central, South and Southeast Asian countries leads to the increase in production of food grains and broadening of food options causing the increase in the wastage of food at consumer level.

The increasing amount of food squander is one of the important concern of today's world as it is one of the major constraint of sustainable development. It can bring adverse effect to the environment as well as economy of a nation. Global warming and climate change: Random dumping of food squander causes the production of one of the major air pollutant like methane by fermentation which mixed with other toxicants like carbon di-oxide, chlorofluorocarbon, carbon monoxide etc. to intensify the greenhouse effect resulting in increase in temperature of air leading to global warming and climate change. Wastage of world's fertile land: According to research, the produced but unconsumed food crops occupy approximately one third of world's cultivable and fertile land which can be used for agriculture or other meaningful purpose. Wastage of water: Water is one of the essential component of agricultural process. Hence, the wastage of food also causes wastage of water. Precise estimation indicates that food wastage is responsible for the wastage of approximately 250 cubic kilolitres of water. Loss of biodiversity: Wastage of a significant portion of food causes shortage of food. Therefore, more agricultural land is required in order to meet the demand of food which causes massive forest land acquisition leading to the loss of biodiversity. Reduction of farmer's income- The wastage of foods after cultivation causes the loss of income of the farmers directly involved with agricultural process. Low economic growth:-The wastage of food products results in the loss of agriculture and allied sector and also the food processing industries which ultimately leading to the lowering of Gross Domestic Product of the country and also overall economic growth.

FINDINGS

8.8 Lakh people under the age group of 0-5 died in 2018 , out of which 69% death where due to malnutrition . 67 Million boatload of food is wasted annually which is equal to 92, 000 crore ,this amount can serve food to small state or even feed Bihar a whole year. 21 million metric horde of wheat is decomposed every year in India .73% of solid waste out of which only 3% is plastic and rest are diary, fruits, and vegetable waste in Maharashtra contributing to 9400 metric horde. New Delhi produces 9000 metric horde of solid waste per day East Delhi produces the gigantic landfills. Wastage of food not only has a negative impact on the environment but also effects the economy of India. Apart from that due to lack of cold storage in India huge

amount of food is wasted , every 5th child is suffering from malnutrition , there is lack of nutrition literacy in India , people don't have knowledge what kind of food are necessary for the human development , Food security can be delineated as access to basic food products both physically and economically. Absences of cold storage infrastructure in may parts of India , 60 % of the food turns rotten . Andhra Pradesh has 12 cold storage on the highway to avoid food wastage , apart from the Many states have started Community supported agriculture ,where a direct contact is created between the farmers and the consumers , where the consumer decides what crops he/she wants from which farmers , in this way the production is done as per the requirements and the consumer directly pays to the farmers . Smart farming and vertical farming are two ways by which we can reduce food wastage , many countries are practising it . India adopted vertical farming in 2019 , the demand for indoor farming has doubled with the rise in COVID-19 and where there is a global food security issue . In India thousand of people die everyday due to shortage of food and most the children are malnourished . India is a country where people hardly get access to a single meal per day , people are found begging on the road for food . In India marriages are one of such places where food is wastage in humongous amount .

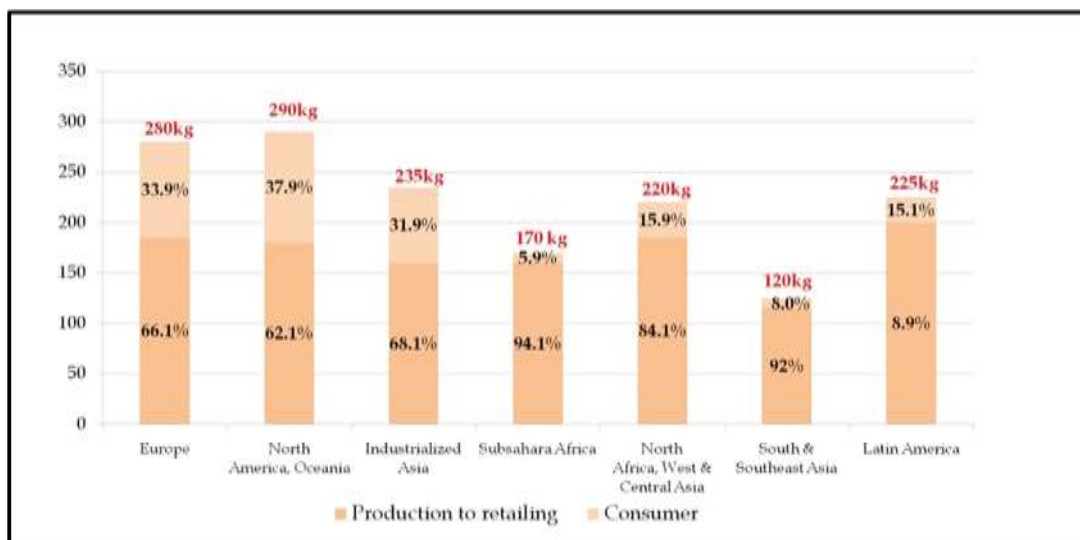
THE CYCLE OF HUNGER

There are many ways hunger can trap people in a cycle of poverty and need. Here is how it can burden someone for a lifetime, and pass it on to the next generation.

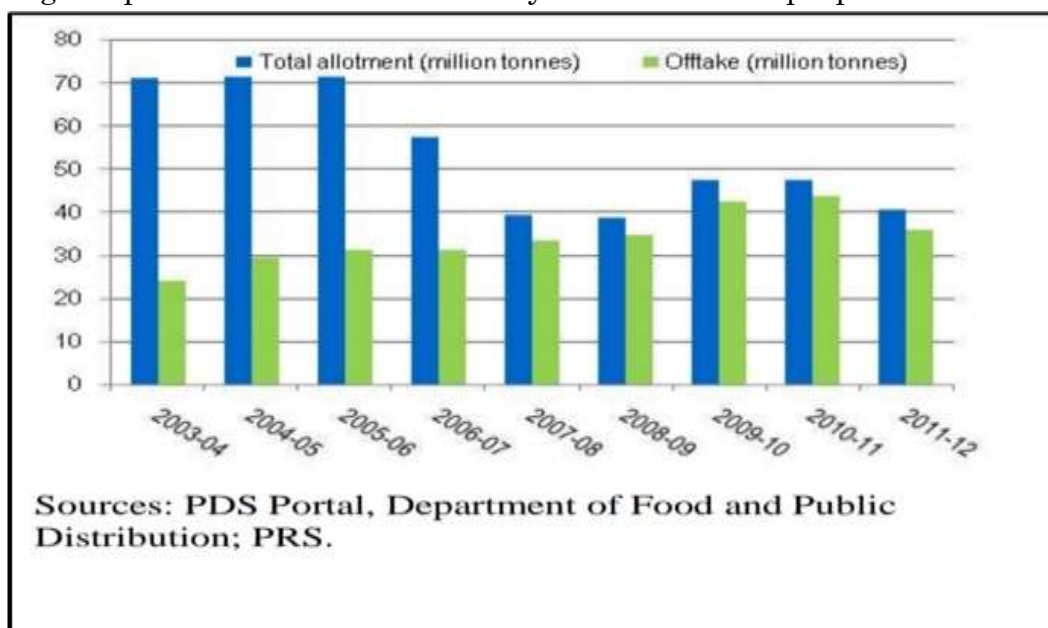


In America 40 % of the food that is produced is never eaten , that is 356 million pounds each day , one in eight American don't have a supply of food . It is a major contributor of climate , it is not only energy and water that is required for the production of food , but a number of resources are reduced for the production of food like human labour , oil . When the food decompose it produces a stinky smell and huge amount of green house gases like methane , we are growing food which no one eats . For instance in America , a family would spent about 1500 dollars on food that they will never eat . The scenario of food wastage is different in developing and developed nations due to their different economic and social environment. In developing nations where a significant proportion of population are still suffering from starvation and

under nutrition, a massive amount of food grains have been lost at the post-harvest and processing stage due to poor infrastructure in food storage facility and imperfect distribution of food, the highest percentage of food loss in post-harvest, processing, packaging and distribution phase in Sub-Saharan Africa, South and Southeast Asia. North Africa, West Asia, Central Asia.



Factors behind the wastage of food are Poor storage infrastructure - In developing nations, the number of technologically equipped warehouses are not enough to store the number of food crops produced resulted in putrefaction of large proportion of food grains after harvesting. Poor distribution of food crops - The Public Distribution System in developing nations are not effective enough to provide the food successfully to all section of people.



The proportion of rice and wheat allocated and distributed in India from 2003-04 to 2011-12, reflects that though the distribution has been increasing, improvement is essential in order to

distribute all the food grains allocated for reducing the quantity of undistributed food grains causing the generation of food waste.

The aperture between the wealthy and the poor, the social standards and caste system in India has resulted in the death of many people due to hunger, where some of the shops or people have refused to provide food to the Dalit.

We need a solution to food wastage which not only has a negative impact on the environment but also effects the other resources, ultimately the poor and the vulnerable are the sufferers of the whole process who at the end don't get access to food, water and price for their labour as it is wastage in other forms. Denmark, France, Japan, South Korea have completely banned wastage of food and have adopted new technologies and produce in new policies to save food and save food wastage in all ways.



SUGGESTIONS

Food squander is the most crucial problem of today, where millions of people across the globe don't have access to 3 meals a day, in which every household waste humongous amount of food each year, though it differs country wise, it is necessary for us to reduce our food squander which is not a difficult work, if done in a proper manner as it contributes maximum to the greenhouse gas emission causing climate change. For instance, the tea leaves, which is thrown after the preparation of the tea, can use be used as manure for plants growth, the sugarcane after it is used, we can use the left for the production of natural fabrics, the cover of orange can be used as a natural skin care product and it is also used for the manufacture of many skin care products. Banana stem is used for the production of natural fabrics for the

manufacture of paper , tissue papers and clothes , we need to also reduce our food squander , by producing as per the requirement, vertical farming has been one such way by which we can provide food to all and reduce its wastage which comes during the process of production , transportation and distribution , the use of high technology , Artificial intelligences for minimising food squander and keeping the food healthy and toxic free for a longer period , we can introduce food banks to reduce food squander , in fact on the street we can open stores which would collect the left over food from homes and the extra food that is left at the hotels and cafes which can be given to the needy people and with people receiving an amount for giving their extra food at the stores . Food squander can also be used in the production of petrol and diesel , food squander can product ethanol which will be used for the petrol and diesel production which will reduce our dependent on natural resources for the production of petrol and diesel , thus reducing climate change and lastly food squander product can also be used for decoration or as part of utensils like coconut shell and also for serving juices which is being practised in South India in the state of Karnataka and Kerala .

CONCLUSION

We need to reduce food squander in order to serve the growing population , right to food is a basic human right ,which everyone should have access without any discrimination , we need to bring in technology in the food sector system which will minimize the food squander from the time of cultivation to the distribution of food to the respective locations , food squander results in lost of labour , water , oil , energy and soil . Today million of people die each other due to hunger , climate change which is the main by product of food squander has also contributed to the death of millions of people , we need to utilise the food squander in a productive manner to reduce the emission of gases like methane and instead of throwing away the extra food or the vegetables and fruits from the supermarket which have remained unsold , its better to distribute it among the poor and hunger people , as two of our SDGs is the end poverty and zero hunger which can be achieved when no person is left hunger .

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