

# **WASTE TO WEALTH**

SYNOPSIS

BACHELOR OF TECHNOLOGY  
COMPUTER SCIENCE AND  
ENGINEERING

SUBMITTED BY

VINAY KUMAR YADA  
HIMANSHU  
VISHESH AGRAWAL



**KIET Group of Institutions, Delhi-  
NCR, Ghaziabad**

**Department of Computer Science and Engineering**

1. Name of Student: VINAY KUMARYADAV
2. University Roll No: 2000290100187
3. Class Roll No: 51
4. Branch: COMPUTER SCIENCE AND ENGINEERING
5. Batch: 2024
6. Proposed Topic: WASTE TO WEALTH
7. Submitted by: VINAY KUMARYADAV

8. Name of Student: HIMANSHU
9. University Roll No: 2100290109005
10. Class Roll No: 66
11. Branch: COMPUTER SCIENCE AND ENGINEERING
12. Batch: 2024
13. Proposed Topic: WASTE TO WEALTH
14. Submitted by: HIMANSHU

15. Name of Student: VISHESH AGRAWAL
16. University Roll No: 2000290130195
17. Class Roll No: 64
18. Branch: COMPUTER SCIENCE AND ENGINEERING
19. Batch: 2024
20. Proposed Topic: WASTE TO WEALTH
21. Submitted by: VISHESH AGRAWAL

<b>CONTENT</b>	<b>PAGENO.</b>
<b>Introduction</b>	4
<b>RationaleandObjectives:</b>	6
<b>FeasibilityStudy:</b>	7
<b>Methodology/Planningofwork</b>	8
<b>Facilitiesrequiredforproposedwork</b>	10
<b>Expectedoutcomes:</b>	12
<b>Reference</b>	13

# **“An Android/Web based Food Waste Connecting System: Waste to Wealth”**

## **Introduction**

### **Importance of food:-**

Food is one of the basic necessities of life. Food contains nutrients—substances essential for the growth, repair, and maintenance of body tissues and for the regulation of vital processes.

A food is something that provides nutrients. Nutrients are substances that provide:

- Energy for activity, growth, and all functions of the body such as breathing, digesting food, and keeping warm;
- Materials for the growth and repair of the body, and for keeping the immune system healthy.

### **Hunger Rate:**

After steadily declining for a decade, world hunger is on the rise, affecting nearly 10% of people globally. From 2019 to 2022, the number of undernourished people grew by as many as 150 million, a crisis driven largely by conflict, climate change, and the COVID-19 pandemic.

### **In India:**

India ranked 107 out of 121 countries in the Global Hunger Index 2022 with its child wasting rate at 19.3 per cent, being the highest in the world. The Global Hunger Index (GHI) is a tool for comprehensively measuring and tracking hunger at global, regional, and national levels.

With a score of 29.1, the level of hunger in India has been labeled "serious".

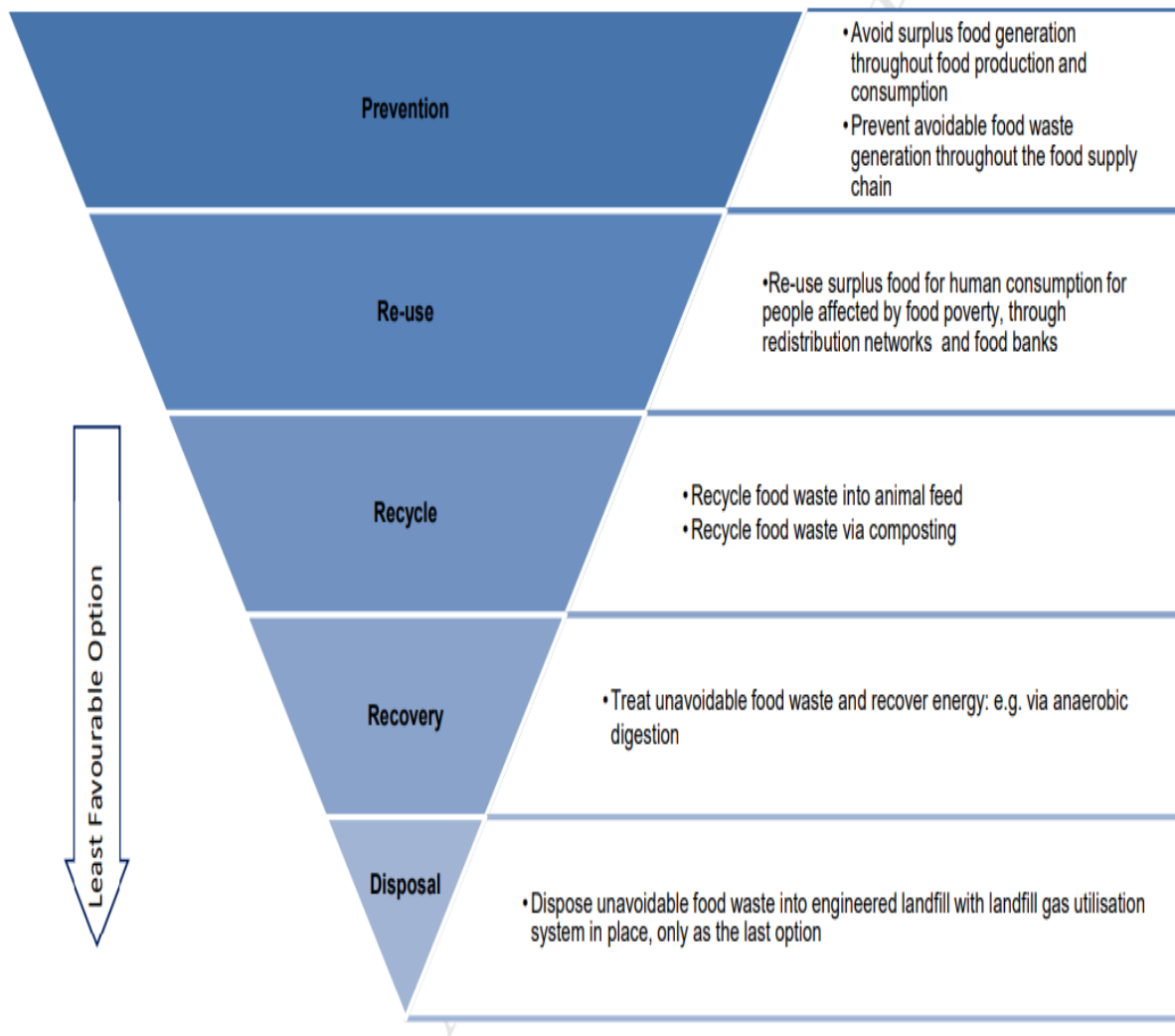
### **Global hunger crisis**

- 14M. Children Suffer from Severe Acute Malnutrition.
- 45% Of Child Deaths Worldwide Are Due to Hunger & Related Causes.
- 700. Children Die Each Day from Illnesses Caused by Dirty Water and Unhygienic Living Conditions.
- The number of hungry people around the world has shot up from 282 million to around 345 million since the beginning of 2022, and by mid-year, WFP had reached just over 111 million in need, aiming to reach a record 153 million by year's end.

## **The food waste hierarchy as a framework for managing food surpluses and waste**

This research argues that we need to implement a food waste hierarchy approach to preventing and managing food surplus and waste. It argues that a distinction between food surplus and waste is crucial as is the distinction between avoidable and unavoidable waste. Its main message is that food waste can be prevented by adopting a sustainable production and consumption approach and by tackling food surplus and waste throughout the global food supply chain.

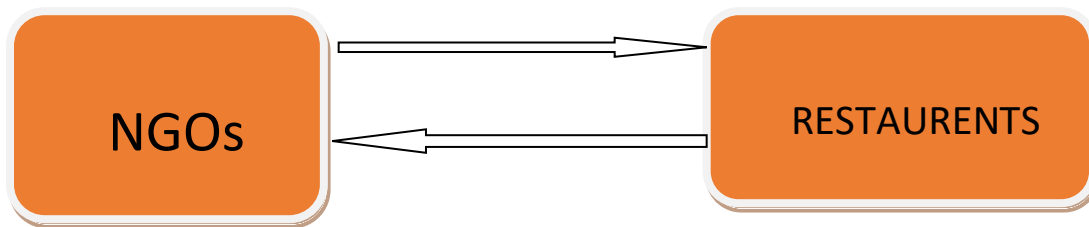
We present here a systematic literature review to assess the effectiveness of the waste hierarchy applied to food, in achieving more efficient use of natural resources and reducing environmental impacts occurring from food waste. This includes the identification of barriers to comply with waste hierarchies.



## **Rationale and Objectives**

1. Minimize the Production of food Waste. Proper management of wasted food.
2. Reduce Pollution Effects. Secondly, it's vital to lower the impact garbage has on pollution. ...
3. Ensure Sustainability.

In this system, we have tried to reduce restaurant food wastage by giving waste food to NGOs. NGOs will raise a request, in case of any leftover food restaurants have. This request is sent to the restaurant manager of that particular restaurant. The NGO Manager then approves the request and assigns it to one of the NGO employees for takeaway and forwards the request to the restaurant. The leftover food at the restaurant can be given to NGOs at the end of the day. The admin can track the history of restaurants and NGOs for the leftover foods.



## **Advantages**

- Benefits will be both the restaurant (reducing food wastage), and the needy
- Keep track of wastage food for restaurant
- User can play role in saving food wastage and help the needy
- Enjoy that feeling of being a “good samaritan”
- Become Socially Responsible
- Feed people to feed the economy
- Reduce your environmental impact

## Reducing wasted food does great things for the environment:

- **Saves Resources** – When food is wasted, it also wastes the resources – such as the land, water, energy, and labor – that go into growing, storing, processing, distributing, and preparing that food. Each year, food loss and waste take up an area of agricultural land the size of California and New York combined. This is enough energy to power 50 million U.S. homes for a year, and emissions (excluding landfill emissions) equal to the annual carbon dioxide (CO<sub>2</sub>) emissions of 42 coal-fired power plants.<sup>5</sup>
- **Reduces Greenhouse Gas Emissions** – More than 85 percent of greenhouse gas emissions from land filled food waste results from activities prior to disposal, including production, transport, processing, and distribution. To reduce these emissions, we need to prevent food from being wasted in the first place.
- **Reduces Methane from Landfills** – When food goes to the landfill, the nutrients in the food never return to the soil. The wasted food rots and produces methane, a greenhouse gas 25 times as potent as CO<sub>2</sub> at trapping heat in the atmosphere.
- **Returns Nutrients to the Soil** – Even when all actions have been taken to use your wasted food, certain inedible parts will still remain and can be turned into compost to feed and nourish the soil. Composting these wastes creates a product that can be used to help improve soils, grow the next generation of crops, and improve water quality.
- **Feed People, Not Landfills** – Instead of feeding landfills, we should be feeding people in our communities. You can donate a variety of foods to many different types of organizations. Contact Feeding America or your local food rescue organizations for information about where you can donate and what types of food your local organization is able to accept.
- **Feed Children** – The U.S. Department of Agriculture estimates that five million children lived in food-insecure households in 2021.<sup>6</sup> By redirecting food that would otherwise be wasted to homes and schools, we can help feed our country's children.
- **Build Cleaner Communities** – Reducing waste and improving waste management can help create cleaner communities. Equitable access to food and organics waste collection can improve soil health, generate renewable energy, and keep economic and job benefits of organics recycling in those communities.
- **Create Job Opportunities** – Recovering and recycling wasted food through donation, salvaging, processing, industrial reuse, and composting strengthens infrastructure and creates jobs. Food recycling in these sectors employs more than 36,000 people, supporting local economies and promoting innovation.<sup>7</sup>
- **Feed the World** – According to the Food and Agriculture Organization of the United Nations, from between 702 and 828 million people were affected by hunger in 2021.<sup>8</sup> They predict that by eliminating food loss and wasted food we would have enough food to feed all the chronically undernourished. They also expect that we wouldn't have to increase food production or put additional pressure on our natural resources to do so.<sup>9</sup>