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Dissertation Proposal

Current trends in green technology and the Sustainable future.

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Topic: Current trends in green technology and the Sustainable future

Introduction

Environmental issues on a global scale have created an urgent need for businesses to alter their products and services to meet the demands for corporate responsibility. Although many have preached the people–planet–profit trinity, only a few of entrepreneurs have been able to place these factors on the same positive scale (Malin, 2008). Profiting from environmental issues is becoming an option that contributes to societal sustainability goals.

Climate change and the accompanying rise in the frequency of unexpected and severe weather events are having a detrimental impact on agricultural output, which in turn has a significant influence on the supply chains of food industries. The industry has already been affected by disruptions in the supply of raw materials because of droughts, floods, and other natural catastrophes. These disruptions have led to an increase in prices as well as a decrease in crop yields. For instance, because of the most recent heatwave in India, farmers anticipate a decline in wheat crop yields of up to 25 percent, and this is just one example out of many more that can be cited (Kapoor, 2021). According to the findings of the Fifth IPCC Assessment Report, which was published in 2014, developing countries are the ones that will be affected by the effects of climate change the most severely. And because to the fact that such many food and beverage industries obtain their raw materials from the countries, this will have severe repercussions for them. Let's look at the example of the countries in West Africa, where it is predicted that agricultural yields will decline by 70 percent by the year 2050, and that bean, banana, and maize yields will decrease by 50 percent (Falke, 2022).

On the other hand, in 2018, the world produced 48.5 million tonnes of electronic garbage, according to a UN report. This number illustrates the growing significance of recycling, which also reveals some alarming statistics: just 20% of this waste is recycled. The United Nations forecasts that by 2050, we will have produced 120 million tonnes of electronic waste if we continue current path. Global e-waste production and ineffective recycling management pose a threat to the environment. Cadmium, lead, lead oxide, antimony, nickel, and mercury are among the most prevalent chemicals detected in these discarded goods. These poisonous substances damage rivers, lakes, and oceans and produce gases that disrupt ecosystems. Therefore, we must immediately return to a production and consumption strategy that lowers electronic waste.

One solution to the problem is responsible consumption, which can extend the usable life of products and limit the growth of this waste. Thibaut de Larauze, chief executive officer of Back Market, explains, "In the face of an ineffective recycling system, the only alternative for reducing electronic waste is the reuse of technological products." This French company chose electronic refurbishing in 2014 and was regarded as one of the most inventive in Europe.

Aims

This research will aim to overview Food & Beverages industry as well as E-waste has been impacting environment over the time. The trend will then help in predicting the future of green technology. Besides, it will be informative about the contribution green energy has had on environmental sustainability at various levels. It will then make recommendations about the optimum technology as per the available information and developments.

Objectives

- To identify and analyze the current technology and process used in food & beverages business.
- To Determine the Impact of E-waste and adapting the alternative solution for future sustainability.
- To determine the damage caused to environment with food & beverages industry.
- Recommendations for Technology of Future Sustainability and Green entrepreneurship.

Research Questions

What are the current methods used for food production?

What is E-waste and how it is impacting Environment?

What is the impact caused on environment in production of food?

What are the techniques that need to be adapted for future sustainability in F&B?

Literature Review

Green entrepreneurship is the most challenging topic in the current world. As the aim of the project is to find the challenges in food and beverage industry and to research the methods to prevent the environmental problems, here is a brief description on some research papers published.

- The idea that company owners may utilise their companies to support their families financially, shape the attitudes and values of their communities, and have an impact on natural resource management has frequently been discounted by globalisation. Here, we examine social awareness patterns mentioned by green business owners and how they could be included in the process of managing natural resources. To understand how small & Green and & green- green; enterprises contribute to environmental and social justice concerns, we examine case studies of small & green and &'green-green', firms. In-depth interviews with a sample of green entrepreneurs revealed a few commonalities, such as low levels of interest in financial success, high levels of knowledge of the environmental impact of the firm, and high levels of concern for social justice. Additionally, several components such as proximity, a

future-focused perspective on sustainability, and personal motivation and goal evolved. The research reveals creative strategies for integrating green business into conservation efforts and resource management (John, 2007).

- Although the energy-water nexus is a well-established concept, it is rarely applied to products with a significant impact on greenhouse gas emissions, particularly food and beverage items. In addition to the primary nexus factors, the proposed method considers other relevant factors, such as climate change, which is closely related to energy and water systems, and evaluates both process and product. Within this framework, this study develops an integrated index (IWEEN) to evaluate energy, water, and climate systems. This index combines life cycle assessment (LCA) and linear programming (LP) to aid in decision-making and the development of eco-innovation measures by identifying products with low energetic and water intensity and climate change effects. In this evaluation of a bottle of gin (70 cl), two major hotspots were identified: the production of the glass bottle and the energy requirements of the distillation process. Consequently, the use of photovoltaic solar energy as an energy source and the replacement of glass bottles with plastic ones and tetra blocks were proposed as two eco-innovation techniques. Using plastic bottles made from solar photovoltaic energy would reduce the IWEEN value of producing one bottle of gin by 58 percent, according to the Nexus results. The sensitivity analysis revealed a clear preference for photovoltaic solar energy over electric power, as well as a preference for decreasing the weight of the glass bottle or replacing it with a plastic bottle. The IWEEN index can be applied to any product to facilitate the development of more environmentally friendly products and their introduction into new green markets (R.Aldaco, 2020).
- **E-waste**, which comprises end-of-life electrical and electronic equipment, has emerged as a major environmental concern. Depending on the processing methods used for recycling it can be a source of toxic substances, such as heavy metals and organic pollutants. A holistic approach encompassing improved product design and recycling without jeopardizing public health is required. E-waste recycling, which comprises systematic collection of e-waste and its treatment for recycling of useful materials, offers a valuable tool to minimize the escalating heap of e-waste, supplement the shortage of some primary resources and support the economy. Electronic and electrical devices have become almost indispensable in the modern age of technology. However, due to the fast-developing nature of the technology, many such devices become obsolete within a few years of their production. E-waste recycling is being carried out in many parts of the world to reduce the amount of electronic and electrical device waste (Rajesh Ahirwar, 2021).
- **THE IDEA OF SUSTAINABILITY ENTREPRENEURSHIP** has emerged from the minds of both theoreticians and practitioners because of the merging of the entrepreneur. ship and sustainable development agendas. Because of the potential role that

sustainability entrepreneurship could play in advancing sustainable development, this topic is not only significant but also highly relevant at the present time. The concept is inherently multidisciplinary and draws on knowledge from a wide variety of research fields, such as traditional entrepreneurship studies, business and environment studies, and more recent research into environmental and social entrepreneurship. Specifically, the concept draws on knowledge from the business and environment studies. The contributions that have been made come from all over the world, and they are starting to come together to form a creative synthesis. even though it is only in its infant stages as a field of study. as the number of researchers who are interested in the connection between entrepreneurship and sustainable development continues to grow. able development continues to grow. There is a window of opportunity to establish a community dedicated to vibrant research to make strides toward a more profound comprehension of the natural world both the potential and the constraints of sustainable entrepreneurship (Parrish, 2006).

Research

To find out the extensive impact of E-waste and damages caused by food & beverages industry, an in-depth analysis interview of the people working in these sectors is planned. Such interviews create situations where the researcher gets the opportunity to further seek more information from interviewees by asking continuation questions

Research Methods

It is very important to know what type of research method will be applied for research. In this case, the sample size is small, and the information needed is from experts who worked in the E-waste and Food & beverages industries or at least have a relation to these sectors.

The conduction of qualitative research, a minimum of 20-40 in-depth interviews are necessary. The present study has a limited time frame; thus, the research will only conduct interviews with 10 managers or executive managers total, with 5 of those managers coming from each company. This is due to the cost of conducting the research. After reaching a point of theoretical and informational saturation, as well as stopping any new material from being provided, the size of the sample for the qualitative investigation was chosen (Marcoulides, 1998).

To apply this, a qualitative research method is apt. Once the data is collected, the researcher will analyse and form a hypothetically pattern of answers to support the research. Qualitative research is a form of market research that focuses on gathering data through conversational and open-ended dialogue. This strategy considers not just "what" people believe, but also "why" they believe it. Consider a convenience store seeking to increase its customer base. A careful observation reveals that more men frequent this store than women. Conducting in-depth interviews with the category's potential customers is an effective way for determining why women were not visiting the store (Anon., 2020).

Data Collection Strategies and analyzing strategy

Data will be collected in the form of (how many people) interviews with semi-structured interviews (how many questions) to help the interviewees gain some momentum.

Conducting qualitative research in this "interview society" has methodological consequences for our comprehension of the significance of the interviewing technology and the processing of interview data. Neither participant reports of interviews nor ethnographic studies of the significance of interviewing for participants have received much attention to date. We advance the existing research by demonstrating the disruptive nature of interviewing and the biographical effort that drives the development of interview data using these data. For the researcher conducting interviews, we present an example of something that is rarely on exhibit. Interviews can disrupt the normal meaning creation and situated action that characterises daily life, despite the fact that we live in an interview culture and are accustomed with its norms and rituals (Blakely, 2017).

Once the data is collected in the excel sheet, answers will interpret to form a hypothesis from the below table.

A	B	C	D
Questions...	Interviewee 1 answers	Interviewee 2 Answers	Interviewee 3 Answers
What do you think of ?	I think it is <u>fgood</u>		
what is your problem?			
So... on			I am open to such waste methods
<u>on.on</u>			

Gantt chart

[illegible]

Conclusion

This study will perform analyse Profiting from environmental issues is becoming an option that contributes to societal sustainability goals it is also referred as Social Entrepreneurship. The food industry has already been affected by disruptions in the supply of raw materials because of droughts, floods, and other natural catastrophes. These disruptions have led to an increase in prices and a decrease in crop yields. In 2018, the world produced 48.5 million tonnes of electronic garbage, according to a UN report. Only 20% of this waste is recycled. Cadmium, lead, lead oxide, antimony, nickel, and mercury are among the most prevalent chemicals detected in these discarded goods.

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