

AN OVERVIEW OF CLIMATE CHANGE AND IT'S IMPACT OF URBAN USERS IN COIMBATORE CITY

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Abstract: There are significant impacts of climate change on user code, mainly in terms of food affordability, availability, and consumption practices. This study attempted to understand the challenges faced by urban consumers in terms of sustainable food consumption practices in response to changes resulting from climate change. For primary data collection, a structured questionnaire method was used among 130 user codes, and the results were analyzed using percentage analysis, ANOVA, and rank analysis. The results indicate that food affordability is a significant challenge, and satisfaction regarding available food does not vary significantly between genders. Consumers ranked limiting packaged and processed foods as of highest priority, therefore focussing on raising awareness nothing on sustainable consumption practices in Coimbatore City.

Keywords: Climate Change, Urban Users, Food Consumption, Food Affordability, Sustainable Practices.

I. INTRODUCTION

The concept of climate change has been recognised as a major issue in the urban sector, particularly pertaining to its effects on the environment and the socio-economic front. It is a significant factor in urban ecosystems, particularly due to the rapid urbanisation, industrialisation, and energy consumption observed over recent periods. The urban users of Coimbatore City are being increasingly exposed to climate-related challenges due to the changes occurring in the climate patterns experienced in this particular region, which is a major industrial and educational centre in the state of Tamil Nadu. The urban users are being impacted on various fronts, particularly pertaining to their health, availability of resources such as water, and the overall lifestyle associated in this region. The nature of climate change is a topic to be understood, particularly pertaining to its effects on urban users in Coimbatore City.

II. STATEMENT OF THE PROBLEM

Climate change has gained recognition as one of the major worldwide challenges, and its impacts are starting to be felt, particularly in urban cities worldwide. Coimbatore city, in general, is subject to rising temperatures, rainfall, and water scarcity, which directly impact the daily lives of its users. Climate change factors such as these impact the lives of users in terms of the availability of drinking and food water, food consumption, and general environmental living conditions. Despite the rise of awareness among users regarding the effects of climate change, research studies at the local level are limited, and no in-depth research works are done on the perception of urban users regarding the impact of climate change in Coimbatore city. Therefore, it is vital to analyze the impact of climate change on urban users of Coimbatore city.

III. OBJECTIVES

- To identify the challenges faced by food users/consumers in Coimbatore city.
- To recommend sustainable measures for food Consumption by public.

IV. LIMITATION OF THE PROBLEM

- The scope of the study is limited to Coimbatore city.
- The findings are derived from primary data collected from a sample of 130 respondents only.

V. SCOPE OF THE STUDY

The present study analyzes the impact of climate change on food consumption by urban users in Coimbatore City. This study specifically focuses on the main issues, such as affordability, availability, and quality, faced by the consumers. The scope includes consumer perceptions and their changed behavior in response to the climate-related impacts on food systems. It also assesses the awareness and the degree of adoption regarding sustainable consumption of food. The present study limits itself to only the urban residents in Coimbatore City. The analysis is supported by primary data obtained directly from the consumers and supplemented by relevant secondary sources. The results obtained will help recommend sustainable measures for responsible consumption of food by the public.

HYPOTHESIS

(H₀): There is no significant difference in satisfaction with food availability despite climate-related changes among different groups of respondents (e.g., based on income, occupation, or age).

(H₀): There is no significant difference in the ranking of sustainable food practices, measures, benefits, and sources of influence by respondents.

VI. RESEARCH METHODOLOGY

The study employed descriptive and analytical research design paradigms to evaluate the effects of climate change on city users in Coimbatore City. The study used primary data, which was sourced by employing a structured questionnaire backed up by stratified sampling techniques, while secondary data were sourced from journals and reports. Percentage analysis was used to extract patterns and conclusions.

SAMPLING TECHNIQUE

The research design to choose urban users at Coimbatore City is based on the concept of Simple Random Sampling.

SAMPLE SIZE

The study is based on a sample of 130 respondents selected for data collection.

TOOLS

- Percentage Analysis
- Anova
- Rank Analysis

VII. REVIEW OF LITERATURE

K. Anusuya Devi, A. Swarnalath, S. Arvinth, M. Harinivashini and M. C. Anitha (2024) has published research article in the name of "ADVERTENCE ON CLIMATE CHANGE AND DIETARY CHOICES AMONG ADULTS IN COIMBATORE, TAMILNADU, INDIA". This study recognising the food system as one of the major contributors to global greenhouse gas emissions, the different stages related to the food system contribute to greenhouse gas emissions, from agricultural production to processing, distribution, consumption, and waste disposal. A few studies reviewed public knowledge, awareness, and practices concerning climate change in general and the food consumption patterns affecting the environment in particular. Evidence from studies conducted in the urban areas of Coimbatore indicates low awareness among adults on climate-friendly food choices; they find only a small proportion of the population understanding the linkage between diet and climate change. According to the study, frequent consumption of carbohydrate-rich foods, processed foods such as paratha, dosa, bread, basmati rice, maida, and dairy products like butter contributes to a higher warming potential. However, its understanding is not deep-rooted among consumers. By and large, the studies reviewed cascade urgency for specific targeted awareness and educational programmes to foster climate-responsive dietary behaviour and enhance sustainable food security in light of climate change.

Dr. VINIINFANTA. A , POORNA PUSHKALA.H has published research article in the name of "A STUDY ON CONSUMER PERCEPTION TOWARDS GREEN PRODUCT WITH SPECIAL REFERENCE TO COIMBATORE CITY". The study aims to highlight the growing salience of green products with various industries, as influenced by changes in consumer perception, adopting more conducive and eco-friendly approaches and technologies. Various studies have portrayed an affirmative role of different industries in promoting green products, whereas consumers' acceptability of green products remains relatively low due to low levels of awareness. The key variables of awareness, influencing factors, benefits, and reasons for purchase of green products, as identified through various studies, are considered highly

significant towards promoting green product adoption. Findings of various studies that adopted the survey research method have reflected a strong and positive correlation between level of awareness and purchase of green products.

VIII. RESEARCH GAP

Current research literature seems to have concentrated on agricultural adaptations, green products, and dietary awareness, without much focus on the influence of climate change on the direct food intake habits of urban users. City-level research on climate variability, urban lifestyle changes, and consumer adaptation strategies in Coimbatore as a city is still insufficient. Additionally, factors on household levels that affect satisfaction with strategies of adaptation are also not addressed sufficiently. To address the gaps identified, this study proposes an investigation into climate change impacts from an urban consumer perspective focused on Coimbatore City.

		Frequency	Percent
Valid	Yes	92	70.8
	No	38	29.2
	Total	130	100.0

INTERPRETATION

The findings reveal that a substantial proportion of respondents (70.8%) face difficulties in purchasing affordable food, while 29.2% do not experience such difficulties.

ANNOVA

		Levene's Test for Equality of Variances			
		F	Sig.	t	df
How satisfied are consumers with the availability of food items despite climate-related changes?	Equal variances assumed	.932	.336	-1.499	128
	Equal variances not assumed	The independent samples t-test shows that Levene's test is not significant (Sig. = 0.336), indicating equal variances between groups. The t-test results (t = -1.499, p = 0.136) reveal that there is no statistically significant difference in satisfaction with food availability despite climate-related changes between male and female respondents.		-1.495	125.445

INTERPRETATION

Levene's test is not significant (Sig. = 0.336), indicating equal variances. The t-test result (p = 0.136) shows no significant difference between male and female consumers in their satisfaction with food availability despite climate-related changes.

Ranks

	Mean Rank	RANK
Consuming locally produced food	2.33	4
Reducing food waste	2.42	3
Choosing organic products	2.57	2
Limiting packaged and processed foods	2.68	1

**INTERPRETATION**

The ranking of sustainable food practices shows that respondents prioritize them as follows: limiting packaged and processed foods (Rank 1, Mean Rank = 2.68) is considered most important, followed by choosing organic products (Rank 2, 2.57), reducing food waste (Rank 3, 2.42), and consuming locally produced food (Rank 4, 2.33), indicating a clear preference for reducing processed food in their diet.

IX. FINDINGS

- A large majority of respondents (70.8%) face difficulties in purchasing affordable food, indicating that food affordability is a major concern among consumers.
- The independent samples t-test shows no significant difference between male and female consumers regarding satisfaction with food availability despite climate-related changes, suggesting similar perceptions across gender.
- Among sustainable food practices, respondents give highest priority to limiting packaged and processed foods, followed by choosing organic products and reducing food waste, while consuming locally produced food is given the least priority.

X. SUGGESTIONS

- Measures should be taken to improve food affordability, such as price stabilization, subsidies, and strengthening public distribution systems.
- Since satisfaction levels do not differ by gender, awareness and policy interventions related to food availability can be uniformly targeted across all consumers.
- Greater awareness and incentives should be provided to encourage consumption of locally produced food, as it supports farmers, reduces climate impact, and improves food security, while continuing to promote reduced consumption of processed foods.

XI. CONCLUSION

The findings highlight that rising food prices and affordability challenges are a significant concern for consumers in the context of climate change. Satisfaction with food availability is consistent across genders, indicating that climate-related food access issues are experienced uniformly. Additionally, while consumers show a strong preference for reducing packaged and processed food consumption, there is a need to promote awareness and acceptance of locally produced foods as a sustainable and climate-resilient choice.

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WEBSITES

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