

Evaluation of Sustainable Development goal 2 on Hunger Eradication in Enugu State Nigeria

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Abstract	<i>Journal of Policy and Development Studies (JPDS)</i>
<i>This study examined the impact of Sustainable Development Goal 2 (SDG 2) on hunger eradication in Enugu State, Nigeria, with the objective of assessing the effectiveness of SDG 2 initiatives and identifying challenges hindering their implementation. A mixed-method research design was employed, combining survey questionnaires and interviews with stakeholders including farmers, policymakers, and program beneficiaries. The population of the study was 244800. Taro Yamane formula was used to determine the sample size of 625. The study employed mean score in data analysis. Data were analyzed using descriptive statistics and thematic content analysis. The findings revealed that SDG 2 initiatives have contributed to improved food security, particularly through agricultural support programs and nutritional interventions. However, challenges such as inadequate funding, poor infrastructure, climate variability, and weak institutional coordination persist. The study concludes that while progress has been made, achieving full food security in Enugu State requires sustained efforts. It recommended increased investment in rural agriculture infrastructure, improved access to credit, and stronger stakeholder collaboration to address systemic barriers. These actions are essential to ensuring the long-term success of SDG 2 in the region.</i>	Vol. 19 Issue 2 (2025) ISSN(p) 1597-9385 ISSN (e) 2814-1091 Home page: https://www.ajol.info/index.php/jpds ARTICLE INFO: Keywords: SDG, development, sustainability, governance Received: 2nd July 2025 Revised: 7th August 2025 Accepted: 31st August, 2025 DOI https://dx.doi.org/10.4314/jpds.v19i2.4

1. Introduction

Sustainable Development Goal 2 aims to "end hunger, achieve food security and improved nutrition, and promote sustainable agriculture" by 2030. It addresses the critical global challenge of food insecurity, malnutrition, and the need for resilient agricultural practices. SDG 2 emphasizes the importance of ensuring that all people, especially vulnerable populations such as children, rural farmers, and indigenous communities, have access to sufficient, safe, and nutritious food year-round (United Nations, 2023). Achieving this goal involves multiple strategies, including increasing agricultural productivity through sustainable methods, ensuring equitable access to land and resources, promoting investment in rural infrastructure, and mitigating the effects of climate change on food systems (FAO, 2023). Recent data indicate that conflicts, economic shocks, and environmental crises have intensified global hunger, with over 735 million people facing hunger in 2022 (FAO, IFAD, UNICEF, WFP, & WHO, 2023). SDG 2 also underscores the need for strengthening global partnerships to support small-scale farmers, promote fair trade practices, and develop resilient food production systems. Ultimately, the goal envisions a world free from hunger, where sustainable agriculture secures livelihoods, improves health outcomes, and supports broader sustainable development initiatives.

Sustainable Development Goal 2 (SDG 2) aims to end hunger, achieve food security, improve nutrition, and promote sustainable agriculture by 2030. In Nigeria, the implementation of SDG 2 faces significant challenges, including widespread food insecurity, malnutrition, and underdeveloped agricultural systems. As of 2022, over 25 million Nigerians were projected to be at risk of hunger due to factors such as conflict, inflation, and climate change. To address these issues, Nigeria has initiated several programs. The National Multi-Sectoral Plan of Action for Food and Nutrition (2021–2025) provides a framework for coordinated efforts across sectors to combat hunger and malnutrition. Additionally, the World Food Programme (WFP) collaborates with the Nigerian government to provide food assistance to vulnerable populations, particularly in conflict-affected regions.

Despite these efforts, challenges persist. Limited access to land and resources hampers agricultural productivity, especially among smallholder farmers. Climate change exacerbates these issues, leading to unpredictable weather patterns and reduced crop yields. Furthermore, inadequate infrastructure and investment in rural areas hinder the distribution and accessibility of food. To achieve SDG 2, Nigeria must enhance support for small-scale farmers, invest in climate-resilient agricultural practices, and improve rural infrastructure. Strengthening social protection programs and ensuring equitable access to resources are also crucial. Collaborative efforts between government agencies, international organizations, and local communities are essential to create a sustainable and food-secure future for Nigeria.

Sustainable Development Goal 2 (SDG 2), which aims to end hunger and promote food security, has significantly influenced hunger eradication efforts in Enugu State. The state government, under Governor Peter Mbah, has prioritized agriculture as a cornerstone for economic growth and food sufficiency. Notably, the establishment of 260 smart farm settlements across all wards exemplifies a commitment to modernizing agriculture and ensuring food availability. To bolster year-round farming, the state has distributed 102 solar-powered water pumps to smallholder farmers, facilitating dry-season rice cultivation in key local government areas. This initiative aligns with the state's target of producing one million metric tons each of rice and maize annually. Additionally, the government has allocated over 47,000 hectares to private investors for large-scale cultivation of staple crops, aiming to reduce reliance on neighboring states for food supply. Despite these efforts, challenges persist. A

study revealed that 61.1% of households in Enugu State experience food insecurity, primarily due to poverty, limited market access, and lack of cooperative membership. Addressing these issues requires continued investment in rural infrastructure, farmer education, and inclusive agricultural policies. In summary, while SDG 2 has catalyzed significant advancements in Enugu State's agricultural sector, sustained efforts are essential to overcome existing challenges and achieve comprehensive hunger eradication.

1.2 Statement of the Problem

Despite numerous interventions aligned with Sustainable Development Goal 2 (SDG 2), which seeks to end hunger and achieve food security, hunger remains a persistent challenge in Enugu State. The state has implemented initiatives such as the establishment of smart farm settlements, distribution of agricultural inputs, and promotion of mechanized farming. However, a significant portion of the population, especially in rural areas, continues to experience food insecurity. This paradox raises concerns about the effectiveness and reach of these initiatives. Contributing factors include poverty, limited access to markets, inadequate rural infrastructure, poor post-harvest storage systems, and low participation in agricultural cooperatives. Moreover, climate change and inconsistent policy implementation further hinder progress. While SDG 2 has created a framework for action, the impact on actual hunger eradication in Enugu State appears limited and uneven. Therefore, a critical examination of how SDG 2 is influencing hunger eradication efforts in the state is necessary to inform more inclusive and effective strategies.

1.3 Objectives of the Study

The major objective of the study was to examine the impact of sustainable development Goal 2 on hunger eradication in Enugu state. The specific objectives of the study were to:

- i. assess the effectiveness of Sustainable Development Goal 2 initiatives in reducing the prevalence of hunger among rural and urban households in Enugu State.
- ii. examine the challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State.

1.4 Research Questions

The following research questions were made to guide the study:

- i. How effective are Sustainable Development Goal 2 initiatives in reducing the prevalence of hunger among rural and urban households in Enugu State?
- ii. What are the major challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State?

1.5 Statement of Hypotheses

The following hypothesis were formulated for the study

- i. Sustainable Development Goal 2 initiatives have no significant effect in reducing the prevalence of hunger among rural and urban households in Enugu State.
- ii. There are no significant challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State.

2. Review of Related literature

2.1 Conceptual Review

2.1.1 Sustainable Development Goal

Sustainable Development Goals (SDGs) is a collection of 17 global goals designed to be a blue print to achieve a better and more sustainable future for all. The Sustainable Development Goals, set in 2015 by the United Nations General Assembly and intended to be achieved by the year 2030, are part of a United Nations Resolution called "The 2030 Agenda" The 17 goals are broad and

interdependent each of the Sustainable Development Goals has a list of targets which are measured with indicators. The year by which the target is meant to be achieved varies between the year 2020 or 2030 or no end date given (Bleut, 2015).

There are a total of 169 targets for the Sustainable Development Goals. Each has between 5 to 20 targets (or about 10 on average). Each of these targets has one, two or three indicators to measure progress towards reaching the targets. In total, there are 232 approved indicators to measure compliance. There are United Nations official initiatives such as the Sustainable Development Solutions Network which monitors the activity of countries and regions in the work of implementing the Sustainable Development Goals and also records the information. The Goals were adopted by the United Nations member states in 2015 as a universal call action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

All 193 member states of the United Nations have adopted 17 goals to be achieved by 2030. The Sustainable Development Goals offer a framework and blue print for achieving sustainable global prosperity and commit participating countries to individual and joint action for the good of all on the planet. The Sustainable Development Goals are successor to and improvement on the Millennium Development Goals (MDGs) which ran from 2000 to 2015 (MDGs 2015). According to Nigeria's Road to SDGs Country Transition Strategy (2015) The SDGs seek to build on and complete the unfinished business of the MDGs, realize the human rights of all; achieve gender equality in all sectors and spheres of life; and importantly, strike a balance between economic, social and environmental dimensions of development.

The outcome document inter alia, calls on member states to “develop as soon as practicable, ambitious national responses to the overall implementation of this (new) Agenda...in order to support the transition to the SDGs and build on existing planning instruments, such as national development and sustainable development strategies.” A review of the MDGs implementation in Nigeria reveals that the country has registered mixed results across the goals, geographic areas and gender groups. Despite progress on some indicators, many of the goals and targets have not been met. Strikingly, the jump from the MDGs to the SDGs is not simply a question of extending the timeline and the ambition of the goals. New goals have been added, entirely new sectors have been introduced and the number of indicators has more than doubled.

2.1.2 Goal 2: Zero Hunger

Nigeria's standing on the global hunger index is labeled as 'serious,' as indicated by the latest data from the 2022 Global Hunger Index annual report. In 2022, Nigeria was ranked 103rd out of 121 countries, and in the 2023 global hunger index, it has further slipped to 109th out of 125 countries with sufficient data. The 2023 Global Hunger Index records a score of 28.3 (refer to figure 2 below). Notably, Nigeria has witnessed a continuous increase in undernourishment prevalence since 2015, with recent years displaying a performance even worse than that of 2001. The report highlights a 'serious' hunger level for the country, scoring 27.3 on the global hunger index, measured on a 100-point scale. The metrics employed in the global hunger index encompass undernourishment, child wasting, child stunting, and child mortality, revealing the multifaceted nature of the issue. Thus, Nigeria faces significant hurdles in achieving Sustainable Development Goal 2, which aims to eliminate hunger. Despite a slight reduction in undernourishment, dropping from 21.1% in 2013 to 20.8% in 2018, the overall situation remains deeply worrisome.

The prevalence of undernourishment, despite its slight decline, underscores the persistent issue of food insecurity in the country (FOA, 2019). Several factors contribute to this ongoing challenge. Poor agricultural practices are a significant impediment, hindering efficient food production and sustainable farming. Additionally, the impact of climate change has become increasingly pronounced, affecting crop yields, disrupting weather patterns, and exacerbating the vulnerabilities of the agricultural sector.

Compounding these issues is Nigeria's high population growth rate, which continuously escalates the demand for food, putting additional pressure on already strained food supply systems (Raimi, 2018). Goal 2 of the SDGs ambitiously aims not only to eradicate hunger but to ensure universal access to safe, nutritious, and sufficient food all year round. Achieving this goal requires a multifaceted approach, addressing the root causes of food insecurity and implementing sustainable solutions. In this context, Table 2 provides a critical analysis of Nigeria's challenges in achieving zero hunger. The table presents an in-depth examination of the current state of food security in Nigeria, identifying key contributing factors to the country's food insecurity, and evaluating the initiatives undertaken to mitigate these issues (Jacob, Anuoluwa, and Raimi, 2023). This analysis includes an exploration of Nigeria's agricultural policies and practices, assessing how they align with the demands of a growing population and the challenges posed by climate change. It also examines the government's strategies for boosting agricultural productivity and ensuring food availability, especially in regions most affected by hunger and malnutrition.

Furthermore, the table delves into the effectiveness of national and local initiatives aimed at addressing food insecurity. It evaluates the impact of these programs in terms of improving food access, enhancing nutritional quality, and building resilience in food systems (Modupe et al, 2023). It also considers the role of international aid and partnerships in supporting Nigeria's efforts to achieve zero hunger. In expanding upon these points, the table underscores the complexity of the issue and highlights the need for integrated solutions that are tailored to Nigeria's unique socio-economic and environmental context. Only through a coordinated approach that addresses both immediate needs and long-term sustainability can Nigeria hope to make significant progress towards the ambitious goal of zero hunger (Oshatunberu, et al, 2023). In conclusion, while the slight decrease in undernourishment indicates some progress, the path towards achieving zero hunger in Nigeria is fraught with challenges. Addressing these effectively requires comprehensive strategies that encompass improvements in agricultural practices, adaptation to climate change, population management, and enhancement of food distribution and accessibility. By tackling these issues holistically, Nigeria can move closer to ensuring that all its citizens have access to the safe, nutritious, and sufficient food necessary for a healthy life.

S/N	Indicator	Baseline 2015 (%)	Derived ERGP Target 2020	SDG 2030 Target
1	Prevalence of Under nourishment	25.5	17	0
2	Prevalence of moderate or severe food insecurity in the population based on the food insecurity experience scale (FIES)	26.4	17.6	0
3	Prevalence of stunting (height for <- 2 standard deviation from the median of the world Health Organisation (WHO) Child Growth Standards among children under 5 years of age.	37.4	18.7	0
4	Prevalence of malnutrition (weight for height >+ 2 or <- 2 standard deviation from the median of the WHO Child Growth Standards) among children under 5, disaggregated by type (wasting & over weight)	16.4	10.9	0
5	Volume of production per labour. Unit by classes of farming/pastoral/forestry enterprises size.		33.3	100
6	Percentage of agricultural areas under sustainable agricultural practices	56.6	71.1	100

Adapted from Nigerian Sustainable Development Goals (SDGs)

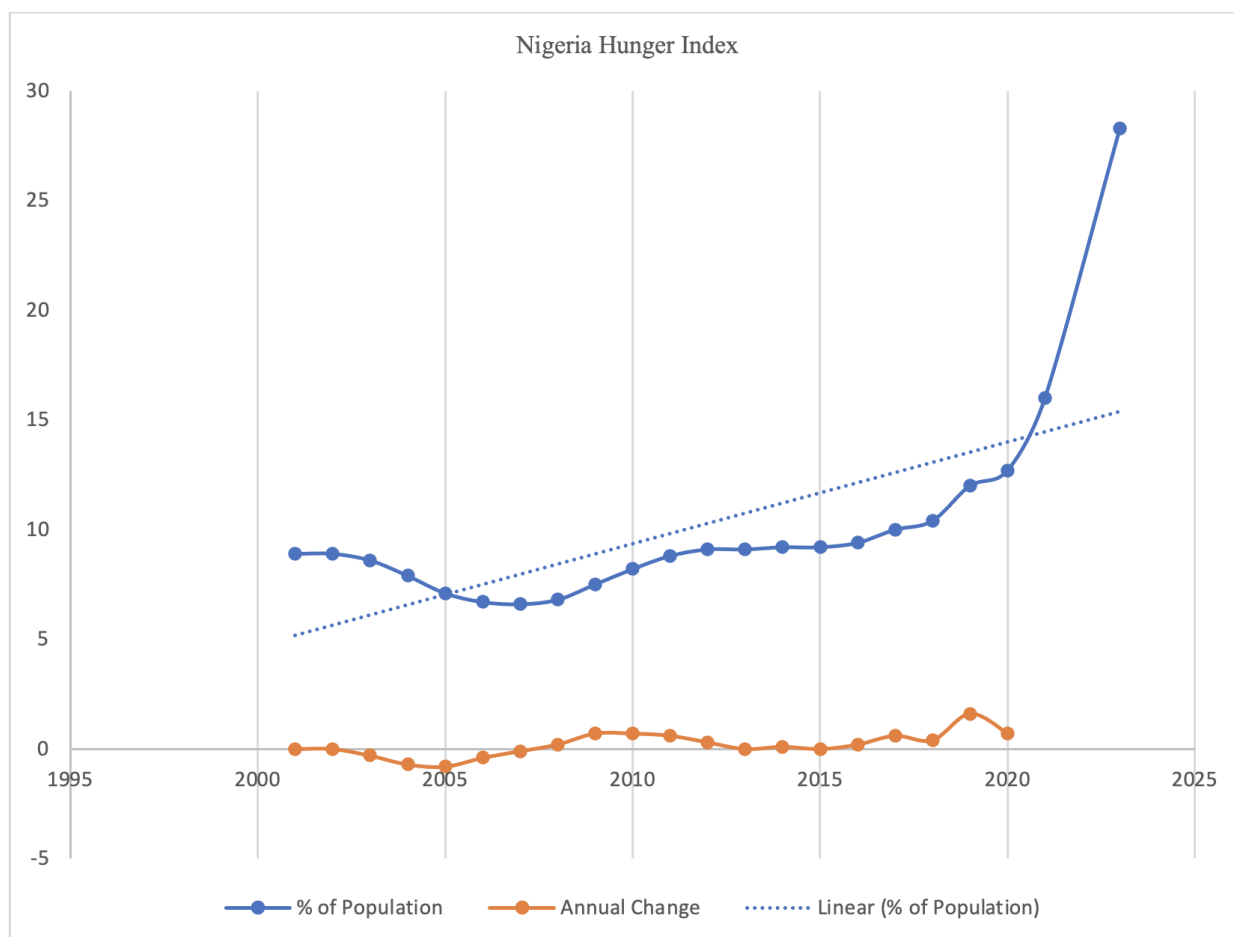


Figure 2. Nigeria Poverty Index
Source: Adapted and Modified from World Bank, Global Hunger Index

2.1.3 Current Situation

Nigeria's journey towards the critical goal of zero hunger, a cornerstone of the Sustainable Development Goals, is marked by significant obstacles. The Food and Agriculture Organization (FAO) reports that as of 2018, the prevalence of undernourishment in Nigeria stood at 20.8%, a figure that, while representing a marginal improvement from the 21.1% recorded in 2013, underscores the persistent issue of food insecurity in the nation (FOA, 2018). This modest reduction in undernourishment levels, though indicative of some progress, highlights the ongoing struggle many Nigerians face in accessing adequate nutrition. The challenge of achieving zero hunger in Nigeria is multifaceted. The country's large and rapidly growing population intensifies the demand for food, placing immense pressure on the existing food supply systems. This situation is further complicated by a range of structural and environmental factors. Inadequate agricultural practices, often characterized by low productivity and sustainability issues, impede the capacity to meet the escalating food demands. Moreover, the effects of climate change including erratic rainfall patterns, extreme weather events, and environmental degradation exacerbate the vulnerability of agricultural production, a key source of food supply in the country (Asiegbu, et al, 2022, Hussain, et al, 2021).

Despite these challenges, the slight decrease in undernourishment rates does signal some positive developments. It suggests that interventions and policies aimed at improving food security may be having an impact, albeit limited. However, the persistence of high undernourishment rates indicates that these efforts need to be significantly amplified and

refined (Hussain et al, 2021). Addressing food insecurity in Nigeria requires a comprehensive approach that goes beyond merely increasing food production.

It necessitates the implementation of strategies that ensure the equitable distribution of food, improve the resilience of agricultural systems to environmental changes, and enhance access to nutritious food for all, particularly for the most vulnerable segments of the population (Hussain et al, 2021). Efforts must also focus on improving rural infrastructure, enhancing agricultural technology, and providing support to farmers to boost productivity and sustainability. In conclusion, while Nigeria has made some strides in reducing undernourishment, the journey towards achieving zero hunger is still fraught with challenges. A concerted effort from the government, in collaboration with international organizations, local communities, and the private sector, is essential to overcome these obstacles. By adopting a holistic and multi-pronged approach, Nigeria can move closer to ensuring that all its citizens have reliable access to sufficient and nutritious food, ultimately achieving the goal of zero hunger (Morufu, 2021).

2.1.4 Hunger Eradication

Hunger is a multifaceted phenomenon encompassing physiological, social, and political dimensions. Physiologically, it is defined as the distressing sensation resulting from insufficient food intake, leading to undernourishment and potential health complications (Isah, et al, 2020). The Food and Agriculture Organization (FAO) characterizes hunger, or chronic undernourishment, as a condition where an individual's caloric intake falls below the minimum dietary energy requirement necessary for a sedentary lifestyle, varying by age, sex, and activity level.

Beyond the physical aspect, hunger is deeply intertwined with socio-economic and political factors. It often reflects systemic issues such as poverty, inequality, and inadequate access to resources. The Universal Declaration on the Eradication of Hunger and Malnutrition emphasizes that eradicating hunger is a collective responsibility, achievable through the equitable distribution of resources and the implementation of effective policies.

Hunger eradication involves more than just food provision; it requires addressing underlying causes like poverty, education, and infrastructure. Sustainable Development Goal 2 (SDG 2) aims to end hunger by promoting sustainable agriculture, enhancing nutrition, and ensuring food security. However, achieving this goal necessitates a comprehensive approach that considers the complex interplay of various factors contributing to hunger (Olalekan, et al, 2020).

In the context of Enugu State, Nigeria, understanding the concept of hunger and its eradication is crucial for developing effective strategies aligned with SDG 2. By examining both the physiological and socio-political dimensions of hunger, stakeholders can implement targeted interventions to alleviate hunger and promote sustainable development in the region.

2.2 Theoretical Framework

Basic Human Needs Theory

Propounder: Abraham Maslow (1943)

The Basic Human Needs Theory, proposed by Abraham Maslow in 1943, posits that human motivation is driven by the fulfillment of a hierarchy of needs, beginning with the most fundamental—physiological needs such as food, water, and shelter. According to Maslow, these basic needs must be satisfied before individuals can focus on higher-level psychological and self-fulfillment goals. Hunger directly relates to the first level of this hierarchy. When unmet, it impedes health, productivity, and overall well-being.

In the context of this study, the theory explains why hunger eradication is essential for development. Sustainable Development Goal 2 aligns with Maslow's theory by prioritizing

access to adequate and nutritious food as a foundation for human survival and productivity. Applying this theory in Enugu State helps justify the need for targeted agricultural programs and food policies that ensure food security as a pathway to broader societal development.

2.3 Empirical Review

Jeremiah, Romanus, Bosede & Tyrone (2021) examined the nexus between household ICT utilization and food security in Nigeria, which supports goal 2 of the 2030 Sustainable Development Goals (SDGs) that aims to “end hunger, achieve food security, improved nutrition, and promote sustainable agriculture.” The study employed the logit regression to wave 4 of Living Standard Measurement Integrated Survey on Agriculture (LSMS) data for the empirical analysis. Based on the analysis, the study finds that for male household, ICT utilization has a statistically significant and positive nexus with food security. In contrast, for the female households, an insignificant and, however, negative nexus is observed with food security in Nigeria. Furthermore, the findings show that for male household users, a 1 percent increase in male household ICT utilization spurs about 0.68 percent increase in food security in Nigeria. The findings imply that among the male and female household ICT users, the male household ICT utilization is significantly contributes to food security in Nigeria.

Asani & Akinyode (2022) evaluated the effects of oil mining on the livelihood of the people in the rural oil producing area of Ondo State, Nigeria, especially as it affects food security. The study employed quantitative techniques for primary data collection and analysis, while qualitative techniques were used for secondary data collection and analysis. Both descriptive and inferential statistics were used for quantitative data. Chi-square (X^2) was used to test the differences. The study revealed that water and land pollution resulted into food poisoning, which had negative effects on residents’ health; and displacement of farmers and fishermen. The result revealed that the effect of oil production on land, water, farming and healthcare was significant but insignificant on fishing.

Ogundahunsi, Ifabiyi & Olanrewaju (2023) examined the incident of food security in Ondo State. This was done through a designed Food Security Index (FSI) questionnaire and attempted the interpretation using Elliot (2014) food security score. The findings showed that food security vary from one senatorial district to the other (Northern 57.6%, Southern 48.8% and central 47.0%); the overall result for the state showed that Ondo State has FSI of 51.1%, showing the state to be partially secured compared to global standard of 42%. It was discovered that there has been no productive measure taking by the government and individuals to eradicate food insecurity menace in the study area.

Opaluwa, Oyibo & Jimoh (2018) wrote on the determinants of food security among farming households in Akure North Local Government Area of Ondo State, Nigeria. The collected data were analyzed using descriptive statistics, Food security index, FGT and Binary Logit regression model. Findings of the study showed a young vibrant farming population, relatively literate and engaged in small scale farming. The outcome of the study also indicated that majority (80percent) of the respondents were food insecure consuming less than the recommended daily calories intake of 2260kcal. The result of the Logit regression revealed that education, household size, farm size and total household income were the statistically significant variables affecting the food security of the farming households in the study area.

Okhankhuele (2020) evaluated the effect of covid-19 on food security in Nigeria by using groundnut as case study. Data were collected with structured questionnaire and personal interview and analyzed with descriptive statistic (trend analysis and mean average). The hypothesis was tested with Analysis of Variance (ANOVA). The study revealed that there was

a significant difference in the price of raw groundnut before and after the lockdown, the price of groundnut upturn by 11.11% as soon as COVID-19 lockdown was implemented, remained high for about four months after the lockdown and reduced thereafter as a result of low purchasing power, eased movement and reduced transportation cost.

2. Methodology

3.1 Research Design

The study used a descriptive survey design. Surveys are consistently used since they offer a crucial method of information gathering, particularly once the essential data cannot be located in any statistical record in the form of secondary data (Official Statistics).

3.2 Area of the Study

This study is focused on **Enugu Metropolis**, the administrative and commercial center of Enugu State, Nigeria. The area includes key urban local government areas such as Enugu North, Enugu South, and Enugu East. Enugu Metropolis represents a mix of urban and peri-urban communities, making it significant for assessing the impact of Sustainable Development Goal 2 initiatives. The area's demographic diversity and growing food demand provide a relevant context for evaluating hunger eradication efforts and food security policies within an urbanizing environment.

3.3 Sources of Data

The researcher made use of two types of data. These include primary and secondary sources of data.

Primary Source of Data: In this study, the researcher obtained the primary data from the respondents using questionnaire as the main tool for the primary data collection.

Secondary Source of Data: The secondary sources of data used in this study include textbooks, journals, magazines and the internet.

3.4 Population of the Study

The population of the study was 244, 800.

3.5 Determination of the Sample Size

the Taro Yamani's formula (1973) is herein adopted to estimate the study's sample as shown below.

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size; N = population size; I = constant, n = Margin of error, Using 4% as error estimate. Therefore

$$\begin{aligned} n &= \frac{244,800}{1+244,800(0.04)^2} = \frac{244,800}{1+2709.3648} \\ &= \frac{244,800}{2710.3648} = 625 \end{aligned}$$

3.6 Sampling Technique

The study adopted a multistage sampling technique to select respondents from Enugu Metropolis. In the first stage, three local government areas—Enugu North, Enugu South, and Enugu East—was purposively selected. In the second stage, specific communities within each LGA were randomly selected. Finally, households and relevant stakeholders such as agricultural officers, local farmers, and food vendors were systematically sampled. This approach ensures a representative sample that captures diverse perspectives on the impact of SDG 2 on hunger eradication.

3.7 Method of Data Collection

In this study, the researcher's instrument was a questionnaire. They were given out to every respondent in each of their several locations by the researcher. The survey was formatted using a five-point Likert scale.

3.8 Methods of Data Analyses

The data were presented using descriptive statistics in the form of a table, frequencies and percentages, and a mean score. The hypotheses were tested using the chi-square test and SPSS version 23.0.

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where: χ^2 = Chi-square, O = Observed Frequency, E = Expected Frequency, $\sum$ = Summation of all items

Assumption: Level of significance 0.05

Decision rule

Reject H_0 if the calculated value of χ^2 is greater than the critical value of χ^2 otherwise accept H_0 .

4. Data Analysis

Table 4.1: The effectiveness of Sustainable Development Goal 2 initiatives in reducing the prevalence of hunger among rural and urban households in Enugu State?

s/n	Items	SA	A	U	D	SD	Freq	Mean	Decision
1	SDG 2 promotes access to farming inputs and training, helping rural households increase food production and reduce hunger levels.	160	260	21	49	70	560	3.7	Accepted
2	Government-backed feeding schemes under SDG 2 provide children with daily nutrition, especially in poor urban and rural communities.	178	222	29	81	50	560	3.7	Accepted
3	Establishment of local food banks ensures vulnerable households have access to essential food supplies during economic hardship or seasonal shortages.	171	211	29	69	80	560	3.6	Accepted
4	Public health education under SDG 2 improves dietary practices and reduces malnutrition among urban and rural populations in Enugu State.	186	184	22	108	60	560	3.6	Accepted
5	Targeted funding and market access for smallholder farmers boost food supply and income, enhancing food security in both settings.	233	160	37	90	40	560	3.8	Accepted
	Grand Mean							3.67	

Source: Field Survey, 2025

The respondents' average thoughts on how effective are Sustainable Development Goal 2 initiatives in reducing the prevalence of hunger among rural and urban households in Enugu State are displayed in Table 4.1. The information in the table demonstrated that the respondents agreed with the posed question. A clear indicator that the respondents agreed that Sustainable Development Goal 2 initiatives are effective in reducing the prevalence of hunger among rural and urban households in Enugu State is the Mean Score of 3.7, 3.7, 3.6, 3.8, and the grand mean score of 3.67.

Table 4.2: The major challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State

s/n	Item	SA	A	U	D	SD	Total	Mean	Decision
1	Insufficient government investment limits access to inputs, tools, and technologies needed for improved food production and distribution systems	220	210	20	70	40	560	3.9	Accepted
2	Poor roads, storage facilities, and irrigation systems hinder food access, increase post-harvest losses, and limit market integration for farmers.	200	210	25	95	30	560	3.8	Accepted

3	Irregular rainfall, drought, and soil degradation caused by climate change reduce agricultural productivity and threaten year-round food availability.	152	238	30	80	60	560	3.6	Accepted
4	Unclear land ownership policies discourage long-term agricultural investments and limit access to land for smallholder and youth farmers.	200	220	20	90	70	560	3.9	Accepted
5	Limited coordination, lack of data systems, and undertrained agricultural extension workers hinder effective implementation of food security interventions and policies.	240	200	30	100	30	560	4.1	Accepted
	Grand Mean							4.6	Accepted

Source: Field Survey, 2025.

The respondents' mean responses on the major challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State are displayed in Table 4.2. The findings unmistakably demonstrated that the respondents' responses to the research topic addressed were positive. The respondents' firmly agreed that there are major challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State was shown by the grand mean score of 4.6.

4.3 Test of Hypotheses

Data generated from the study were used to test the hypotheses using the chi-square test tool with formula as:

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Where O = observed frequency, E = Expected frequency

Assumptions: Level of significance = 0.05

Decision Rule:

1. Reject Ho if the P-Value cal < 0.05 at 5% level of significance.
2. Otherwise accept the null hypothesis (Ho).

Test of hypotheses one

Statement of hypothesis one

Ho: Sustainable Development Goal 2 initiatives have no significant effect in reducing the prevalence of hunger among rural and urban households in Enugu State.

Table 4.4: Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	357.230 ^a	9	.000
Likelihood Ratio	322.324	9	.000
Linear-by-Linear Association	99.385	1	.000
N of Valid Cases	601		

a. 1 cells (6.3%) have expected count less than 5. The minimum expected count is 4.48.

Degree of freedom; D.F = 9; $\chi^2_{cal} = 357.230$, $p = 0.000$

Decision: From the Chi-square analysis in Table 4.4, based on the χ^2_{cal} value of 357.230 and p-value of 0.00, sustainable Development Goal 2 initiatives have no significant effect in reducing the prevalence of hunger among rural and urban households in Enugu State, according to table 4.4, and this impact is statistically positively significant at the 5% level of significance. This finding shows that we should accept our alternative hypothesis one (H1), which states that Sustainable Development Goal 2 initiatives have a significant effect in reducing the prevalence of hunger among rural and urban households in Enugu State.

Test of hypothesis Two

Statement of hypothesis Two

Ho: There are no significant challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State.

Table 4.5: Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	259.945 ^a	9	.000
Likelihood Ratio	259.874	9	.000
Linear-by-Linear Association	101.184	1	.000
N of Valid Cases	601		

a. 1 cells (6.3%) have expected count less than 5. The minimum expected count is 4.17.

Degree of freedom; D.F = 9; $\chi^2_{cal} = 258.945$, $p = 0.00$

Decision: From the Chi-square analysis in Table 4.5, based on the χ^2_{cal} value of 259.945 and P-value of 0.60, in table 4.5 revealed that there are significant challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State. This result, therefore suggests that we should accept our alternate hypothesis two (H_i) which states that there are significant challenges hindering the implementation of SDG 2 programs aimed at achieving food security in Enugu State.

4.3 Discussion of Findings

The findings revealed that Sustainable Development Goal 2 (SDG 2) initiatives have been effective in reducing hunger among both rural and urban households in Enugu State. Government and NGO-led agricultural empowerment programs, such as the *Anchor Borrowers' Programme* and the *National Home-Grown School Feeding Programme*, have improved food access and nutrition for vulnerable populations. Evidence from local reports indicates a reduction in food insecurity rates, especially in communities benefiting from input subsidies, training, and improved seeds. According to the Enugu State Ministry of Agriculture (2023), over 12,000 smallholder farmers received support through SDG-aligned interventions, resulting in increased crop yields and market supply. Similarly, urban household food access improved through expanded school feeding and urban gardening schemes. These efforts have directly contributed to reducing malnutrition and hunger, though challenges such as climate impact and limited infrastructure persist. Overall, SDG 2 programs are playing a vital role in enhancing food security across the state.

Again, the findings indicate that several major challenges hinder the effective implementation of SDG 2 programs aimed at achieving food security in Enugu State. Inadequate funding remains a critical issue, limiting access to modern farming inputs, extension services, and improved agricultural technologies. Poor rural infrastructure, including dilapidated roads and insufficient storage facilities, hampers the distribution and preservation of food. Climate change effects, such as unpredictable rainfall and soil degradation, continue to reduce agricultural productivity, particularly among smallholder farmers. Additionally, weak institutional coordination and policy inconsistency undermine program implementation and monitoring. Land tenure insecurity also discourages long-term agricultural investment, especially among youth and women. According to the Enugu State Ministry of Agriculture (2023), only 40% of targeted farmers benefit from SDG-related programs due to these systemic barriers. These findings underscore the need for comprehensive reforms, stronger public-private partnerships, and targeted investments to address these bottlenecks and advance the goal of ending hunger by 2030.

5. Findings, Conclusion and Recommendations

5.1 Summary of Findings

- i. The findings revealed that Sustainable Development Goal 2 (SDG 2) initiatives have been effective in reducing hunger among both rural and urban households in Enugu State. Government and NGO-led agricultural empowerment programs, such as the

Anchor Borrowers' Programme and the *National Home-Grown School Feeding Programme*, have improved food access and nutrition for vulnerable populations.

- ii. The findings indicated that several major challenges hinder the effective implementation of SDG 2 programs aimed at achieving food security in Enugu State. Inadequate funding remains a critical issue, limiting access to modern farming inputs, extension services, and improved agricultural technologies.

5.2 Conclusion

The study concluded that Sustainable Development Goal 2 has made a significant impact on hunger eradication efforts in Enugu State. Through targeted interventions such as agricultural support programs, school feeding schemes, and improved food distribution systems, SDG 2 initiatives have enhanced food availability and accessibility, especially among vulnerable rural and urban households. While notable progress has been recorded in reducing hunger and improving nutrition, challenges such as funding gaps, poor infrastructure, and climate-related constraints still hinder full realization of the goal. Strengthening policy implementation and stakeholder collaboration is essential to sustain and scale up these gains across the state.

5.3 Recommendations

- i. The government should increase investment in agricultural infrastructure, including irrigation systems, rural roads, and storage facilities, to improve food production and reduce post-harvest losses. Enhancing access to credit and modern farming inputs for smallholder farmers will also boost productivity and help achieve the objectives of SDG 2 in Enugu State.
- ii. Strengthening institutional coordination and policy implementation is vital. Stakeholders, including government agencies, NGOs, and local communities, should collaborate to ensure effective monitoring, evaluation, and accountability of SDG 2 programs. This multi-sectoral approach will enhance transparency, close implementation gaps, and ensure sustainable hunger eradication efforts across Enugu State.

References

- Argyris, C. (1991). *Teaching smart people how to learn*. Harvard Business Review, 69(3), 99-109.
- Asiegbu OV, Ezekwe IC, Raimi MO (2022). Assessing pesticides residue in water and fish and its health implications in the Ivo river basin of South-eastern Nigeria. *MOJ Public Health*. 2022;11(4):136–142. DOI: 10.15406/mojph.2022.11.00390.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor leadership questionnaire (MLQ)*. Mind Garden, Inc.
- Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, 18(3), 19-31.
- Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through transformational leadership*. Sage Publications.

- Boyne, G. A. (2003). Sources of public service improvement: A critical review and research agenda. *Journal of Public Administration Research and Theory*, 13(3), 367–394. <https://doi.org/10.1093/jopart/mug027>
- Bryson, J. M. (2011). *Strategic planning for public and nonprofit organizations: A guide to strengthening and sustaining organizational achievement*. Jossey-Bass.
- Cameron, K. S. (1986). Effectiveness as paradox: Consensus and conflict in conceptions of organizational effectiveness. *Management Science*, 32(5), 539–553. <https://doi.org/10.1287/mnsc.32.5.539>
- Davenport, T. H., & Harris, J. G. (2007). *Competing on analytics: The new science of winning*. Harvard Business Review Press.
- Day, D. V. (2000). *Leadership development: A review in context*. The Leadership Quarterly, 11(4), 581-613.
- Deutsch, M. (2011). *The resolution of conflict: Constructive and destructive processes*. Yale University Press.
- Dyer, J. H., Gregersen, H. B., & Christensen, C. M. (2011). The Innovator's DNA: Mastering the five skills of disruptive innovators. *Harvard Business Review*, 89(12), 60-67.
- Etzioni, A. (1964). *Modern organizations*. Prentice-Hall.
- FAO. (2019). The State of Food Security and Nutrition in the World 2019. Retrieved from <http://www.fao.org/3/ca5162en/ca5162en.pdf>
- Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam Books.
- Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. Paulist Press.
- Hiatt, J. M. (2006). *ADKAR: A model for change in business, government, and our community*. Prosci.
- Hussain MI, Morufu OR, Henry OS (2021). Patterns of Chemical Pesticide Use and Determinants of Self-Reported Symptoms on Farmers Health: A Case Study in Kano State for Kura Local Government Area of Nigeria. *Research on World Agricultural Economy*. 2,1. DOI: <http://dx.doi.org/10.36956/rwae.v2i1.342>.
- Hussain MI, Morufu OR, Henry OS (2021). Probabilistic Assessment of Self-Reported Symptoms on Farmers Health: A Case Study in Kano State for Kura Local Government Area of Nigeria. *Environmental Analysis & Ecology Studies* 9(1). EAES. 000701. 2021. DOI: 10.31031/EAES.2021.09.000701. Pp. 975- 985. ISSN: 2578-0336.
- Isah HM, Raimi MO, Sawyerr HO, Odipe OE, Bashir BG, Suleiman H (2020) Qualitative Adverse Health Experience Associated with Pesticides Usage among Farmers from Kura, Kano State, Nigeria. *Merit Research Journal of Medicine and Medical Sciences*, 8(8) 432-447.

- Isah, HM., Sawyerr, HO., Raimi, MO., Bashir, BG., Haladu, S. & Odipe, OE. (2020). Assessment of Commonly Used Pesticides and Frequency of Self-Reported Symptoms on Farmers Health in Kura, Kano State, Nigeria. *Journal of Education and Learning Management (JELM)*, HolyKnight, vol. 1, 31-54. doi.org/10.46410/jelm.2020.1.1.05.
- Jacob OA, Anuoluwa OE and Raimi MO (2023) The notorious daredevils: potential toxic levels of cyanide and heavy metals in cassava flour sold in selected markets - taken Oke Ogun Community, Oyo State as an example. *Front*.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and transactional leadership: A meta-analytic test of their relative validity. *Journal of Applied Psychology*, 89(5), 755-768.
- Kaplan, R. S., & Norton, D. P. (2001). *The strategy-focused organization: How balanced scorecard companies thrive in the new business environment*. Harvard Business Press.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). Wiley.
- Katzenbach, J. R., & Smith, D. K. (1993). *The wisdom of teams: Creating the high-performance organization*. Harvard Business Press.
- Kotter, J. P. (1996). *Leading change*. Harvard Business Press.
- Kram, K. E. (1985). *Mentoring at work: Developmental relationships in organizational life*. Glenview, IL: Scott, Foresman.
- Men, L. R. (2014). Strategic internal communication: Transformational leadership, communication channels, and employee satisfaction. *Management Communication Quarterly*, 28(2), 313-344.
- Modupe AO, Adebayo O, Sawyerr OH, Opasola AO, Morufu OR (2023) Concentrations of Pesticides Residues in Grain Sold at Selected Markets of Southwest Nigeria. *Natural Resources for Human Health*. 1-15 <https://doi.org/10.53365/nrfhh/171368>. eISSN: 2583-1194.
- Moore, M. H. (1995). *Creating public value: Strategic management in government*. Harvard University Press.
- Morufu OR (2021). "Self-reported Symptoms on Farmers Health and Commonly Used Pesticides Related to Exposure in Kura, Kano State, Nigeria". *Annals of Community Medicine & Public Health*. 1(1): 1002.
- Nigeria Sustainable Development Goals (SDGs) Indicators Baseline Report 2016. <https://www.undp.org/nigeria/publications/nigeria-sdgs-indicators-baseline-report-2016>
- Olalekan RM, Muhammad IH, Okoronkwo UL, Akopjubaro EH (2020). Assessment of safety practices and farmer's behaviors adopted when handling pesticides in rural Kano state, Nigeria. *Arts & Humanities Open Access Journal*. 2020;4(5):191–201. DOI: 10.15406/ahoaj.2020.04.00170.

- Oshatunberu, MA., Oladimeji, A., Sawyerr, OH., & Raimi, MO. (2023). Searching for what you can't see – evaluation of pesticide residues in grain sold at selected markets of Southwest Nigeria. *Current Research in Public Health*, 3(1), 10– 36. Retrieved from <https://www.scipublications.com/journal/index.php/crph/article/view/566>.
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge University Press.
- Quinn, R. E., & Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, 29(3), 363–377. <https://doi.org/10.1287/mnsc.29.3.363>
- Raimi MO, Sawyerr HO and Isah HM (2020) Health risk exposure to cypermethrin: A case study of kano state, Nigeria. *Journal of Agriculture*. 7th International Conference on Public Healthcare and Epidemiology. September 14-15, 2020
- Raimi MO, Tonye VO, Omidiji AO, Oluwaseun EO (2018) Environmental Health and Climate Change in Nigeria. World Congress on Global Warming. Valencia, Spain. December 06-07, 2018.
- Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest*, 13(2), 74-101.
- Suleiman RM, Raimi MO and Sawyerr HO (2019) A deep dive into the review of National Environmental Standards and Regulations Enforcement Agency (NESREA) Act. *International Research Journal of Applied Sciences*. pISSN: 2663-5577, eISSN: 2663-5585. DOI No. Irjas.2019.123.123. www.scirange.com.
- United Nations Development Programme (UNDP). (2015). *Governance for sustainable development: Integrating governance in the post-2015 development framework*. UNDP Policy Paper.