

# Evaluating the Integration of Sustainable Development Goals into National Policies and Development Plans of Nigeria

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**Abstract:-** Nigeria has formulated and implemented numerous national development plans with the aim of achieving long-term development. However, these plans have not adequately addressed the need for a comprehensive development strategy that takes into account the impact of diverse development plans and policies on global sustainable development goals. This research endeavour aimed to establish a framework for evaluating the interlinkages among various goals and targets, specifically focusing on the Water-Energy-Food Nexus within the context of Nigeria's development framework and policies. Employing content analysis as the chosen methodology, the study scrutinized the Nigerian Economic Recovery and Growth Plan (ERGP) 2017-2020 and the National Policy on Food and Nutrition (NPFN) to identify possible synergies and trade-offs with respect to SDGs 1, 2, 6, and 7. The analysis of interactions between the ERGP and the SDGs yielded 1,978 scored instances, revealing a 25% synergy, 5% trade-offs, and 70% neutral relationships. In the case of the NPFN and the SDGs, the study examined 280 interactions, indicating a 63% synergy, 7% trade-offs, and 30% neutral relationships. This research contributes to the knowledge base by offering policymakers in various sectors a broader understanding of the connections between different national policies and the SDGs.

**Keywords:-** Sustainable Development Goals, Synergies; Tradeoffs; Neutral-Interactions; Economic Recovery and Growth Plan; National Policy on Food and Nutrition; Poverty; Water; Energy; Food; Nigeria.

## I. INTRODUCTION

The United Nations Conference on Sustainable Development in 2012 recognized the limitations of the Millennium Development Goals (MDGs) in achieving their aims completely. As a response, the conference introduced the Sustainable Development Goals (SDGs), which aimed to establish a comprehensive set of goals balancing the environmental, social, and economic dimensions of sustainable development (UN, 2015a). This approach gained unprecedented global consensus in 2015 through the COP21 Paris Agreement by the United Nations Framework Convention on Climate Change (UNFCCC) and the

adoption of the resolution "Transforming our World: the 2030 Agenda for Sustainable Development" (UN, 2015a; UNFCCC, 2015). These initiatives serve as strategic guidance and present a unique opportunity to achieve inclusive and sustainable development within the boundaries of planetary and social justice constraints (Del Río Castro et al., 2021). Despite the challenges ahead (Osburg, 2017), they offer a viable roadmap for mitigating anthropogenic impacts on the Earth while promoting global governance and policy coherence (Dalby, 2019; Kanie, 2017).

The SDGs consist of 17 goals and 169 targets, collectively depicting a vision of what the world could achieve by 2030 if all targets are met (UN, 2015b). However, in Nigeria, one of the most significant challenges facing the SDGs is the difficulty in reaching the intended demographic. The country still faces extreme poverty, and it has recently surpassed India as the world's poverty capital (Uzoma, 2020). Despite previous efforts made through the MDGs, a considerable number of impoverished individuals remain, while inequalities and social exclusions persist in Nigeria today.

Moreover, it is crucial to recognize that pursuing one SDG target may have unintended consequences on the achievement of other targets. The interconnected nature of the SDGs implies that progress toward one goal may contribute to the attainment of multiple objectives, or pursuing one goal may pose conflicts with the achievement of another (UNEP, 2020). Thus, a comprehensive approach is necessary to ensure overall human well-being, poverty reduction, and long-term development. Access to clean water, sanitation, hygiene, electricity, and food are fundamental elements in this regard (FAO, 2014; WEF, 2011; Weitz et al., 2014).

While the SDG framework demonstrates exceptional balance through the triple bottom line when viewed as a whole, such balance is not always mirrored within each SDG because they were intended as separate goals (Fortunate M. & L., 2017). This raises the risk of policy glitches, in which policymakers and practitioners continue to cherry-pick which elements of the SDGs they want to implement, while others succumb to political opportunism or unnecessary and poorly thought-out tradeoffs, with no mitigation policies in place to mitigate

negative consequences (Fortunate M. & L., 2017). Identifying the connections between numerous targets of the Sustainable Development Goals (SDGs) and the various national policies will aid in the integration of diverse sectoral programs and develop coherent cross-sectoral policies to examine opportunities (Mainali, Luukkanen, Silveira, & Kaivo-oja, 2018).

Nexus techniques can help improve sustainability pathways by supporting greater resource use efficiency, lower pollution and waste output, and more coherent policy by finding positive synergies and negative trade-offs (Amón, 2015; Biswas, 2008; Li, 2012). The study by Liu et al. 2018 looked at numerous recent quantitative studies on the food-energy-water nexus, which meets basic human requirements,

to show the benefits of the nexus approach (Liu et al., 2018). Notwithstanding the significant improvements, 660 million people still do not have access to safe drinking water, 2.4 billion do not have adequate sanitation (WHO. & UNICEF., 2015), 795 million people suffer from chronic hunger (WFP, 2016), and 1.2 billion do not have access to electricity (IEA., 2015). Food, energy, and water are all interconnected and may influence all of the SDGs, yet they are generally managed separately through different policies developed by the various government ministries. Rasul Golam's work on Food, water, and energy security in South Asia: A nexus viewpoint from the Hindu Kush Himalayan area, also clearly utilized graphics to demonstrate the water, food, and energy nexus as shown below (Rasul, 2014):

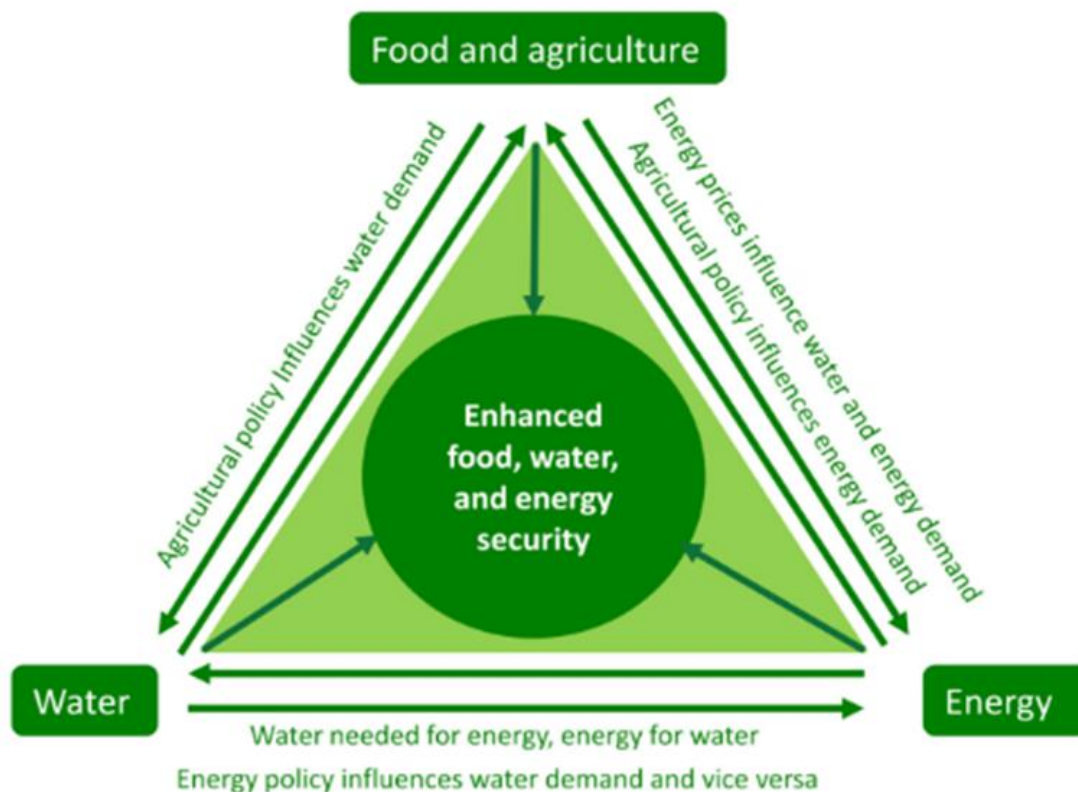


Fig 1 Water-Food-Energy Nexus.

(Source: Rasul Golam., Food, water, and energy security in South Asia (Rasul, 2014)).

Several national development plans have been implemented in Nigeria to achieve sustainable development. However, these plans have not adequately addressed the interconnections and potential conflicts between different development goals and targets. Consequently, there is a lack of comprehensive strategies that consider synergies and minimize trade-offs across Nigeria's path towards achieving the Sustainable Development Goals (SDGs). Recognizing this gap, this study has developed a framework to assess the linkages among various goals and targets, conducted an analysis of external impacts to identify trade-offs and synergies within the Water-Energy-Food Nexus, and

provided expert recommendations on how Nigeria can adopt a robust and sustainable development framework aligned with its national plan and the global agenda for 2030.

It is worth noting that no previous studies have quantified the specific contributions of nexus approaches to Nigeria's progress towards the SDGs. Furthermore, there is currently no comprehensive thesis on Nigeria that has analyzed and presented precise and collective findings based on the goals examined in this research (SDGs 1, 2, 6, and 7).



Fig 2 The Analyzed Sdgs Against the ERGP and the NPFN.

This study brings attention to the interconnectedness of efforts aimed at achieving specific Sustainable Development Goals (SDGs) and how they can either facilitate or hinder the implementation of other SDGs through national policies. Specifically, it focuses on two key documents: the National Economic Recovery and Growth Plan and the National Policy on Food and Nutrition in Nigeria, both of which were developed in the context of the SDGs adopted by world leaders in 2015. By examining these policies, the study investigates the potential synergies and trade-offs between them and SDGs 1, 2, 6, and 7.

The research utilizes case studies and draws upon relevant data sources to explore the trade-offs and synergies involved in integrating these specific SDGs and their objectives within Nigeria's policy landscape. Furthermore, it highlights the challenges associated with integrating individual goals or targets, emphasizing the importance of recognizing, forecasting, and addressing potential negative externalities resulting from trade-offs within these interlinkages.

The article is structured as follows: The introduction provides an overview, followed by the materials and methods section (section 2), which describes the approach utilized in the study. Section 3 presents visualizations and discussions on the interactions between the investigated SDGs and policies, employing qualitative content analysis and cross-impact analysis to analyze the policies' objectives and the targets of the SDGs. Finally, section 4 concludes the research and provides recommendations based on the findings.

By delving into the interdependencies between national policies and SDGs, this study aims to provide valuable insights for the development of a comprehensive and effective sustainable development framework in Nigeria, aligning with the country's national plan and the global agenda for 2030.

## II. MATERIALS AND METHODS

In line with the objectives of the study, we analyzed two policies from Nigeria that were developed after the adoption of the SDGs by the UN in September 2015 (UN., 2015b). First is the Economic Recovery and Growth Plan (ERGP), a Medium Term Plan for 2017 – 2020 developed to eliminate the bottlenecks that impede innovation and market-based solutions by leveraging Science, Technology, and Innovation (STI) and building a knowledge-based economy that is consistent with the aspirations of the Sustainable Development Goals (SDGs) given that the initiatives address its three dimensions of economic, social and environmental sustainability issues (NIGERIA., 2017). The second is the Reviewed National Policy on Food and Nutrition - a long-term policy developed by the Federal Ministry of Budget and National Planning, passed by the national assembly, and assented to by the President Federal Republic of Nigeria in 2016 (Planning., 2016). These policies were then analyzed with the Sustainable Development Goals One (1), two (2), Six (6), and Seven (7).

## III. METHODOLOGY

The methodology primarily addresses the alignment of domestic policy aims with global objectives. Similar to the methodology used in this research, Weitz et al. (2014) used three complementary ways to analyze linkages across SDGs: (i) screening for interactions among proposed goals; (ii) analyzing the nature of target relationships (interdependent, constraining, and reinforcing); and (iii) finding 'nexus objectives' between sectors (Weitz et al., 2014). Content analysis; one of the types of qualitative analysis was carried out on the data. Content analysis is the systematic analysis of the content of a text (Yan Z. & Barbara, 1996). This content analysis was carried out using three key steps: Customization, scoring interactions, and analysis of the interactions. Two thousand two hundred and thirty-eight

(2238) interactions were analyzed in all; one thousand nine hundred and fifty-eight (1958) interactions from the Economic Recovery and Growth Plan, and two hundred and eighty (280) interactions from the National Policy on Food and Nutrition. This methodology also aligns with the concept of qualitative content analysis as outlined by Yan Zhang and Barbara M. Wildemuth (Yan Z. & Barbara, 1996).

**IV. CUSTOMIZATION**

This process involves customizing the data into Microsoft excel. This process is not random but involves sampling the policy objectives and the selected SDGs target for analysis. The SDGs and their targets were inputted on the horizontal axis while each of the two policies' objectives was entered on the vertical axis as shown below;

Table 1 The Analysis Table Template

The Policy Objectives /SDGs	SDG 1.1	SDG 1.2	SDG 1.3	SDG 1.5	SDG 1.a	SDG 1.b
Policy objective 1						
Policy objective 2						
Policy objective 3						
Policy objective 4						

Just like Nilsson et al. research where they use policy coherence analysis to assess goal connections, this research was designed to show the unique perspectives and inclusiveness that can help to show the relationship that exists between each of the SDGs targets and the policy objectives(Nilsson, 2016). This was done collaboratively, with discussions on the interpretation of the targets for the specific context:

- What does this objective mean?
- Does it address issues that are central to enhancing sustainability?
- What is the form of interaction between the policy and the SDGs (tradeoffs, synergy, or neutral relationships)?

When these questions were identified to show the relationship between the policy objectives and the SDGs targets, we proceeded to code the interactions.

**V. CODING INTERACTIONS**

After the subset of targets was selected and coded in a “cross-impact matrix”, each interaction was given a code against a guiding question. For each policy objective and the SDGs target, relevant literature was consulted to determine the type of relationship that exists between them. To code the interactions we used the numbers one (1), two (2), and Zero (0). Using a structured process, the identification of linkages, i.e. neutral (no direct relationships), synergies, and trade-offs, was initially carried out through a blended approach whereby interdisciplinary expertise and knowledge were complemented by targeted literature searches to create an interdisciplinary evidence base using these codes:

- The synergies between the chosen objective and the SDG target were coded as One (1)
- The tradeoffs between the chosen objectives and the SDG target were coded as two (2)
- The objectives that do not have any direct relationships (neutral) with the goal were coded Zero (0)

The scored interactions were then visualized to show the various relationships between the SDGs and the policies.

- The boxes for the synergies were colored-----Yellow
- The boxes for the tradeoffs were colored-----Red
- The boxes for the neutral were colored-----Blue

➤ *Analysis*

The dataset underwent analysis in Microsoft Excel in order to ascertain the quantified occurrences of synergies, trade-offs, and neutral relationships between individual policy objectives and the targets outlined in the Sustainable Development Goals (SDGs). The subsequent data visualization employed a bar chart to illustrate the findings, while a pie chart was utilized to determine the proportion of interactions. These analytical procedures align with the qualitative methodology espoused by Gala et al. in their scholarly investigation on harnessing synergies and addressing trade-offs among specific Goals (Gala et al., 2010).

**VI. RESULT AND DISCUSSION**

➤ *The Economic Recovery and Growth Plan (ERGP 2017-2020)*

The ERGP's vision through a short-term plan is for long-term, inclusive growth. It called for an urgent pursuit of structural economic transformations that focus on enhancing both public and private sector efficiency. It is aimed at raising national productivity and establishing long-term production diversification to significantly develop the economy and provide maximum welfare for citizens, starting with food and energy security. This plan outlines the type of Nigeria that the people want in the short to medium term, and it promotes the use of science, technology, and innovation to spur progress. It also lays out a plan for the type of foundation that needs to be created for future generations, with a focus on enhancing Nigeria's youth's ability to lead the country into the future(Planning, 2017).

The ERGP had three major strategic objectives that were designed to achieve the above-mentioned vision of inclusive growth:

- Restoring growth,
- Investing in our people, and
- Constructing a globally competitive economy.

Stabilizing the macroeconomic environment, achieving agriculture and food security, ensuring energy sufficiency (power and petroleum products), improving transportation infrastructure, and driving industrialization by focusing on Small and Medium Scale Enterprises were the key execution priorities to achieve the ERGP's objectives (NIGERIA., 2017).

Table 2 Visualizations of the Interactions between the ERGP and the SDGs 1,2,6 &7

	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G				
	1. 1	1. 2	1. 3	1. 4	1. 5	1. a	1. b	2. 1	2. 2	2. 3	2. 4	2. 5	2. a	2. b	2. c	6. 1	6. 2	6. 3	6. 4	6. 5	6. 6	6. a	6. b	7. 1	7. 2	7. 3	7. a	7. b	
1																													
1. 1																													
1. 1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	2	0	0	1	1	1	1	1
1. 2	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. 3	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. 2																													
1. 2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
1. 2	1	1	0	1	0	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
1. 2	1	1	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	
1. 2	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	
1. 2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	
1. 2	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	
1. 3																													
1. 3	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. 3	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	2	0	2	2	0	0	0	0	2	2	2	2	2	2
1. 3	0	0	0	0	2	2	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1. 3	1	1	0	1	2	2	2	1	1	0	2	0	0	0	0	2	0	2	2	0	0	0	0	2	2	2	2	2	2

1.3.5	0	1	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1.4.4																																							
1.4.1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.2	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.3	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.4	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.6	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.7	1	1	0	0	0	1	1	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.8	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.9	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.10	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.11	1	0	0	1	0	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.12	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1.4.13	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.4.14	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2 continues...

1.5																																							
1.5.1	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5.2	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.5.3	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.6																																							
1.6.1	1	1	0	0	2	1	1	0	0	0	2	0	0	0	0	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
1.6.2	0	0	0	0	2	1	1	0	0	0	2	0	0	0	0	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

1.6.3	1	1	0	0	2	1	1	0	0	0	2	0	0	0	0	2	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1.6.4	0	0	0	0	2	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2
1.6.5	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2
1.6.6	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
1.6.7	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	2	2	2	2
2																															
2.1																															
2.1.1	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
2.1.2	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
2.1.3	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
2.1.4	1	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	1	1	0	0	0	0	1	1	1	1	1	1	1	1
2.1.5	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
2.1.6	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
2.1.7	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
2.2																															
2.2.1	0	0	0	0	1	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.2	0	0	0	0	1	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.3	0	0	0	0	1	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2.4	0	0	0	0	1	1	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3																															
2.3.1	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3																															
3.1																															
3.1.1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.1.2	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.1.3	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.1.4	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 2 continues...

3.2																															
3.2.1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.2.2	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.2.3	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.3																															
3.3.1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.3.2	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.4																															
3.4.1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.4.2	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.4.3	1	1	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.5																															
3.5.1	0	0	0	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
3.6																															
3.6.1	1	1	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1
3.6.2	1	0	0	0	1	1	1	1	1	1	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
3.6.3	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
3.6.4	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
3.6.5	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
3.6.6	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
3.6.7	1	1	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1

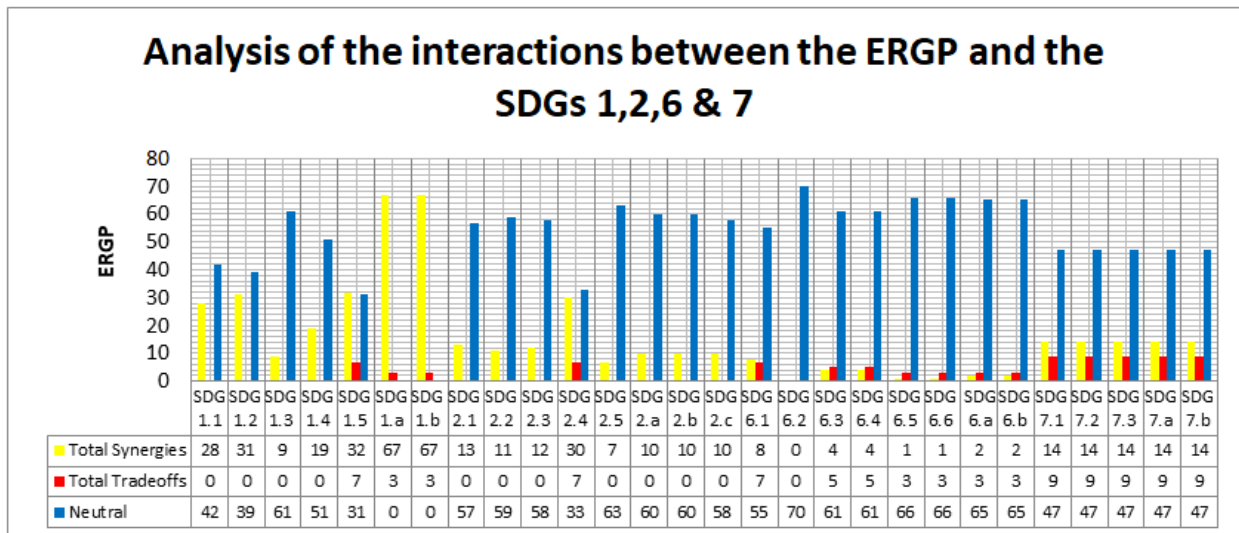


Fig 3 Analysis of the Interactions between the ERGP and the SDGs

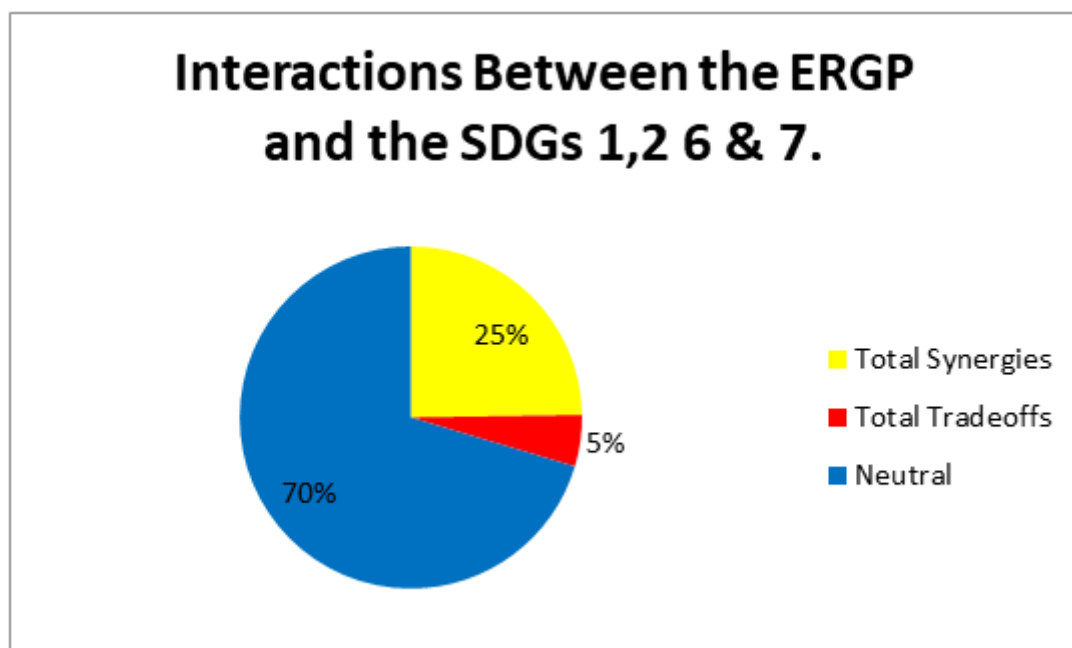


Fig 4 Percentage of Interactions between the ERGP and the SDGs 1,2,6, and 7.

In total, out of the 1978 interactions that were scored and analyzed, there were 485 interactions which made up 25% of the interactions that showed synergies, 95 interactions that made up 5% of the entire interactions that showed tradeoffs while 1378 made up 70% on the interactions showed neutral.

Out of the 70 interactions analyzed for each SDGs target and the ERGP objectives, SDG 1.5 focuses on building the resilience of the poor and those in vulnerable situations and reducing their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters by 2030 showed 32 interactions for synergies, 7 interactions showed tradeoffs and 31 interactions were neutral.

The tradeoffs arise from the divergent priorities highlighted in ERGP columns 1.3 and 1.6, which respectively emphasize the development of solid minerals, including mining activities, and the promotion of crude oil exploration. This echoes the findings of Adeyinka et al., who assert that coal mining can lead to various adverse effects such as subsidence (e.g., Iva Valley), alteration of topography due to mine waste dumps, pollution of water bodies and groundwater by acidic mine water, potential corrosion of machinery and health risks to miners caused by flooding with acid water, insufficient ventilation impacting miners' well-being, and air pollution resulting from coal dust (Adeyinka et al., 2019).

The tradeoffs documented in the report between Sustainable Development Goal (SDG) 1.5 and ERGP column 1.6 further substantiate the observations made by Campbell, who noted that emissions from oil-polluted



regions and petrochemical plants can introduce unpleasant odors and affect the taste of local water supplies (Campbell, 1983). These findings also align with the research conducted by Blanes-Vidal et al. in 2012, indicating that oil production and refining involve the consumption and production of potentially harmful substances, some of which are toxic, malodorous, or flammable, thereby raising concerns about the health implications of exposure to such environmental contaminants (Blanes-Vidal, 2012). Moreover, these results corroborate the report by Ordinioha and Brisibe in 2013, which highlights the elevated prevalence rates of various symptoms, including headaches, nausea, diarrhea, sore eyes, sore throat, cough, itchy skin, rashes, respiratory issues, and general discomfort, among oil-polluted communities in the Nigerian delta (Ordinoh & Brisibe, 2013).

There were tradeoffs between SDG 1.a and SDGs 1.b, and ERGP column 1.3. Out of the 70 interactions analyzed, 67 showed synergies, 3 showed tradeoffs and there were no neutral interactions for the SDGs 1.a and 1.b each. This is consistent with the findings of Berman et al. (2012), Cutter et al. (2008), and Engle (2011), who classified the SDGs into three categories: convergence of social vulnerability, natural hazard mitigation, and social-ecological resilience techniques through adaptive capacity. Their studies categorize SDGs 1, 2, and 5 as socially vulnerable. A close examination of these outcomes and the SDG1.a reveals that there is a tradeoff with the ERGP column 1.3 (Berman R., 2012; Cutter SL., 2008; NL., 2011).

SDGs 2.4 showed tradeoffs with columns 1.3 and 1.6. Out of the 70 interactions analyzed, 30 showed synergy, 7 showed tradeoffs and 33 were neutral. Columns 1.3 and its sub-columns promote mining and recruitment of more rural dwellers into mining while column 1.6 and its sub-columns promote crude oil exploration and mining. These do not in any way align with the concept of the SDG 2.4 which aims to “ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters and that progressively improve land and soil quality.” This further confirms the research by Ogunmodede and Olufemi 2021, on safeguarding the food basket from oil pollution in Nigeria: post-oil city perspective. According to their findings, the Niger Delta, one of the country's most productive food baskets, has been completely polluted by oil spills on land, wetlands, and offshore, and oil spills continue to have an unquestionably destructive impact on people's lives and livelihoods, posing a threat to food security (Ogunmodede & Olufemi, 2021). Also, the analysis aligns with the report that Mining activities have environmental impacts due to sediment movement and contamination of areas and also pose risks to people's food security (Blanco, 2020).

SDGs 6.1 interactions showed 8 for synergies, 7 tradeoffs, and 55 neutral. The SDG 6.1 which focuses on “achieving universal and equitable access to safe and affordable drinking water for all by 2030” showed a tradeoff with the columns 1.3 and its sub-columns and 1.6 and its

columns of the ERGP. Coal mining and crude oil explorations both have adverse effects on equitable and clean water supply (Blanco, 2020; Ogunmodede & Olufemi, 2021).

The Interactions between the SDGs 6.3 and the ERGP showed 5 synergies, 4 tradeoffs, and 61 neutrals. The SDGs 6.3 which aims to “improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally by 2030” showed tradeoff with the columns 1.3 and its sub-columns and 1.6 and its columns of the ERGP. This is in line with the report by Ogunmodede and Olufemi 2021, that crude oil exploration leads to oil spillage which releases hazardous chemicals into the water bodies thereby reducing the water quality (Ogunmodede & Olufemi, 2021). The SDGs 6.4 which aims to substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity by 2030 also showed interactions with the ERGP as with the SDGs 6.3 above.

SDGs 6.5, 6.6, 6.a, and 6.b all showed 1 synergy, 3 tradeoffs, and 66 neutrals interactions with the ERGP. SDG 6.5 aims to implement integrated water resources management at all levels, including through transboundary cooperation as appropriate by 2030, SDG 6.6 aims to protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes by 2030, SDGs 6.a aims to expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies by 2030 and SDGs 6.b aims to support and strengthen the participation of local communities in improving water and sanitation management. All of these SDGs targets showed tradeoffs with the 1.6 columns and its sub-columns which aim to increase crude oil production in Nigeria (Ogunmodede & Olufemi, 2021).

SDGs 7.1, 7.2, 7.3 7.a, and 7.b all showed 14 synergies, 9 tradeoffs, and 47 neutral interactions with the ERGP. SDGs 7.1 aims to “ensure universal access to affordable, reliable and modern energy services by 2030”, SDGs 7.2 aims to “increase substantially the share of renewable energy in the global energy mix by 2030”, SDGs 7.3 aim to “By 2030, double the global rate of improvement in energy efficiency by 2030”, SDGs 7.a aims to “enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology by 2030”, and SDGs 7.b aims to “expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, in accordance with their respective programs of

support by 2030”. All these SDGs targets showed tradeoffs with columns 1.3 and 1.6 of the ERGP. Chemical transformations occur as a result of coal-fired power plant operations. Carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), sulfur trioxide (SO<sub>3</sub>), nitric oxide (NO), and nitrogen dioxide (NO<sub>2</sub>) are all released in substantial quantities during this process. Due to their ability to induce a variety of chemical reactions, the combination of pollutants causes climate change and has serious health consequences(Juciano G. & Kátia Da, 2020; M. Hendryx, 2020).

There were significant synergies between column 1 and its sub-columns of the ERGP and the entire SDGs 1, 2, 6, and 7. The ERGP sub-columns 1.1.1 to 1.1.3 focus on sustainable agriculture and increasing food production which aligns with the concept of SDGs 1 and 2 (UN., 2015b). The entire column 3 and its sub-columns equally

showed some synergies with the SDGs. The ERGP column 3.1 focuses on improving health care, column 3.2 focuses on improving education, and column 3.3 focuses on improving social inclusions. High educational accomplishment increases access to meaningful livelihood options, hence preventing poverty. Increased money, on the other hand, allows for improved access to high-quality education. Also, Higher educational attainment means that parents have a better understanding of how to care for their children's health, and as a result, infant mortality rates are lower(Obiwulu., 2019). On the ERGP, column 2.1 focuses on power generation, 2.2 focuses on transport infrastructures, and 2.3 focuses on the business environment. 2.11 to 2.16 showed synergy with the SDGs 7. It also showed synergies with the SDGs 1.5 to SDGs 1.b (UN, 2015b). The other interactions without scientific proof yet to show between the ERGP and the SDGs were recorded as neutral.

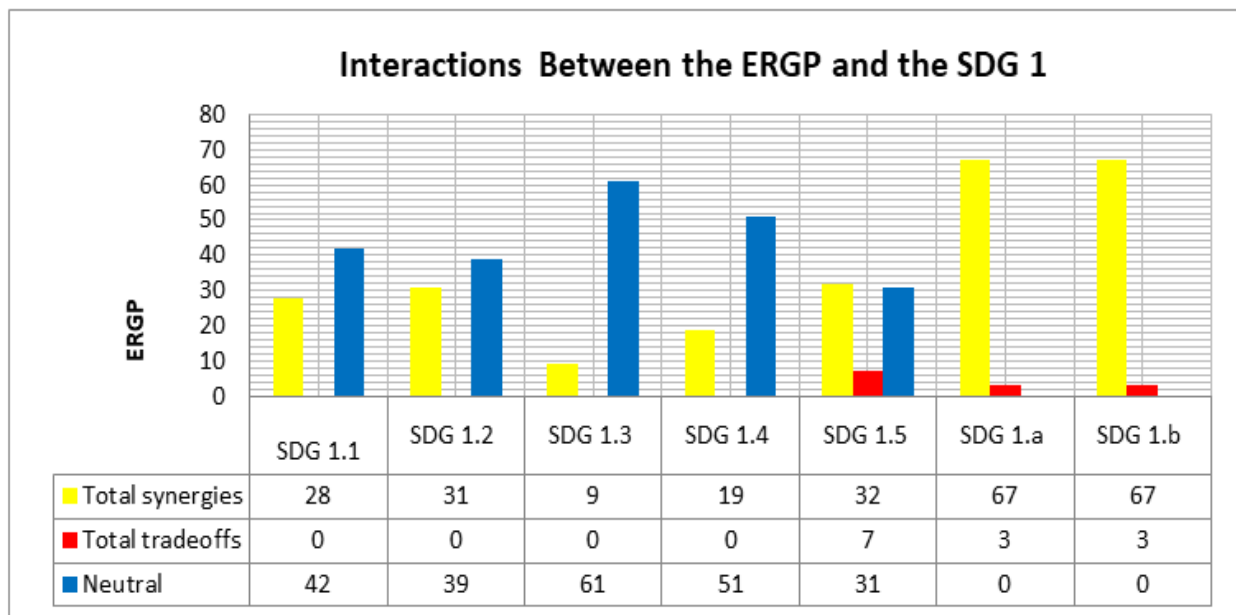


Fig 5 Interactions between the ERGP and the SDG 1

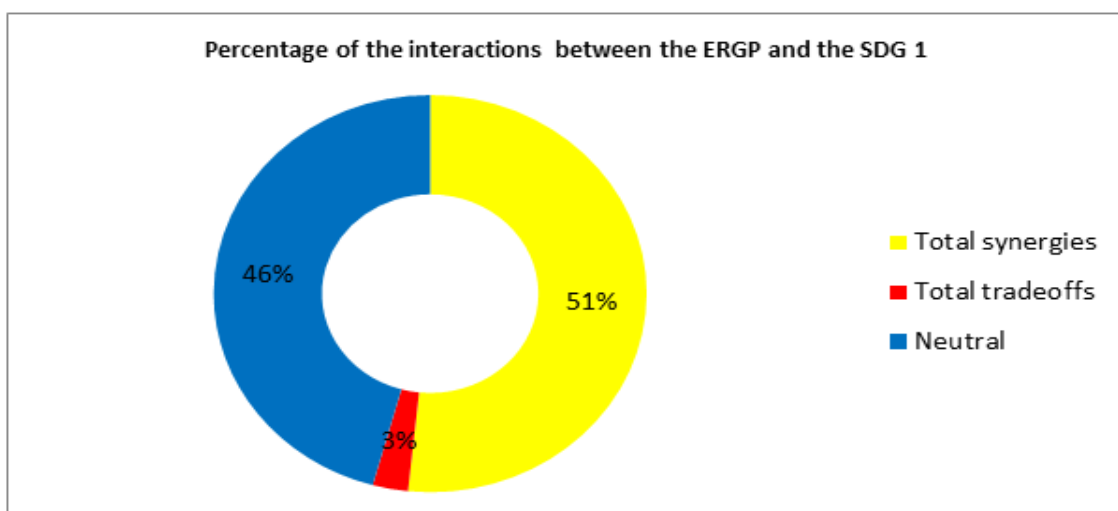


Fig 6 Percentage interactions between the ERGP and SDG 1

The analysis of the interactions between the ERGP and the SDG 1 shows that there are two hundred and fifty-three (253) positive interactions which account for fifty-one percent (51%) synergies, thirteen (13) negative interactions which account for three percent (3%) tradeoffs and two hundred and twenty-four (224) neutral interactions which account for forty-six percent (46%) of the total interactions.

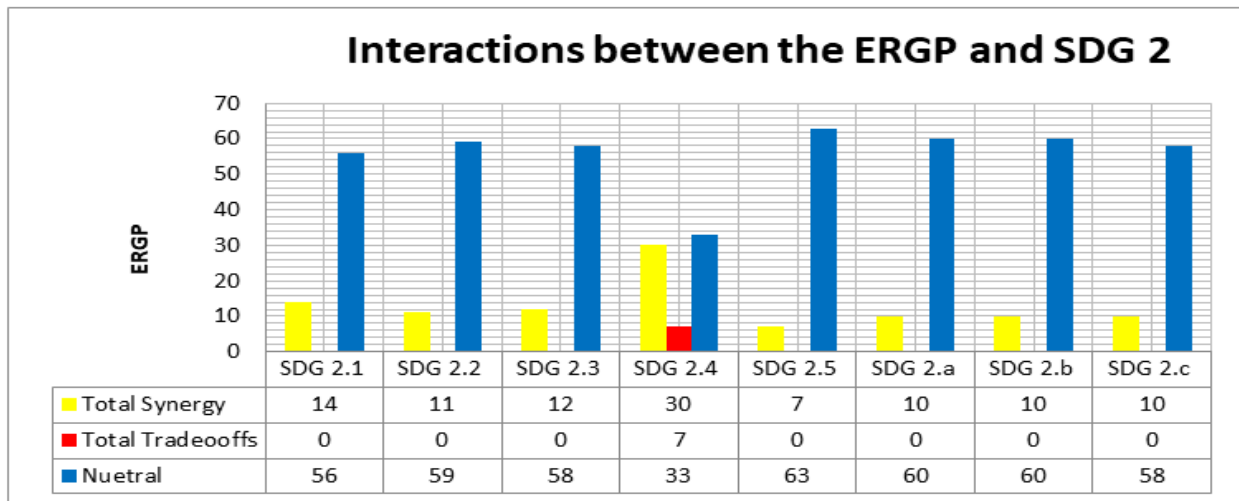


Fig 7 Interactions between the ERGP and SDG 2

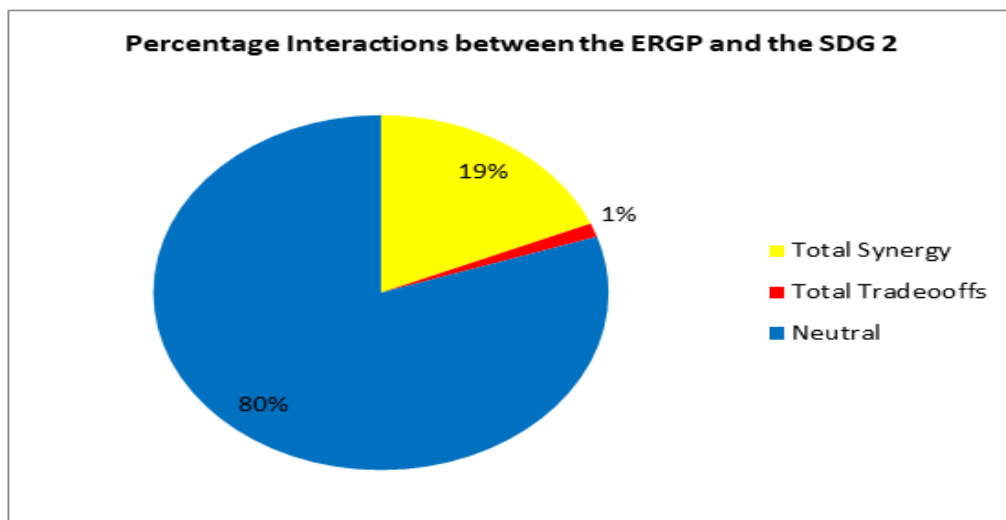


Fig 8 Percentage Interactions between the ERGP and SDGs 2

Out of the five hundred and fifty-eight (558) interactions between the ERGP and the SDGs 2, there were one hundred and four (19%) synergies, seven (7) tradeoffs (1%), four hundred and forty-seven (447) neutrals (80%).

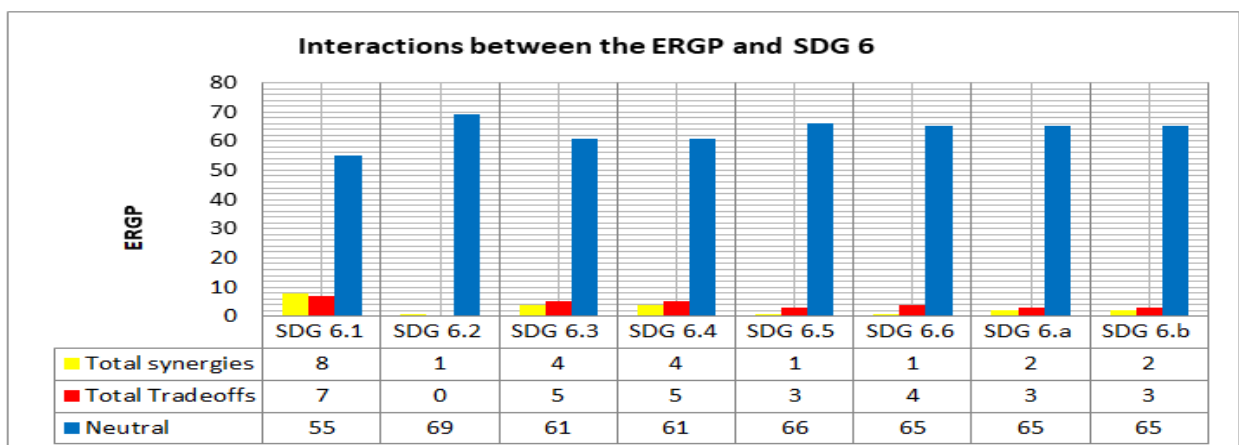


Fig 9 Interactions between the ERGP and SDG 6

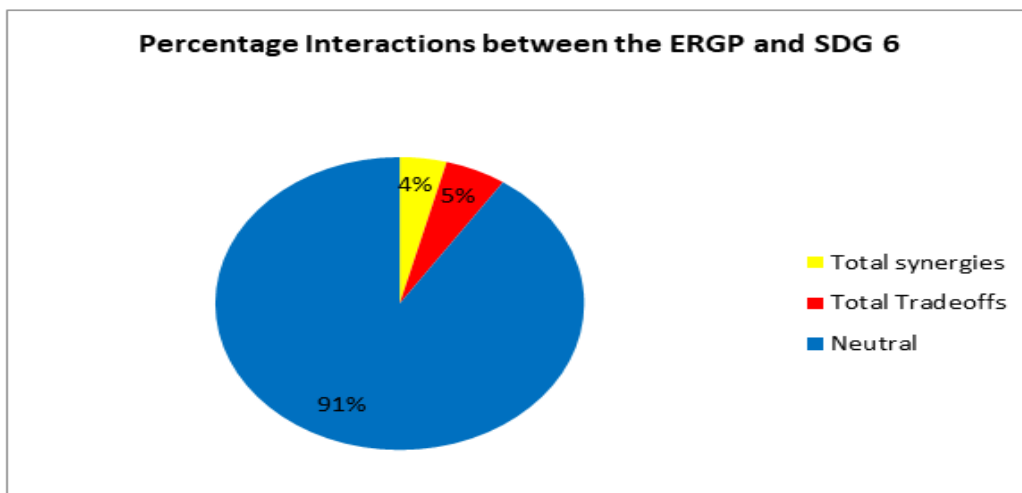


Fig 10 Percentage Interactions between the ERGP and SDG 6

From the five hundred and sixty (560) interactions between the ERGP and the SDGs 6, there were twenty-three (33) synergies (4%), thirty (30) tradeoffs (5%), and five hundred and seven (507) neutrals (91%) interactions.

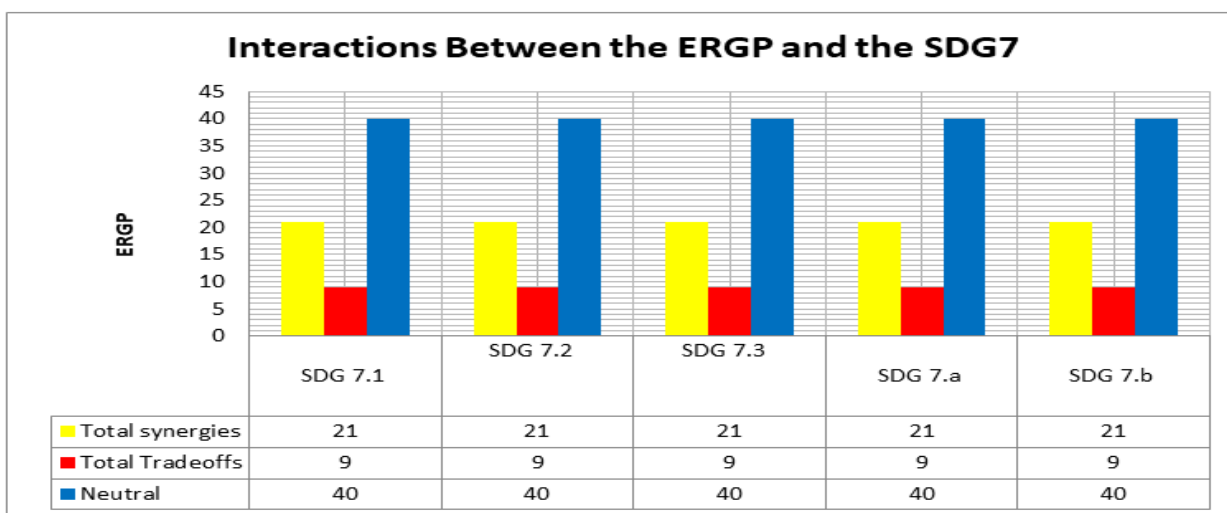


Fig 11 Interactions between the ERGP and SDG 7

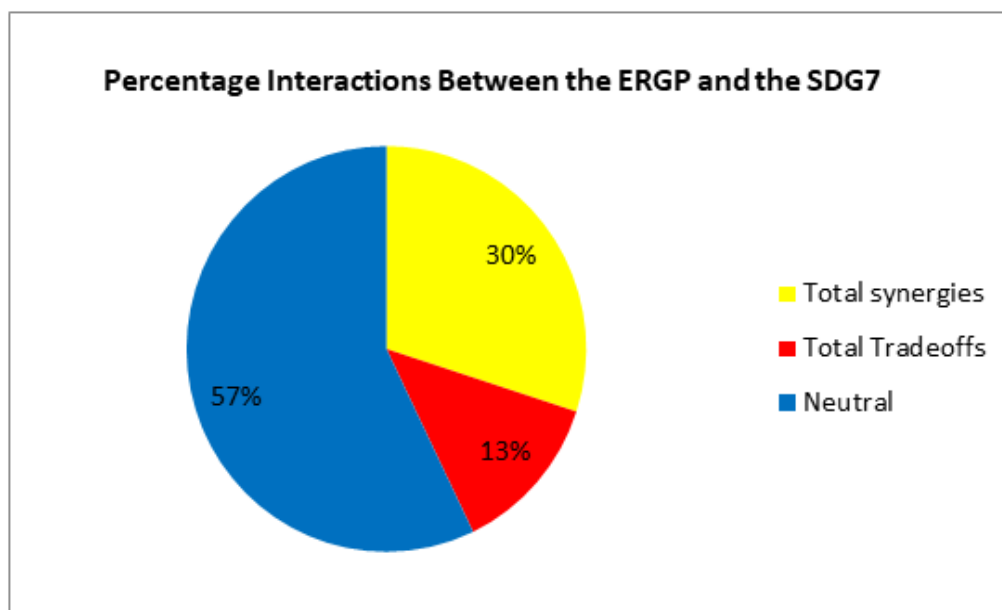


Fig 12 Percentage Interactions between the ERGP and SDG 7

Out of the three hundred and fifty (350) interactions between the ERGP and the SDGs, one hundred and five (105) show synergies (30%), forty-five (45) show tradeoffs (13%) while two hundred (200) show neutral (57%).

➤ *The National Policy on Food and Nutrition (NPFN)*

The National Food and Nutrition is a document that lays out the foundation for tackling food and nutrition insecurity in Nigeria at all levels, including the individual, household, community, and national levels. It directs the selection, development, and execution of intervention actions in a variety of areas. The Policy has been reviewed to enhance value and improve synergy between sectors and other government and partner efforts. It acknowledges the importance of governmental and private sector participation, as well as the fact that hunger elimination and nutrition enhancement are a shared duty of all Nigerians.

Table 3 Visualizations of the Interactions between the NPFN and the SDGs 1,2,6 &7

	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G	S D G		
	1. 1	1. 2	1. 3	1. 4	1. 5	1. a	1. b	2. 1	2. 2	2. 3	2. 4	2. 5	2. a	2. b	2. c	6. 1	6. 2	6. 3	6. 4	6. 5	6. 6	6. a	6. b	7. 1	7. 2	7. 3	7. a	7. b	
O bj 1	2	2	2	2	1	1	2	2	2	2	2	2	1	1	2	2	2	2	2	2	2	2	2	1	1	1	2	1	1
O bj 2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0
O bj 3	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0
O bj 4	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0
O bj 5	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0
O bj 6	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0
O bj 7	1	1	1	0	1	0	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	0	0	0	0	0
O bj 8	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0
O bj 9	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0	0	1	1	1	1	1	0	0
O bj 10	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0

The first objective of the NPFN is to improve food security at the national, community, and household levels. This shows tradeoffs with the SDGs 1 except 1.5 and 1.a. It also shows tradeoffs with SDGs 2 except for 2.a and 2.b. It shows tradeoffs for the entire SDGs 6 and, SDGs 7.3. Hunger elimination is one of the United Nations' sustainable development goals. To feed 10 billion people by 2050, we must strike the correct balance between sustainability, food security, and food safety, as well as make better use of food that has already been produced(Vågsholm, Arzoomand, & Boqvist, 2020). The rising cost of food is one of the obstacles to attaining food security, which has tradeoffs with

poverty eradication, ending hunger, and ensuring equitable access to water, sanitation, and hygiene. The limited supply of healthy and safe foods, as well as customers' food purchasing power, are threats to food security, which can lead to food insecurity(Vågsholm et al., 2020).

There were significant synergies between the NPFN and the SDGs analyzed except for the SDG 7 which shows more neutral interactions due to a lack of scientific proof to back up any interactions that may exist between the SDG 7 and the NPFN. However, objectives 8 and 9 of the NPFN showed synergies with SDG 7, this is in line with the fact

that energy plays a critical role in ensuring food security and improving nutrition. Modern food systems rely significantly on fossil fuels, absorbing over 30% of available energy and emitting more than 20% of global greenhouse gas emissions(FAO, 2022). The synergies are a result of the relationship between the nutrition, and food security between the NPFN and the SDGs 1,2, and 6. Nutrition has a direct or indirect impact on seven of the Sustainable

Development Goals, and treating malnutrition is a critical component of reaching them. Ending poverty, ending hunger, achieving food security and improving nutrition, promoting access to clean water and promoting sustainable agriculture, as well as ensuring healthy lifestyles and promoting well-being for all at all ages, are all directly influenced by nutrition(Daniel L, 2021).

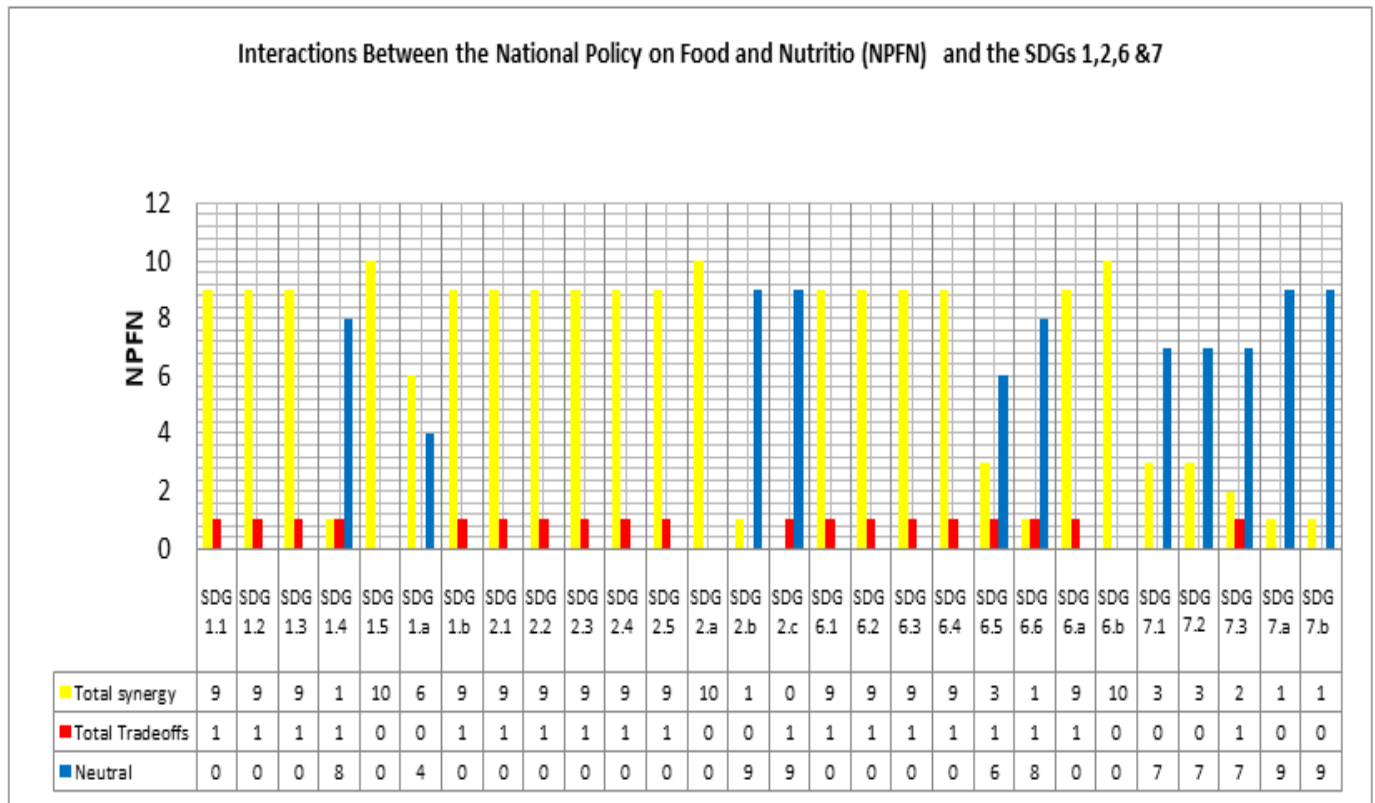


Fig 13 Interactions Between the National Policy on Food and Nutrition (NPFN) and the SDGs 1,2,6 & 7

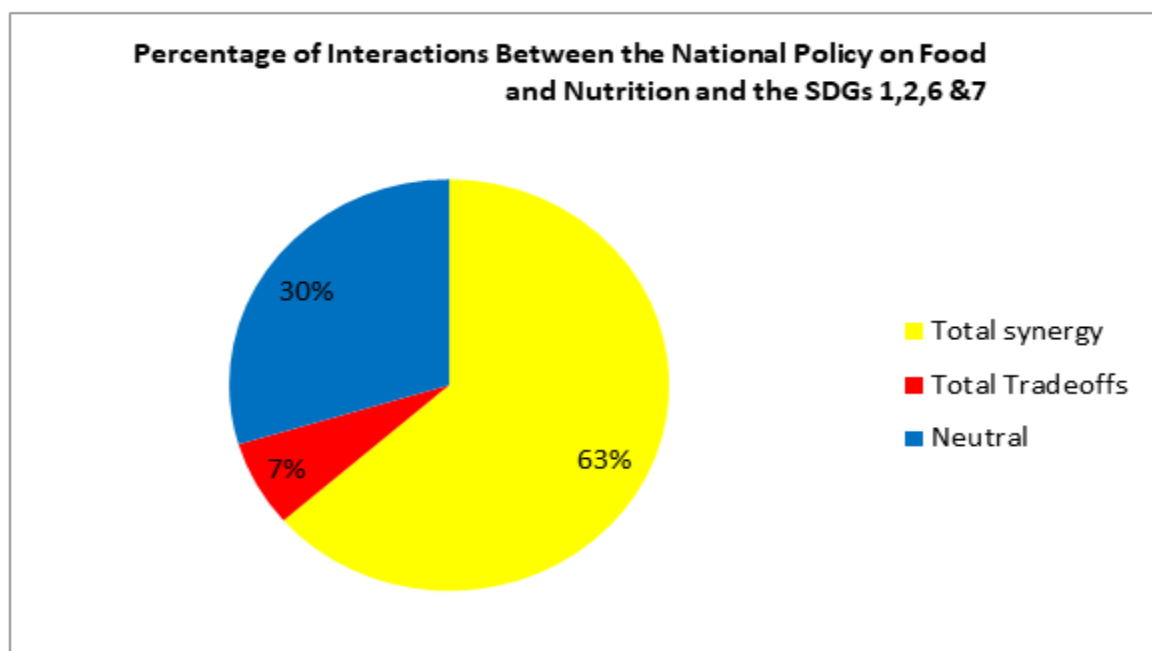


Fig 14 Percentage Interactions between the NPFN and the SDGs

Out of the two hundred and eighty (280) interactions between the NPFN and the SDGs, one hundred and seventy-eight (178) interactions which made up sixty-three percent (63%) of the total interactions showed synergies. Nineteen (19) Interactions which is seven percent (7%) of the entire interactions show tradeoffs while eighty-three (83) interactions which made up thirty percent (30%) of the total interactions show neutrality

➤ *Model of Policy-Setting Approach for Integrating the Sdgs into the National Development Plans and Policies*

This model proposes that, prior to the design of any national policy, there should be a thorough stakeholders mapping that draws experts from the seventeen SDGs, and

that these stakeholders should be engaged from the policy planning stage until it is assented to, to become an act bound by the national authority.

A cross-impact matrix should be created using the content analysis methodology to allow for the investigation of the interactions that exist between each of the policy draft objectives and the SDGs. This would allow all experts on the different goals to highlight the tradeoffs that would emerge during implementation between each SDG's aim and the policy objectives. The policy document should then be evaluated to ensure that every tradeoff highlighted by the experts is harmonized and kept to a bare minimum, before being presented to the appropriate authorities for approval.

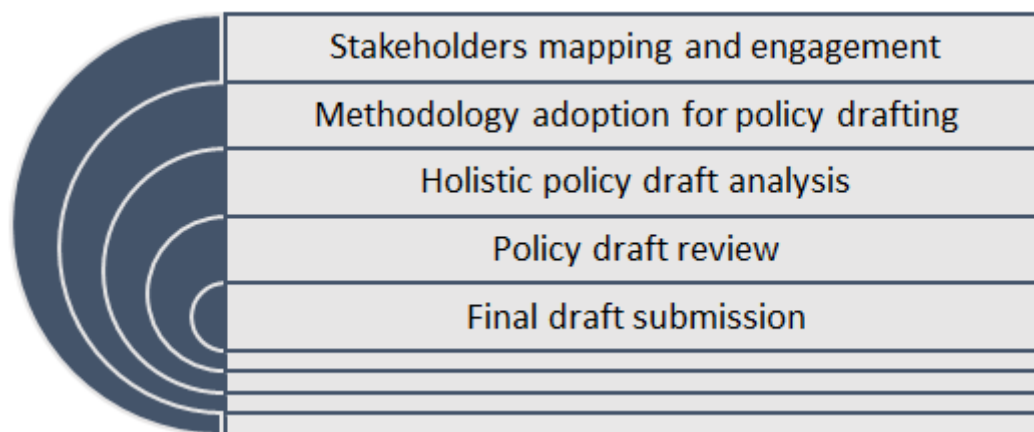


Fig 15. Model of Policy-Setting Approach for Integrating the Sdgs Into the National Development Plans and Policies

**VII. CONCLUSION**

This research has been able to show the interaction between the National Policies and Plans in Nigeria, and the SDGs 1, 2, 6 & 7. Although the policies have shown significant levels of level of positive interactions with these SDGs; there still exist some negative interactions which call for policy coherence and cross-sectoral collaborations between the government sectors.

The approach used in this paper shows how each of the SDGs targets is interconnected with the policies and what opportunities exist for mutually beneficial solutions in terms of national development, as well as the possibilities of one target impairing another policy objectives. Policymakers can use this methodology to take into account a more holistic view of possible outcomes from certain actions or inaction. This analysis has been done on a broad global scale, attempting to factor in considerations of time, space, economics, and feasibility. By using a content analysis methodology, the process can be reproduced within other contexts, being suitable to be scaled down to suit specific government policies and development plans, and even be applied for analyses of targets from other SDGs. The study also supports an assessment of how the national policies and plan can contribute to the achievement of the SDGs and identify co-benefits that could be developed between their implementations.

**RECOMMENDATION**

- Each Government Ministry should bring together experts with a diverse range of skills to identify the linkages between the 17 SDGs that are unique to their circumstances. This will assist governments in prioritizing investments and establishing a uniform language and strategy across sectors, allowing for cross-sector collaboration.
- Existing institutions and players, as well as their capacity to make progress on key SDGs defined at the national level, should be identified. This will aid in identifying strengths and weaknesses that need to be addressed or at the very least monitored. It will also assist in determining which SDGs to focus on to support several goals and objectives with good synergy.
- The government should create inter coordination mechanisms to allocate resources, share data and information, facilitate research and innovation, and build capacity, as well as apply a similar integrated approach to monitoring, evaluation, and review, with a focus on areas where tradeoffs may exist.
- The Nigerian government should start or join a movement that fosters collaboration to address the SDGs where progress will be the most difficult to accomplish.

➤ *Author Contributions:*

Conceptualization, O.D.O. ; methodology, O.D.O.; Literature review, M.A.A and M.M.; formal analysis, O.D.O, and T.O.; resources, T.O.; writing—original draft preparation, O.D.O.; writing—review and editing, M.A.A and O.D.O.; visualization, O.D.O, and M.M.

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➤ *Data Availability Statement:*

Not applicable.

➤ *Conflicts of Interest:*

The authors declare no conflict of interest.

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## APPENDIX

Table 1 The SDGs and their Target

<b>The Sustainable Development Goals and their Targets</b>	
SDGs 1	No Poverty: End poverty in all its forms everywhere
SDG 1.1	By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
SDG 1.2	By 2030, reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions
SDG 1.3	Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable
SDG 1.4	By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology, and financial services, including microfinance.
SDG 1.5	By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental shocks and disasters
SDG 1. A	Ensure significant mobilization of resources from a variety of sources, including through enhanced development cooperation, to provide adequate and predictable means for developing countries, in particular, least developed countries, to implement programs and policies to end poverty in all its dimensions
SDG 1. B	Create sound policy frameworks at the national, regional, and international levels, based on pro-poor and gender-sensitive development strategies, to support accelerated investment in poverty eradication actions.
SDG 2	Zero Hunger: end hunger and all forms of malnutrition by 2030
SDG 2.1	By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round
SDG 2.2	By 2030, end all forms of malnutrition, including achieving, 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women, and older persons
SDG 2.3	By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment
SDG 2.4	By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters, and that progressively improve land and soil quality
Table 1 continues...	
SDG 2.5	By 2020, maintain the genetic diversity of seeds, cultivated plants, and farmed and domesticated animals and their related wild species, including through soundly managed and diversified seed and plant banks at the national, regional, and international levels, and promote access to and fair and equitable sharing of benefits arising from the utilization of genetic resources and associated traditional knowledge, as internationally agreed

SDG 2. A	Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development, and plant and livestock gene banks to enhance agricultural productive capacity in developing countries, in particular, least developed countries
SDG 2. B	Correct and prevent trade restrictions and distortions in world agricultural markets, including through the parallel elimination of all forms of agricultural export subsidies and all export measures with equivalent effect, by the mandate of the Doha Development Round
SDG 2.c	Adopt measures to ensure the proper functioning of food commodity markets and their derivatives and facilitate timely access to market information, including on food reserves, to help limit extreme food price volatility
SDG 6	Ensure access to water and sanitation for all
SDG 6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all
SDG 6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
SDG 6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the release of hazardous chemicals and materials, halving the proportion of untreated wastewater, and substantially increasing recycling and safe reuse globally
Table 1 continues...	
SDG 6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity
SDG 6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate
SDG 6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers, and lakes
SDG 6. A	By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling, and reuse technologies
SDG 6. B	Support and strengthen the participation of local communities in improving water and sanitation management
SDG 7	Ensure universal access to affordable, reliable, and modern energy services
Table 1 continues...	
SDG 7.1	By 2030, ensure universal access to affordable, reliable, and modern energy services
SDG 7.2	By 2030, increase substantially the share of renewable energy in the global energy mix
SDG 7.3	By 2030, double the global rate of improvement in energy efficiency
SDG 7. A	By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency, and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology
SDG 7. b	By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked developing countries, by their respective programs of support

(Source: The United Nations Sustainable Development Goals -SDGs)(UN., 2015a)

Table 2 The Key Objectives of the Economic Recovery and Growth Plan

<b>ECONOMIC RECOVERY &amp; GROWTH PLAN 2017-2020</b>	
<b>1</b>	<b>RESTORING GROWTH – ECONOMIC DIVERSIFICATION PRIORITY SECTORS</b>
<b>1.1</b>	<b>Agriculture</b>
1.1.1	Increase agriculture GDP from N16.0 trillion in 2015 to N21.0 trillion in 2020 at an average annual growth rate of 6.92 percent (2017-2020).
1.1.2	Significantly reduce food imports and become a net exporter of key agricultural products, e.g., rice, tomatoes, vegetable oil, cashew nuts, groundnuts, cassava, poultry, fish, and livestock.
1.1.3	Become self-sufficient in tomato paste (by 2017), rice (by 2018), and wheat (by 2019/2020).
<b>1.2</b>	<b>Manufacturing</b>
1.2.1	Ensure manufacturing GDP growth moves from a dip of -7.84 percent in 2016 to 10.6 percent in 2020, translating to an average of 8.48 percent from 2018 to 2020.
1.2.2	Create forward and backward linkages among industrial sub-sectors and other sectors of the economy, e.g., solid minerals, agriculture, oil, and gas.
1.2.3	Increase local content to reduce the amount of foreign exchange required to buy raw materials and machinery, and to create jobs.
1.2.4	Enhance the foreign exchange earning capacity of manufactured goods to increase foreign exchange earnings.
1.2.5	Increase R&D, technology, and innovation to generate the competitive edge needed to penetrate the global economy.
1.2.6	Increase the employment share of manufacturing by 8 percent a year up to 2020.
<b>1.3</b>	<b>Solid minerals</b>
1.3.1	Grow solid minerals GDP from N103 billion (2015) to N141 billion (2020) at an average annual growth rate of 8.54 percent (2017-2020).
1.3.2	Facilitate the production of coal to fire power plants.
1.3.3	Produce geological maps of the entire country by 2020 (on a scale of 1:100,000).
1.3.4	Integrate artisanal miners into the formal sector.
1.3.5	Encourage and promote mineral processing and value addition industries that strengthen backward and forward linkages.

Table 2 Continue

1.4	<b>Services</b>
1.4.1	Achieve cutting-edge, global ICT standards.
1.4.2	Develop sufficient, efficient, affordable, and critical ICT infrastructure.
1.4.3	Encourage rapid ICT penetration among all socio-economic levels and increase the current coverage
1.4.4	Promote and encourage local production of ICT hard and software to reduce import dependence and generate foreign exchange by exporting to the regional and continental markets.
1.4.5	Increase the volume of assets and the diversity of financial instruments.
1.4.6	Review the capitalization of financial institutions.
1.4.7	Encourage lending to agriculture and manufacturing sectors through syndication with development banks and at affordable lending rates and minimum other charges.
1.4.8	Enhance the contribution of tourism to GDP.
1.4.9	Increase the number of visitors to Nigeria by 10 percent a year (from 2017).
1.4.10	Increase the volume of domestic tourism.
1.4.11	Promote and encourage patronage of local agricultural, creative industry, and manufactured products by operators in the tourism industry and strengthen backward and forward linkages as well, as to conserve foreign exchange.
1.4.12	Increase film production by 15 percent on an annual basis.
1.4.13	Export videos to generate USD1 billion in foreign exchange by 2020.
1.4.14	Improve enforcement of intellectual property rights for artistic works produced in Nigeria.
1.5	<b>Construction and real estate</b>
1.5.1	Overcome critical constraints in the construction and real estate sectors
1.5.2	Increase the availability of financing for the construction industry.
1.5.3	Invest in technical and vocational training for craftsmen (electricians, masons, carpenters, etc.) needed by the local industry.

Table 2 continue...

1.6	<b>Oil and gas</b>
1.6.1	Restore oil production to 2.2 mbpd in 2017 and increase it to 2.5 mbpd by 2020.
1.6.2	Increase local refining capacity to meet domestic demand and become a net exporter of petroleum products by 2019.
1.6.3	Expand domestic gas production to meet power generation and manufacturing demand.
1.6.4	Promote LPG for domestic use.
1.6.5	Increase local content in the upstream and downstream oil and gas sectors.
1.6.6	Ensure industry compliance with global health, safety, and environmental standards.
1.6.7	Reform NNPC to deliver returns to the Government and provide excellent service to customers
2	<b>BUILDING A COMPETITIVE ECONOMY</b>
2.1	<b>Power</b>
2.1.1	Improve energy efficiency and diversify the energy mix, including through greater use of renewable energy.
2.1.2	Facilitate private sector investment in generation, transmission, and distribution
2.1.3	Improve access to electricity for all Nigerians
2.1.4	Increase rural electrification through the use of off-grid renewable solutions
2.1.5	Restore financial viability in the electricity market
2.1.6	Implement a data-driven approach in power sector development planning
2.1.7	Eliminate sabotage of gas and power infrastructure
2.2	<b>Transport infrastructure</b>
2.2.1	Restore degraded sections of the Federal highway network to improve connectivity over a distance of 4,000 km.
2.2.2	Construct strategic rail projects to connect major economic centers across the country. The target is to complete the construction of the Lagos- Kano, and Lagos- Calabar rail projects.
2.2.3	Offer concessions on the four major airports to improve infrastructure maintenance and boost operational efficiency.
2.2.4	Dredge 1,000km of inland waterways and reinforce riverbanks to increase the capacity of inland waterways.
2.3	<b>BUSINESS ENVIRONMENT</b>
2.3.1	Make the Nigerian business environment more competitive.

Table 2 continue...

3	<b>INVESTING IN OUR PEOPLE</b>
3.1	<b>HEALTHCARE</b>
3.1.1	Improve the availability, accessibility, affordability, and quality of health services.
3.1.2	Expand healthcare coverage to all Local Governments.
3.1.3	Provide sustainable financing for the health care sector.
3.1.4	Reduce infant and maternal mortality rates.
3.2	<b>EDUCATION</b>
3.2.1	Ensure quality universal education for Nigeria's children and youth.
3.2.2	Increase the number of youth and adults with the skills required to secure employment and/or become entrepreneurs.
3.2.3	Prioritize education for girls.
3.3	<b>SOCIAL INCLUSION</b>
3.3.1	Increase social inclusion by enhancing the social safety net for the poor and vulnerable.
3.3.2	Address region-specific exclusion challenges, particularly in the North East and the Niger Delta.
3.4	<b>JOB CREATION AND YOUTH EMPOWERMENT</b>
3.4.1	Reduce unemployment from 13.9 percent (Q3 2016) to 11.23 percent by 2020 by creating over 15 million direct jobs between 2017 and 2020 or an average of 3.75 million jobs per annum.
3.4.2	Support the private sector to maximize its job creation potential and complement Government direct job creation.
3.4.3	Improve workforce employability through targeted skill-building programs.
3.5	<b>Population Growth Management</b>
3.5.1	Manage Nigeria's population growth for sustainable development.
3.6	<b>ENVIRONMENTAL SUSTAINABILITY</b>
3.6.1	Promote sustainable management of natural resources.
3.6.2	Address severe land degradation and desertification.
3.6.3	Attract financing for sustainable development projects.
3.6.4	Reduce gas flaring by 2 percentage points a year so that it is eliminated by 2020.
3.6.5	Install 3,000 MW of solar systems over the next 4 years.
3.6.6	Increase the number of households transiting from kerosene to cooking gas (LPG) to 20 percent by 2020.
3.6.7	Increase the number of households replacing kerosene lanterns with solar lamps by 20 percent by 2020.

(Source: The Nigerian Economic Recovery and Growth Plan; 2017-2020)(NIGERIA., 2017)

Table 3 National Policy on Food And Nutrition In Nigeria

<b>NATIONAL POLICY ON FOOD AND NUTRITION IN NIGERIA</b>	
Objective 1	To improve food security at the national, community, and household levels.
Objective 2	To reduce undernutrition among infants and children, adolescents, and women of reproductive age.
Objective 3	To significantly reduce micronutrient deficiency disorders, especially among the vulnerable group.
Objective 4	To increase the knowledge of nutrition among the populace and nutrition education in formal and informal training.
Objective 5	To promote optimum nutrition for people in especially difficult circumstances, including PLWHA.
Objective 6	To prevent and control chronic nutrition-related non-communicable diseases.
Objective 7	To incorporate food and nutrition considerations into the Federal, State, and Local Government sectoral development plans
Objective 8	To promote and strengthen the Research, Monitoring, and Evaluation of food and nutrition programs.
Objective 9	To strengthen systems for providing early warning information on the food and nutrition situation.
Objective 10	To ensure universal access to nutrition-sensitive social protection.

(Source: The National Policy on Food and Nutrition in Nigeria(Planning., 2016)