

## Food Insecurity and Policy Implementation in Nigeria: The Impediments to the Proper Implementation of Food and Agricultural Policies

Simone Trishana Morris

Institute of African Studies, Zhejiang Normal University

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### Abstract

The concern for food security is a cornerstone in the development process for every nation. One of the nations that has been concern and cursed with the utter devastation food insecurity can bring is Nigeria. This is because millions of Nigerians, particularly in the rural areas, deal with hunger each day and they continue to suffer from the effects of food insecurity such as malnutrition and stunting. This crisis is heavily rooted in the continued underperformance of the agriculture sector which produces food that is less than the market demand. This is because the agriculture sector is plagued by problems such as gender discrimination, inadequate infrastructure, climate change and poor policy implementation. The food and agricultural policies that are supposed to be the solution to the crisis are themselves inherently problematic. Since this is the case, research is required to better understand how food security can be strengthened. To do so, this research was driven by three research questions. First, what is the food insecurity situation and the related policies intended to alleviate the situation? Second, what are the obstacles preventing these food and agricultural policies from being effectively implemented? Third, in what ways can a new approach be incorporated into the implementation process to increase the rate of success for food and agricultural policies? After using Matland's ambiguity-conflict model of implementation to answer the above questions and assess the feasibility of this policy, it became apparent that while the goals are clear and defined, the approach used to achieve each goal is limiting the possibility for a greater rate of success. The study indicates that the bottom-up approach should be incorporated into the implementation process in order to maximize benefits and gain the desired results.

**Keywords:** Agricultural policies, Conflict, Food insecurity, Matland's ambiguity-conflict model, Nigeria

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## 1. Introduction

Anne Frank (2003) once stated “Hunger is not a problem. It is an obscenity.” This powerful quote encapsulates the idea that hunger and food insecurity is a threat to mankind’s right to a basic standard of living. Food Security is a situation where all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996). Hence food insecurity is the opposite. Food insecurity arises when people lack regular access to enough safe and nutritious food for normal growth and development and an active and healthy life. This may be due to unavailability of food and/or lack of resources to obtain food (Gong, Wang and Fang, 2020).

In a quest to eradicate food insecurity, world leaders came together and adopted the United Nations Millennium Declaration and the 2030 Agenda for Sustainable Goals in 2000 and 2015 respectively. Both declarations had a common goal of ensuring all people are able to have food security.<sup>1</sup> Now all world leaders are expected to achieve Zero Hunger by 2030. However, observations from reviewed reports (Food Security Information Network, 2019) have shown that many countries are still lagging behind in the set targets needed to achieve Zero Hunger. The countries which are the most food insecure are mainly distributed in Sub Saharan Africa, South and West Asia and some countries in Southeast Asia (AfDB, 2011; Pu, Ming and Jing, 2014). According to the FAO, ECA and AUC

(2020) report, Africa is one of the most food insecure continent in the world. The number of hungry people on the continent has risen by 47.9 million since 2014 and now stands at 250.3 million, or nearly one-fifth of the population.

One African country that has been battling with food insecurity for decades is Nigeria (Otaha, 2013). But this has not always been the case. Daramola et al. (2007) postulated that in the early 1940s and 1950s, Nigeria was relatively self-sufficient in food production. It had a strong agricultural economy that allowed all their food needs to be met (Kamil, Sevin and Festus, 2017). It is indisputably known that the agriculture sector is vital to food security as it is a source of employment so persons can have the capital and purchasing power to obtain goods as well as it directly supplies food to the markets (WMO, 2014; Liu, 2020) Hence, it is of utmost importance to foster the sustainable development of this sector. However, with the discovery of oil in 1956 and the exploration of it in 1958, the Nigerian government’s interest in agriculture waned dramatically (Igbokwe, 1983; Eigege and Cooke, 2016). It was later that the consequences of this lack of focus on the agriculture sector was felt. Nigeria now had to contend with low levels of national food self-sufficiency, increased imports, rising food prices and the inability to feed its population due to low productivity in the sector (Adebayo and Ojo, 2012). This was the beginning of their perpetual struggle with food insecurity.

In light of this dilemma, the obvious solution seemed to be to enact policies that would promote greater agricultural productivity and mobilization of resources needed for food security. So the government started rolling out the relevant agriculture and food policies to achieve food security such as the Agriculture Promotion

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<sup>1</sup>“UNESCO and Sustainable Development Goals.” *UNESCO*.

Retrieved 10 August, 2021 from

<https://en.unesco.org/sustainabledevelopmentgoals>

Policy in 2016 (Ojong and Anam, 2018) Economic Recovery Growth Plan in 2017 (Adekunle and Alokpa, 2018) and the most recent being the National Policy on Food and Nutrition in 2016 (Ministry of Budget and National Planning, 2016). However, after successive policies failed to meet the intended targets, it was soon revealed that there inherently existed a major problem. This problem was not in the formulation of the policies as these policies had clearly outlined goals and objectives. The problem seems to lie in the implementation of the policies. Policy implementation refers to when an action is taken to address a public problem (Achebe, 1983; Okoli and Onah, 2002; Ebienfa and Paki, 2013). Though these policies seemed perfect on paper, they were not being properly implemented in the various states (Ugwuanyi and Chukwuemeka, 2013). So now the big question is how should the government modify their way of implementing these vital policies?

Richard E. Matland (1995) proposed the employment of the ambiguity-conflict model of policy implementation to address the issues that may arise when implementing a policy. For a long time, the policy making process was seen to be straightforward and rational where a problem is identified, potential solutions are developed, the pros and cons of these solutions are weighed and then the viable solutions are implemented with an evaluation procedure taking place afterwards (Parsons, 1995). Due to this long-standing belief, the top-down approach was often used to implement policies. The top-down approach refers to a hierarchical structure where the leaders formulate the policies and it is simply passed down to those at the bottom of the hierarchy to follow (Sabatier, 1986). However, as it became clear that the policy making process and implementation is much more complex and is affected by a myriad of factors, a different approach started developing. This approach

was the bottom-up approach which involved including the target groups and service deliverers in the actual implementation process (Paudel, 2009). But despite having these two approaches, sometimes problems would arise if one approach was chosen over the other. Hence, Matland (1995) proposed a synthesis of the two approaches using his ambiguity-conflict model. With this model, you would analyze the policy goals to determine their level of clarity and conflict and from there on, decide on the best approach to use.

Nigeria has historically mostly used the top-down approach when implementing policies (Akinbamowo, 2013). But this approach has constantly led to little progress which have often been attributed to poor political institutions, lack of political will and corruption (Shuaibu, 2020). Albert Einstein famously said “the definition of insanity is doing the same thing over and over again but expecting different results”. So instead of continuously only using the top-down approach to implement food policies which have proven to only lead to limited success, it could be feasible to apply the ambiguity-conflict model in the implementation process of the food and agricultural policies.

This study analyses Nigeria’s food insecurity phenomenon and the barriers reducing the effectiveness of the related food and agricultural policies when they are implemented. The main task of this paper is to answer three important questions: (i) What is the food insecurity situation and the related policies intended to alleviate the situation? (ii) What are the obstacles preventing these food and agricultural policies from being effectively implemented? (iii) In what ways can a new approach be incorporated into the implementation process to increase the rate of success for food and agricultural policies?

In order to answer these three questions, this study focuses particularly on the implementation framework the government has mostly used in their policy implementation process. It seeks to assess the extent to which their implementation framework has actually met the goals and objectives of their food and agriculture policies. This study will also use an analytical framework which previous literature has shown could be used as a guide to implement and diffuse strategies across all sectors of society. With the observations garnered from literature used in this study, a deeper understanding of the implementation process can be gained as well as a more modified way of thinking can be acquired.

As there is a need to provide a holistic picture for this study, statistics, case studies and other literature have been harnessed from multiple sources which include government statistics as well as research conducted by international organizations such as the Food and Agriculture Organization and Cadre Harmonise. However, it must be noted that some official statistics regarding the success rate of Nigeria's agriculture and food policies have not yet been published as Nigeria does not publish these statistics on a regular basis. As such, the reports from international organizations and literature from other researchers who have conducted their own analysis of these policies will be used to complement the statistics. Section 2 outlines the analytical framework that can be used in the policy implementation process. It highlights the different approaches and how each approach may be suitable for different situations. Section 3 introduces the food insecurity situation in Nigeria and how the agriculture and food policies have been implemented to combat the situation. It also uses Nigeria's Agriculture Food Security and Nutrition Strategy as a case study. Section

4 highlights the ways in which Nigeria can move forward in order to gain a higher rate of success with their policies.

## 2. Analytical Framework for Policy Implementation

Before delving into Matland's (1995) ambiguity-conflict model, it is essential to gain an understanding of the two main approaches widely used in policy implementation. These two approaches are known as the top-down approach and the bottom-up approach. According to deLeon and deLeon (2002), the top-down approach is a clear cut system of command and control. These commands are sent down from the government to the project which concerns the people. This approach is a very rational approach and it is often used by overhead democracies where elected officials delegate implementation authority to non-elected public servants who are accountable to the democratically elected officials.<sup>2</sup> On the other hand, the bottom-up approach deals with a local driven approach within a specific context. Parsons (1995) explained that with this approach, the target groups and service deliverers were involved in the implementation strategy formation. They were included because they were seen as the actual implementers of the policy. Since these are the people who the policy would directly impact, it was best to include them in the implementation process or else the policy had a potential to fail.

It must be noted, however, that these two approaches have their inherent weaknesses. While the top-down...

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<sup>2</sup>"Top-Down and Bottom-Up Approaches Within Implementation." *Political Pipeline*, February 21, 2013. Retrieved 8 August, 2021 from <https://politicalpipeline.wordpress.com/2013/02/21/top-down-and-bottom-up-approaches-within-implementation/>

approach has a strong organizational structure, there exist the strong possibility of shirking. Shirking refers to the inability to control subordinates' non-productive behavior. This possibility increases when shirkers are not stakeholders in some way to the policy so they feel no sense of attachment or obligation to carry out their duty. Also, the problem of opportunism can also arise where people without a stake in the policy engage in counterproductive behavior which can lead to goal displacement. On the other end of the spectrum, the bottom-up approach is time consuming as it involves the participation of a massive amount of stakeholders and results may take a longer time to achieve.<sup>3</sup>

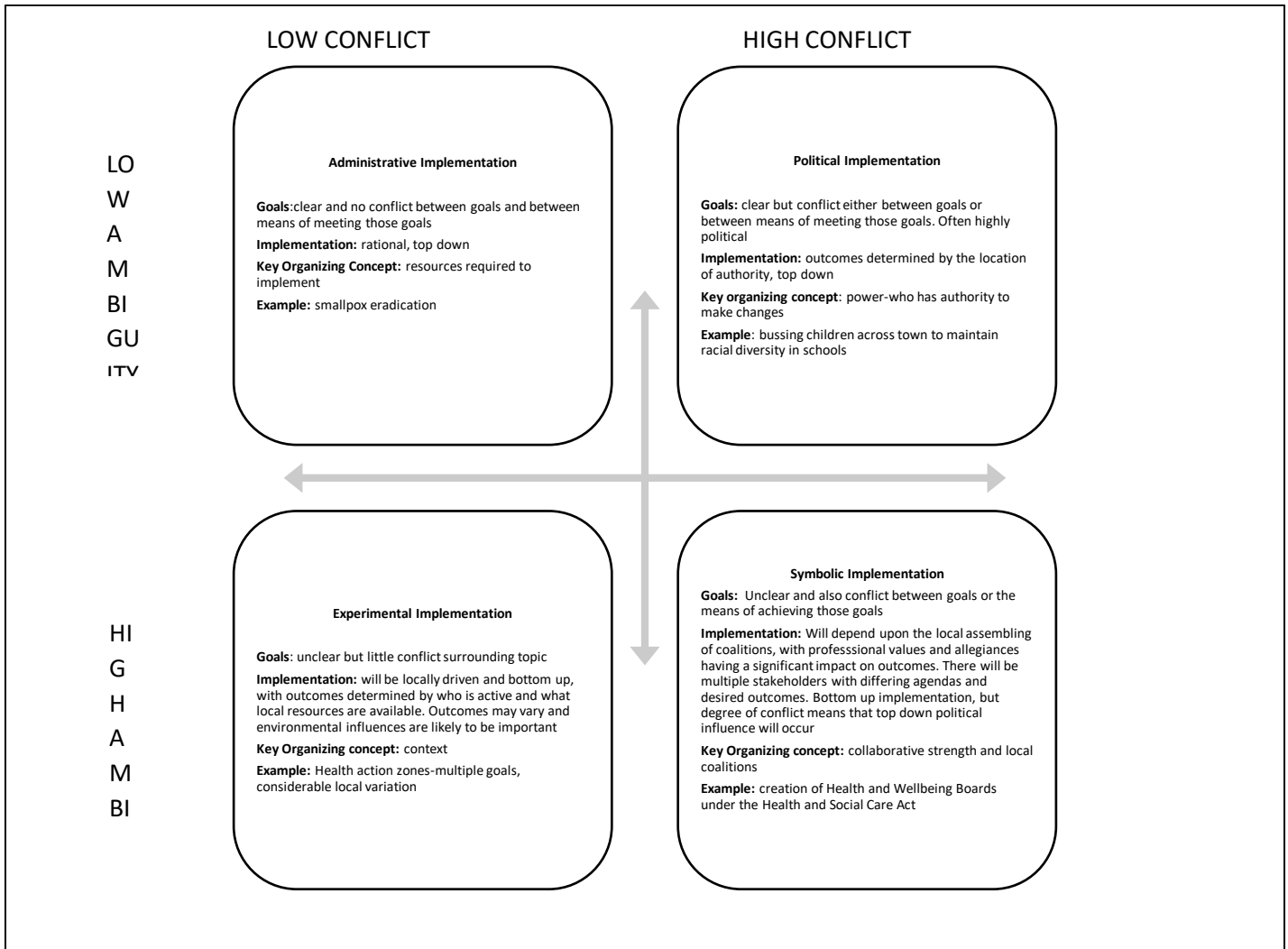
With these strengths and weaknesses in mind, this is where Matland's (1995) ambiguity-conflict model comes in as a useful tool in policy implementation. He proposes that in order for a policy to be successful, it is necessary to understand the goals of those developing a specific policy and the extent to which those goals are based upon explicit expressions of values. He suggests that the implementation approaches must be different depending on the nature of the goals of the specific policy. There are two axes that make up Matland's model: conflict and ambiguity (see Figure 1). Conflict is the potential conflict between goals and conflict in how goals are met. Oftentimes, a policy will have multiple goals which are incompatible as when one of the goals is achieved, it becomes impossible to achieve the other goal. This is where conflict between goals arise. The second axis is ambiguity which refers to the extent to which the goals of the policy are clear. There can be ambiguity of goals (what is being aimed at) and the ambiguity of means (different ways of achieving the goals) (Coleman, Billings, Allen et al, 2021).

When a goal has low conflict and low ambiguity about how to achieve it, the implementation process is normally straightforward and the top-down approach is used and success is relatively high. In the case where there is low ambiguity but high conflict as policy makers may contest certain goals, the top-down approach is still a good method of implementation even if the idea is contested (Suggett, 2011)

However, when there is low conflict about the goal and a high level of ambiguity particularly about how to implement it, this is when bottom-up strategies can be utilized to ensure a greater level of success. Implementers can engage with providers in the field and gain more diverse ideas on how best to ensure these policies impact the people in a beneficial way. And lastly when there is a high level of conflict over the goal and a high level of ambiguity about the means of achieving it, this is when a combination of the top-down approach and bottom-up approach is needed (see Table 1). With goals like these, it is hard to force an implementation strategy on the people as well as its risky to just use the bottom-up approach. The key here is to establish strong leadership around the vision of the goal while working with the interest groups and trying to reduce either one or both of the conflict and ambiguity (Suggett, 2011)

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<sup>3</sup> Ibid



**Figure 1:** Matland's ambiguity-conflict model

**Source:** Adapted from Matland in Checkland et al. (2019)

Managing the Differences	
High Conflict	High Uncertainty
Outcomes depend on:	Outcomes depend on:
Administrative Excellence	Clarity-owners and outcomes
Strong Mandate and Governance	Local solutions/networks
Resources to achieve outcomes	Tolerance of diversity
Capacity to engage opponents	Consistency over long timeframe
Consistent messages	Knowledge capture/feedback
Sustained Political Profile	Regular Provider Engagement
Compliance monitoring	Capacity to adjust on evidence
Transparency for Winners and Losers	

**Table 1:** Managing the differences between top down and bottom-up approach **Source:** Adapted from Suggett (2011)

As food and agricultural policies are such a multifaceted and multisectoral policy, this model can be useful in distinguishing the lack of policy clarity particularly with regards to the different ways of achieving the policy goals as well as the conflict between goals. The implementers' intentions must also be taken into account as one group may see the value of achieving one of the goals but doesn't see the value of achieving the other goals which will inevitably lead to conflict. Hordern (2015) suggested that when different parties need to work together but do not see mutual benefits, or agree on a vision, then conflict could arise. This could possibly be an explanation for why food and agricultural policies have consistently had limited success in Nigeria because it requires different sectors to work together, yet if they do not share the same vision, the policies cannot be effectively implemented.

Matland's ambiguity-conflict model has been criticized for ambiguity surrounding what "implementation" means in this context as it is unclear whether it focuses on the implementation process, output from a given programme or the outcome of the implementation process (Winter, 2003). Nevertheless, this model has been used in understanding the policy implementation process and the outcomes across a wide range of public policy fields (Coleman, Billings, Allen et al, 2021). The two axes of conflict and ambiguity will be useful in the analysis of Nigeria's policies and can help to bring about general conclusions about the implementation process of their policies.

### **3. Nigeria's Food Insecurity and Policies implemented to combat the crisis**

Before delving into the food and agricultural policies and their inherent weaknesses, it is pertinent to gain an understanding of the grave food insecurity situation in

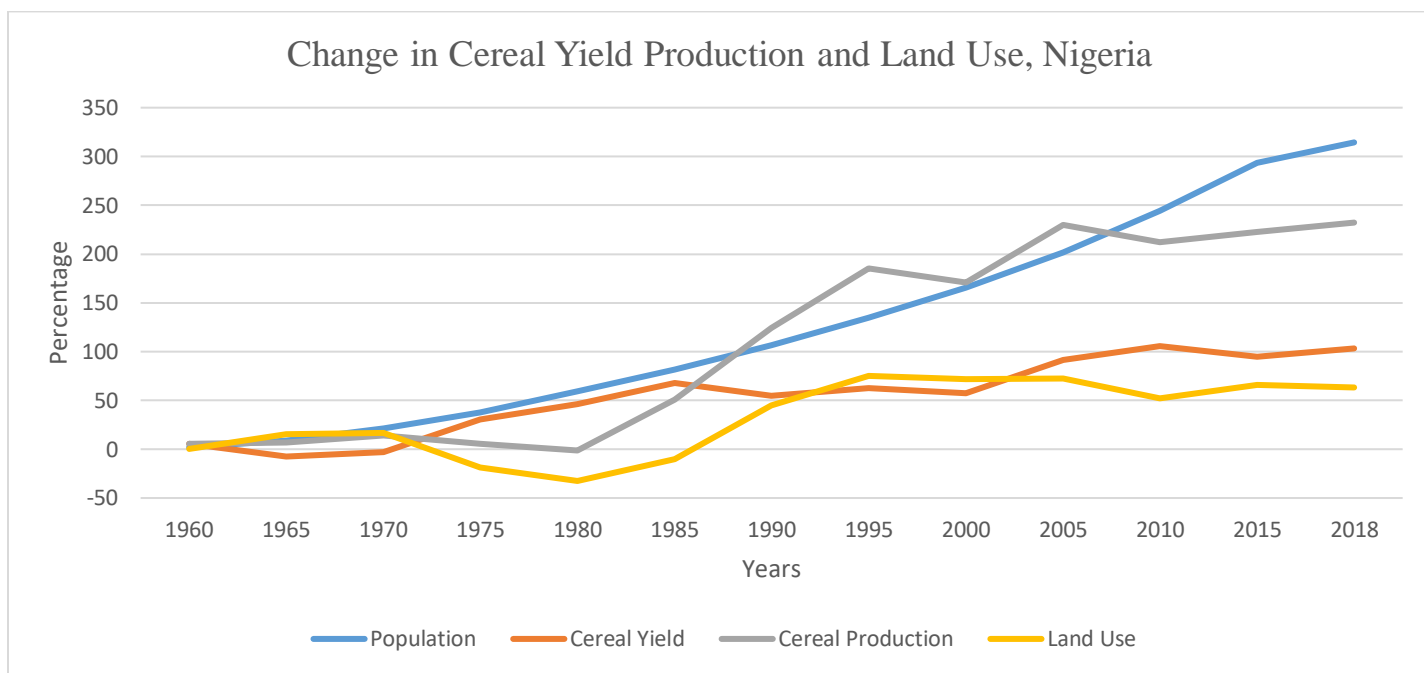
Nigeria and how there is now a desperate need for effective implementation of the related policies to tackle the situation. Onabanjo, Fadare and Oyeyemi (2016) explains that food insecurity exists when people do not have enough access to sufficient, safe and nutritious foods that meets their dietary needs for a healthy life. The level of food security is determined by assessing four dimensions. These include food availability, food access, utilization and stability. Availability refers to the existence of sufficient quantities of food that are available for people within a specific geographical location. Access deals with the ability of households to obtain food in the marketplace or from other sources. Utilization deals with the proper usage of food including processing, storage, consumption and digestion. And the final dimension, stability, refers to the constant supply of food to households throughout the year and in the long term.

According to Adenekan, Eneh and Achugbu (2019), food insecurity is not a new concept to Nigeria as it has been battling food insecurity since the 1970s. This was due to the fact that the government turned their attention from their thriving agriculture sector to their newly discovered oil sector. The agriculture sector then became severely neglected which resulted in low levels of productivity. This neglect is still evident in the sector today which is seen with the low levels of mechanization, poor infrastructure and inconsistent government policies. This low level of productivity in the agriculture sector is particularly detrimental to Nigeria because the agriculture sector has always been an important economic sector as it employs 70 percent of the working force and it is the principal source of food and livelihood in the country. Hence, low agricultural production in Nigeria has affected all four dimensions of food security

as it has severely limited availability of food, access to food, stable supply of food and it has hampered the people's ability to utilize food needed for proper nutrition. So, although food insecurity in Nigeria has been influenced by several factors, declining agricultural production has significantly exacerbated the food insecurity situation. It is estimated that almost 14 million Nigerians will face hunger and food insecurity by the end of 2021 (FAO and CH, 2020)

This low agricultural productivity has resulted in food production being unable to meet the demands of the population. Nigeria has a rapidly growing population;

however, the food supply is continuously insufficient to meet the population demand. The value of locally produced wheat in Nigeria was estimated at \$13 million in 2016, \$15.5 million in 2017, 16 million in 2018 and 16.3 million in 2019. However, the national production capacity was significantly lower than the Nigerian market demand which was valued at \$1.2 billion in 2016, \$1.5 billion in 2017, \$1.65 billion in 2018 and \$1.7 billion in 2019 (Oirere, 2019). Figure 2 shows how the Nigerian population growth has outstripped the land used for cereal, cereal yield and cereal production especially since 2010.



**Figure 2:** Changes in cereal production, yield and land use

**Source:** FAO (2019)

Due to the country being unable to feed its population through its own national food production system, they have become heavily dependent on imports. From 2016 to the first half of 2019 Nigeria spent 54.51 trillion naira importing manufactured goods, mostly food and

agricultural products (Adekoya, 2019). However, the Nigerian President, Muhammadu Buhari, has repeatedly made statements that the country does not have enough money to continue importing massive amounts of food so Nigerian farmers need to increase their food



production (Ikade, 2020). With their inefficient food production systems and their inability to continue to fund their high import bill, the food insecurity situation will continue to deteriorate. As it is now, the global food security index has ranked Nigeria in the 100<sup>th</sup> place with an overall score of 40.1.<sup>4</sup>

### **Factors influencing declining Agricultural Production and Food Insecurity**

There are many factors which have led to the deteriorating state of the agriculture sector but this paper will only briefly explore 4 factors. These are gender discrimination, poor infrastructural development, environmental degradation and poor policy implementation. It is important to understand the factors affecting agriculture and food insecurity as it is these factors that normally influence the goals and objectives of Nigeria's agricultural and food policies.

#### **Gender Discrimination**

Gender Discrimination is defined by Article 1 of the United Nations Convention on the Elimination of all forms of Discrimination Against Women of 1979 as "any distinction, exclusion or restriction made on the basis of sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field" (Li, 2015). Though Nigeria has ratified this Convention, gender discriminations continue to be a pervasive issue in the society (Okome, 2002). This country has a male dominated culture which gives women an inferior position in society (Mohammed and Abdulquadri,

2012). Although, women account for 75% of Nigeria's farming population and provide up to 70% of small scale agro-businesses, their productive capacity in the sector remains significantly lower than their male counterparts (Chekene and Kashim, 2018). Governmental policies do not ensure that female farmers have access to resources needed for the food production process. The policies on land access and financing still favor the culture of male dominance as women mostly can only access land through their husbands or male relatives. Only 7% of women in Nigeria actually own the land that they farm (Iruoma, 2018). Additionally, if they want to access credit and financing, land is normally a good form of collateral but due to the fact that they don't have easy access to land, this prevents them from accessing credit (UN Women, 2018). Furthermore, wages paid to females in the agriculture sector are lower compared to their male counterparts (Idowu and Ambali, 2019). This low income, compounded with inadequate financing and lack of access to vital resources leads to low morale amongst female farmers in Nigeria, reduced food production and ultimately food insecurity.

#### **Poor Infrastructural Development**

Agricultural production is greatly hindered by the low levels of development of social and physical infrastructure. The government of Nigeria favors urban development over rural development by a great margin. This results in a neglect of the health and educational facilities, social services such as electricity and an effective communication system in the rural areas. These constraints are a major problem as it negatively affects the trade, investments and agricultural production. Some places in the villages have only one tap for water which does not always work due to the lack of electricity (Ufiobor, 2017). Additionally, the agriculture sector suffers from extremely low levels of mechanization.

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<sup>4</sup> "Global Food Security Index." 2020. Retrieved 14 August 2021 from <https://foodsecurityindex.eiu.com/index>

Odigboh(2002) defined agricultural mechanization as the use of a machine to accomplish a task or an operation involved in agricultural production. Agricultural mechanization in Nigeria is still in its infancy. Smallholder farmers in Nigeria still depend heavily on manual labour equipped with traditional hand tools. Also, these farmers are too poor to purchase modern tools. Hence, there needs to be more policies and programmes that increase the affordability of these modern tools (Oiganji, 2018).According to Josepha Sacco, a member of the African Union’s Rural Economy and Agricultural Committee, sustainable agricultural mechanization is needed to help alleviate the food insecurity crisis and help Africa achieve the sustainable development goal of Zero Hunger by 2025 (Li, 2018).

### **Environmental Degradation**

Environmental degradation is a process by which the resource base (air, water and soil) becomes depleted which reduces their originality and quality. These resources are very vulnerable to being degraded through overuse and unfriendly human activities (Asaju and Arome, 2015). The International Fund for Agricultural Development (2010) stated that environmental degradation results in decrease in production, income and availability of food. Nigeria has lost much of its habitable lands to environmental degradation which has destroyed significant amounts of crops and aquaculture. There has been rampant mismanagement of the land resources as well as soil and water contamination. The rural areas are now faced with increasing soil infertility and along with the shrinking of Lake Chad, crop yield and land productivity has significantly reduced (Godson and Chikaire, 2016).

### **Policy Implementation- Solution or another Cause of Food Insecurity?**

It would be logical to think that in order to solve the food insecurity crisis and its root causes, the main route would be through policies. The government is the primary actor in the physical, social and economic aspects of food security. Therefore, the government and its policies are vital to enhancing food security and agricultural development. However, it has become increasingly clear that the obvious solution to the crisis has its own in-built problems. Though the government has implemented several policies to increase agricultural production and reduce food insecurity, they have been largely unsuccessful. This has been attributed to poor funding, poor implementation and little monitoring and evaluation of the programmes and policies (Gong, 2013). It is this fourth factor that will be thoroughly assessed throughout the rest of this study

### **The Agricultural Sector Food and Nutrition Strategy (ASFNS) (2016-2025) and approach to implementation**

In order to fully understand Nigeria’s approach to implementing their food and agriculture policies, this study will take a look at their current Agriculture Sector Food and Nutrition Strategy (AFSNS) which was implemented in 2016 and will continue until 2025. This policy will be used as a case study because it addresses both the agricultural capacity issues as well as other targeted approaches to improving nutrition and food security. Also, due to it being a current policy and spanning 10 years, current achievements can be assessed as well as suggestions about varied future approaches can be made. Moreover, this policy has almost all the goals that are normally in Nigeria’s other agriculture and food policies so it can be used as a guide in understanding how they generally formulate these policies.

The ASFNS Policy has the overarching goal of improving food and nutrition security of all Nigerians while empowering women and promoting resilience of the most vulnerable through sustainable agricultural livelihoods. In order to achieve this goal, they have set six objectives and several corresponding implementation strategies. For the purpose of this study, seven key strategies will be assessed. Table 2 outlines the objectives of this policy and a few of their key implementation strategies.

This policy, like most policies in Nigeria is being implemented via a top-down approach with the main bodies spearheading this policy being the Federal Ministry of Agriculture and Rural Development (FMARD) and the National Committee on Food and Nutrition. FMARD (2016) policy document stated that FMARD inaugurated an Inter-ministerial Agriculture Nutrition Working Group to provide high profile advisory support for this policy. Its members include representatives from Ministry of Budget and National Planning, Federal Ministry of Health, Federal Ministry

of Women Affairs, Federal Ministry of Education, International Fund for Agricultural Development (IFAD), the European Union (EU), Bill and Melinda Gates Foundation (BMGF) and others. Additionally, membership of the National Committee on Food and Nutrition is once again drawn from ministries, departments and agencies of government as well as representatives of tertiary institutions dealing with issues of food and nutrition. Though this policy has various representatives from various sectors, it is obvious upon the first glance that it is still heavily centralized in the government and power is concentrated in the hands of only institutional stakeholders. These implementation groups exclude important stakeholders such as the smallholder farmers and teacher organizations. With this approach being used for the past 5 years since the implementation of this policy, an assessment can be made as to its effectiveness in achieving each objective. Matland’s ambiguity-conflict model will be used in this assessment as it will provide an alternative route through which each objective can be achieved

Goals	Key Implementation Strategies
Improve Food Security at the national, community and household levels.	<p>Increase production of food crops by providing support for local production, repair and maintenance of agricultural equipment</p> <p>Expand bio-fortified staple foods such as pro-vitamin A cassava, yellow maize, orange flesh sweet potato, iron sorghum for nationwide distribution</p>
Reduce undernutrition especially targeting women	<p>Expand bio-fortified staple foods such as pro-vitamin A cassava, yellow maize, orange flesh sweet potato, iron sorghum for nationwide distribution</p> <p>Scale up production of vegetables and fruits</p> <p>Management of natural resources which increases resilience to climate change e.g., construction of roof water harvesting structures</p>
Prevent chronic nutrition-related noncommunicable diseases, especially targeting women	<p>Scale up production of vegetables and fruits</p> <p>Management of natural resources which increases resilience to climate change e.g., construction of roof water harvesting structures</p>

Increase the knowledge of nutrition and integrate nutrition into agricultural trainings	Production and dissemination of food-based dietary guidelines
Strengthen systems that build resilience for improved Food and Nutrition.	Facilitating access to credit for smallholder farmers
Incorporate food and nutrition considerations into national agricultural sector development plans	Develop a comprehensive monitoring and evaluation framework for the AFSNS

**Table 2:** AFSNS goals and strategies

**Source:** Adapted from Federal Ministry of Agriculture and Rural Development AFSNS Policy document (2016)

The main overarching goal of this policy which is to improve food and nutrition security for all Nigerians aligns with Matland’s experimental implementation as there is little conflict about the goal as all parties agree that malnutrition and food insecurity is a massive problem in Nigeria that needs to be eradicated. However, the implementation is ambiguous as it involves a multisectoral approach and it cannot be a one size fits all approach. Hence, the best outcomes would be heavily dependent on the use of the bottom-up approach. However, the individual objectives and their strategies need to also be considered in order to make an informed conclusion about what the best approach would be to achieve this goal. With regards to the first objective which is to improve food security at the national, community and household levels, one of the main strategies is improve agriculture equipment in order to increase food production. Nigeria’s agriculture sector has continuously struggled with poor infrastructural development as it has been plagued with a lack of storage facilities, unreliable power supply and limited

quality control which severely limits their export potential. After 5 years of the AFSNS being implemented, they still struggle with these same problems. Of the 197,000 km of federal roads in Nigeria, only 18% are paved (Aija, 2020).Falaju (2019) stated that crops such as cassava have seen an increase in production, however farmers are unable to transport the roots to the markets due to bad road networks and high cost of transportation which has led to a glut of the product. So, while they have achieved one aspect of the goal by increasing food production, neglecting the other aspect of improving infrastructure has made that success invalid. However, the lack of infrastructure remains a baffling issue because constant investments are being made to the sector. The International Fund for Agricultural Development has committed \$1,141.82 to Nigeria’s agricultural sector and in 2016, the African Development Bank provided a \$9 million equity investment fund for agricultural finance in Nigeria (Adeyeye, 2020).So, one of the most asked questions has been why has the infrastructure not been developed.

With the top-down approach however, mismanagement of funds is not a new occurrence.

Typically, infrastructural development strategy would fall in line with the bottom-up approach because with community participation, the needs of the community will be better understood and infrastructure can be tailored to meet those needs. The planning and designing of certain infrastructure such as water systems and roads should include the input of the stakeholders as this will ensure equal access is given to all residents in that area. Also, these citizens will feel more obligated to maintain this infrastructure due to their input being valued. However, apart from the approach, the main problem here is mismanagement of funds and corruption. There are no little to no resources being provided to start infrastructure development projects in these farming communities.

The second objective which is to reduce under nutrition particularly among women shares an implementation strategy with the first goal which is bio fortification of staples. Bio fortification has been defined as the enhancement of micronutrient levels of staple crops through conventional breeding or genetic engineering using transgenic methods (Bouis, 2002). In Nigeria, the focus is on introducing more vitamin A, iron and zinc into the citizens' diet (Harvest Plus, 2015). According to Onuegbu (2017) staples such as cassava, orange fleshed sweet potato, maize and sorghum have been selected and all are being fortified with provitamin A. The provitamin A cassava has been distributed to over 672 communities and 450,000 Nigerian households have received the vitamin A cassava stem cuttings. This staple has seen the most success out of all the bio fortified staples. With regards to the sweet potato, over 20,000 households have received the vines. Other staples like sorghum and maize are in varying stages of development.

According to Onyeneke, Amadi and Anosike (2019) one of the main determinants for the adoption of bio fortified foods is awareness. For example, awareness of bio fortified cassava through effective marketing was found to influence the adoption and sustainability of the market in Akwa Ibom State. However, this level of awareness is still not present in all states of Nigeria. There is still heavy reluctance to accept these foods in many states due to consumers not understanding what biofortification is and how it can aid and not harm their health. This shows that there needs to be more widespread education (Onuegbu, Ihediohanma and Eze et al, 2017). With this scenario, you cannot force people to consume genetically modified products via the top-down approach so you have to engage local organizations and networks in the various communities to bring about awareness and demonstrate the benefits of consuming these products. This goal also aligns with Matland's bottom-up approach in his experimental implementation.

Objective three focuses on preventing chronic nutrition-related non communicable diseases with a special focus on women and it also shares implementation strategies with objective two in the form of scaling up fruits and vegetables production and managing the resources to become more resilient to climate change. These two implementation strategies address the earlier factor mentioned in this paper which were gender discrimination and climate change. In order to scale up production, the federal government has started a seed initiative to distribute improved seeds which are high yielding, climate resilient, disease resistant, drought tolerant and nutrient rich. However, the amount of improved seed used in Nigeria is extremely low. Overall, only 5–10% of cultivated land is planted with improved

seeds, and about 10% of rural farmers use improved varieties (Uduji and Okolo-Obasi, 2018). This is mainly due to lack of access to information about these seeds. This challenge was tackled with the creation of the Nigerian Seed Portal in May 2018 which is an online platform that facilitates easy access to information on released seed varieties and improved agricultural practices. However, use of these seeds still remain low (Seed Portal, 2020). Promotion of climate smart agriculture to make resources more resilient has led to certain areas like Borno state practicing terracing, intercropping and conservation agriculture. However, use of these practices are still low compared to the traditional methods like bush burning (FAO, 2019). Using Matland's model, these two objectives are high conflict and high ambiguity which requires the approach of symbolic implementation. This is because Nigeria is a male dominated society so objective three which focuses on women increasing their production can meet the barrier of male supremacy. Therefore, it is important to utilize the bottom-up approach so that both male and female local farmers are included in the implementation of this policy. This way women can have a say in this policy since it directly affects them and it fosters female empowerment and the men can be educated on the importance of adjusting this long-held belief. However, it will need top-down influences as an objective like this needs a strong political backing. For the management of resources, farmers need to be included since oftentimes it is their harmful agricultural practices that are damaging the environment. Hence, they need to be a part of the implementation. This also needs strong political backing. These objectives highlight the fact that though initially the overarching goal may have originally called for the bottom-up approach, certain objectives need a

combined approach. Matland's model is not static and so approaches can change according to the context.

Objective four which revolves around increasing nutrition education deals with the strategy of disseminating food based dietary guidelines. Nigeria developed these guidelines in 2000 and published it in 2001 but they are yet to revise it. The old version is accessible as an e-book.<sup>5</sup> This strategy would call for the bottom-up approach as the best way to disseminate information would be through the different service providers in the communities. These service providers would include health care providers, teachers, village leaders and their council etc. They would know how best to distribute the information to their community members. Also, these providers are people the communities will trust so they are more likely to listen to them with regards to how they are supposed to change their diet. Objective 5 focuses on strengthening systems that build resilience for improved food and nutrition and one strategy put forward has been to increase smallholder farmers' access to credit. Smallholder farmers find it difficult to gain access to credit due to them having no collateral to pledge against the loans. Hence banks are normally wary to lend to small farmers.<sup>6</sup> This is still a big constraint to farmers despite this policy stating access to credit as a priority. This inhibits the farmers from maintaining their current livelihood or even potentially diversifying their

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<sup>5</sup>“Food-based dietary guidelines – Nigeria.” 2002. Retrieved 16 August 2021 from <http://www.fao.org/nutrition/education/food-dietary-guidelines/regions/countries/Nigeria/en>

<sup>6</sup>“Money and Credit.” *StudyAdda*, 2020. Retrieved 18 August, 2021 from <https://www.studyadda.com/ncert-solution/10th-social-science-money-and-credit/347/28032>

livelihood. This approach would also require the approach of a symbolic implementation where a combined approach would be used. There is high conflict about the goal as banks may not want to extend credit to these farmers as well as there is a high level of ambiguity about how to help these farmers gain credit. Hence the government needs to work with regional rural banks and agriculture cooperatives to come to a solid solution and provide a strong show of support for these smallholder farmers.

The final objective deals with incorporating food and nutrition information into future development plans. This requires the development of a national database which will contain all the nutrition and agricultural statistics from all the states. Currently, no database has been created and there is a lag in data being collected from the states and local government areas (LGAs). Also funding to Nigeria's Statistics Bureau still remains poor (Kazeem, 2019). This strategy would be heavily dependent on the bottom-up approach as it is local organizations and groups that will have to be responsible for collecting data via surveys from the relevant persons in order to compile it and enter it into the database. The fulfillment of this objective is crucial to the success of any policy because it is through this evaluation that implementers can track the progress of the policy and adjust the policy implementation when needed.

After using the Matland model to thoroughly analyze the goals of the AFSNS policy, it can be said that using only the top-down approach will most likely result in limited success. It is best to include the bottom-up approach for certain aspects and a combined approach for others. In this way, Nigeria may break away from the tradition of unsuccessful policy implementation.

#### 4. **The Way Forward: Change equals Progress**

It is possible for Nigeria to take their carefully crafted policies and make them a reality through the implementation process. It is just that several important changes need to be made. However, before achieving these changes, it is important to understand why the governments have continued to only use one approach in implementing policies when there are alternative methods which could have improved the level of achievement for each policy. One of the reasons is that of history. During the 1970s when the food shortages first began, three different programmes were launched to increase food production. The first two had been launched by military governments and the third by a civilian government. All three programmes failed almost as soon as they were implemented. Since then, each successive government has still continued to follow this approach despite the trend of failure (Anandajayasekeram, Rukuni et al, 2007).

Another reason is lack of continuity. When elected, the President knows that he may only have one term. So due to this short tenure, there is an eagerness to produce quick results and gain national favour. Gaining national favour can be the route through which he can get reelected. The President is also aware that after his term has ended, the successive government will most likely scrap the policy or restructure it and give it a new name ((Nnaji for et al, 2013). With these motives, the government is usually reluctant to use the bottom-up approach because it is time consuming and results are slow to emerge. Also, with the bottom-up approach, results can also be hard to specify in advance so this makes implementers uneasy (Kupiers et al, 2013).

The third reason is that agricultural programmes have often been politicized which has resulted in financial

allocation to agricultural programmes, choice and location of projects and even funding being done on the basis of ethnic, geographical and political considerations (Ukwumah, 2011). President Buhari has been accused of mainly allocating resources to the north of Nigeria which is his home region (Munshi, 2021). Hence using the top-down approach gives implementers more control of how and where the policy is implemented. Based on these reasons, it is clear that the intentions of the implementers is also a hindrance to the successful implementation of these policies.

With the motives of the implementers and the inherent flaws of the implementation plan being the greatest barriers for successful policy implementation, it may seem impossible for the policy process to get better. However, the situation can get better. With regards to the implementers' motives, this aspect will be the hardest to change. It requires the implementers to strive for a common goal instead of personal interest. Implementers need to understand that doing things the most effective way will get them more results which can aid in their quest to leave behind a legacy. It requires breaking away from tradition which may seem radical at first but in the end, it will produce the needed change in food security and agricultural development.

In terms of the implementation process, food security needs to be looked at as a multifaceted and multisectoral issue so a one size fits all approach cannot be used if it is to be comprehensively tackled. Food insecurity is affected by several factors so a multifaceted approach must be taken so that all factors can be suitably addressed. While aspects of the top-down approach may work for addressing climate change, it cannot work for encouraging people to increase their nutrition through genetically modified foods, Additionally, Ukwumah

(2011) pointed out that in Nigeria, there is no synergy and synchronization of efforts by agencies in various sectors of the economy. This absence of organic relationship between key sectors of the economy has impacted negatively on the overall development of the country. If this continues, food security, which relies on various agencies working together, cannot be achieved. Also there needs to be a recognition that implementation is not static. There are various factors that may impact the implementation process and as such some aspects of the implementation process may need to adapt and change. Only sticking to the top-down approach impedes the adaptability of implementation and prevents the policy from meeting the needs at the specific time. Barret and Fudge (1981) identified this as a policy-action continuum. It identifies policy as multidimensional and a multiorganizational field of interaction with negotiation (disagreements) between those in control of ideas and resources (policymakers) and those upon who actions depend (state and local government). This ever-changing interaction makes it impossible to believe that policy implementation will always go in one specific direction

Furthermore, integrating the bottom-up approach into the implementation process can galvanize enthusiasm for change at the local level. This is important for supporting the development of local solutions for the complex tasks of providing suitable and sustained resources across sectors. This will help to build a better relationship and trust between parties who may not have historically worked well together. With this approach, implementers can gain knowledge on what not to do and how to generate fairly rapid change from the bottom up instead of just focusing on acquiring quick results. This knowledge can be used to ensure that successive food



and agricultural policies actually solve the food insecurity problem.

## 5. Conclusion

This paper attempts to understand the current food insecurity situation in Nigeria and why it continues to be a problem despite the numerous policies implemented to rectify the situation. This phenomenon brings suffering to countless Nigerians and drastically reduce their quality of life. Though the right to food is a basic human right, not all people have access to this right. A big contributor the present food insecurity problem is low productivity in the agriculture sector. Due to gender discrimination, poor infrastructural development, climate change and ineffective policies, this sector continues to be unable to meet the food needs of the growing Nigerian population. The problem of food insecurity and low productivity in the agriculture sector has troubled Nigeria since the 1970s and each successive government has enacted food and agricultural policies intended to ensure that all Nigerians have access to a steady supply of food in order to have a healthy life. However, each policy has failed in significantly reducing the crisis. This has resulted in great confusion as to why these clearly outlined policies are unable to achieve the intended targets.

In order to gain an understanding of the impediments that have hindered these food and agricultural policies from being effectively implemented, attention was turned to Matland's ambiguity-conflict model of implementation. This model highlighted four main implementation approaches that implementers can use when making a decision on the best approach to use. It stressed that the key to success is addressing each policy goal individually and assigning the best approach to each goal. Based on the level of conflict surrounding the goal

and the level of ambiguity surrounding the means by which this goal can be achieved, implementers can then decide which approach will garner a potential higher rate of success.

This model was helpful in understanding some of the inherent problems in Nigeria's food and agricultural policies. After examining their Agriculture Food Security and Nutrition Strategy, it was revealed that their continued use of only the top-down approach prevented them from effectively achieving certain objectives which would have required a bottom-up approach or a combination of the two approaches. It was also revealed that the implementers' motives also played a role in the implementation process. Their need to stick to tradition, gain national favor and control how resources are allocated have greatly hindered food security from being tackled in all Nigerian states. With these discoveries, it was clear that the only way forward is to make significant changes to the entire implementation process. Policymakers and implementers need to focus on the common goal of ensuring all Nigerians have equal access to food rather than individual interests and politics. Additionally, acknowledging that implementation is not a static process and that it requires adaptability to the ever-evolving situations is key to making a policy effective. Implementers need to be able to change strategies according to what is best for the citizens and they need to work together with the beneficiaries in order to build a harmonious and food secure nation.

## Notes

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