

Bridging the Policy Gaps in the Rice Value Chain through Inclusive Policy Processes in Nigeria

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Abstract

Rice which was traditionally a ceremonial food has emerged as a critical staple consumed daily by millions of people in Nigeria. Despite being the largest rice producer in Africa, Nigeria's annual production meets only half of its domestic demand, the high shortfall underscoring the need for inclusive policy development that engages all stakeholders across the rice value chain. The persistent challenges in the rice value chain lie beyond the control of the farmers. Other players such as processors, marketers, input suppliers and support institutions are crucial, highlighting the need for a coordinated involvement to enhance the sector's performance. The relevance of the stakeholders in the rice value chain notwithstanding, policy frameworks have historically lacked adequate stakeholder participation in all the policy pathways, limiting their effectiveness in significantly improving the rice sector in Nigeria. The paper examines contextual issues and challenges of the rice value chain in Nigeria, identifies some persistent gaps in the policy process, and highlights how stakeholders' inclusiveness in the policy process can contribute to the performance of the rice value chain in the country. The paper used document analysis to highlight the relevance of an inclusive policy process that engages the value chain actors and the interfacing institutions in rice sector improvement in Nigeria. The paper also highlights the supply-side driven policy process, limited participation of value chain actors with indigenous knowledge of their problem, and lack of pilot testing of policies before large-scale implementation as some policy gaps that hinder the rice sector performance. It recommends that the active participation of key stakeholders in the rice value chain is imperative in filling the demand-supply gaps in Nigeria.

Keywords: Rice Value Chain, Agricultural Stakeholders, Policy Process, Inclusive Policymaking, Rice Production

Introduction

Inclusive policy development processes that recognize the importance of all the stakeholders in the rice value chain is a key component for achieving sustainable rice production for poverty reduction and employment creation in Nigeria. This is because rice has the potential to address

food security challenges in the country, since the crop grows in all the ecological zones of Nigeria. While rice was previously consumed as a ceremonial food in Nigeria, it has become a staple food to millions of urban and rural families, with increasing demand that far outweighs supply. The Food and Agriculture Organization of the United Nations Statistics (FAO/UN, 2019) showed that Nigeria is presently the largest producer of rice in the African continent, with an estimated production capacity of 3.7 million metric tons per annum, a production capacity that only meets about 50% of the local demand (Nzeka and Taylor, 2017; Food and Agriculture Organization, FAO, 2018).

Rice production that will meet domestic demand and ensure food security in Nigeria with the myriads of production-related challenges that continues to undermine the sector will require the combined efforts of the stakeholders in its value chain. These include the farmers, input suppliers, processors, and marketers, apart from the government institutions and non-governmental organizations (NGOs). The holistic interplay of the stakeholders is important because some of the forces constraining the sector's performance are outside the influence of the farmers. What this means is that the production capacity of the rice farmers is not sufficient to determine the quantity of rice that ultimately gets to the consumers. The interplay of the input suppliers, processors, marketers and interfacing institutions is a key determinant in the performance of rice in meeting domestic demand in Nigeria.

While the failure of the rice sector to meet domestic demand has been consistently drawn to constraints emanating from the farming environment, limited access to inputs, credit and other processing and market-related challenges (Nkuba et al., 2016; Balana and Oyeyemi 2022), the government's policy support systems that are expected to drive the sector, have not demonstrated the political will that is necessary for increased supply that match demand (Karkare et al., 2022). Additionally, the limited participation of the value chain actors affects rice demand-supply outcomes. This is because the actors have a better understanding of their indigenous problems and their contributions can offer solutions for better outcomes since they are the human interface of implementing the policy (Balogun and Oladeji, 2024). Neglecting them in policy design will continue to hamper evidence-driven and contextual policy design and implementation (Tjilen et al., 2024).

Although several studies on rice policies have been carried out in Nigeria, gaps exist in studies in policy processes that involve the active stakeholders (Obinna et al., 2020; Onwujekwe et al., 2022; Karkare et al., 2022). Obinna et al. (2020) examined the profitability of actors in the rice value chain in Nigeria, focusing on three communities in Ebonyi state, which is not sufficient to provide a comprehensive insight into value chain challenges that represent the views of all actors in Nigeria. While their study highlights some of the challenges faced by the value chain actors, it did not focus on their inclusiveness in policy processes. In their study, Onwujekwe et al. (2022) examined the role of stakeholders in policymaking for inclusive urban development in Nigeria; their study's focus is urban stakeholders and not agricultural stakeholders. Karkare et al. (2022) examined inconsistent policies in Nigeria's trade and industrial policy focusing on rice and pharmaceuticals. The focus of the study is rice as a commodity for boosting international trade, rather than production on which this study focuses. Badiora (2020) examined stakeholders' perspectives of public participation in land use policy in Nigeria. The study engaged stakeholders who had at one time or the other participated in land use policy in Nigeria. The methodology involved 18 interviews with different stakeholders, with only five of them drawn from the public. While their study throws some light on the inclusiveness of stakeholders in the policy process in Nigeria, its focus on urban land use, and

the responses does not reflect the views of rural stakeholders who enjoy limited participation in policy processes. Hence, there is a need of insights on how rural agricultural stakeholders, especially rice value chain stakeholders, can be integrated into policymaking, given that rice has become a political commodity for national food security in Nigeria.

While these studies throw some light on rice value chain actors' challenges and stakeholders' role in policymaking in urban areas and policy inconsistency in rice international trade, respectively, they were not targeted at providing an understanding of inclusive policy processes that involve the rice value chain stakeholders. This study therefore provides some insights into the contextual issues in the rice value chain in Nigeria and existing gaps in policy process that are affecting the performance of the rice sector, and offers suggestions on how value chain stakeholders can be engaged to ensure that policies are designed to address their specific needs. Incorporating their voices in policy design and implementation will contribute to improved rice production that can bridge the demand-supply gap in Nigeria. To achieve the paper's aims, the following three major research questions are addressed: (1) What are the trends and contextual issues in the rice value chain in Nigeria? (2) What gaps persist in the agricultural policy process that are affecting the rice sector in Nigeria? (3) How can stakeholders' inclusiveness in the policy process contribute to the performance of the rice value chain in Nigeria?

The paper, which is generated as a working paper as part of a broader study that focuses on the participation of rice value chain stakeholders in the agricultural policy process in Southern Nigeria, highlights preliminary insights critical issues undermining the performance of the rice sector, and how inclusive policy processes that engage the input suppliers, farmers, processors and marketers can lead to better policy and production outcomes in the rice sector in Nigeria.

Conceptual Clarifications

Two concepts that are important in situating the paper are clarified. They are (1) agricultural policy and (2) agricultural value chains. These are discussed one at a time in the subsections that ensue.

Agricultural Policy

Agricultural policy is a public policy that expresses the decision to drive specified action plans aimed at improving agricultural practices for the advancement of the agricultural sector (Kingsley, 2018). Munonye (2019) defined a policy as a process through which governments translate their political visions to programs in order to bring about societal change. Agricultural policy is the synthesis of the framework and action plans of government designed to achieve overall agricultural growth and development (Office of the Secretary to the Government of the Federation, OSGF, 2023).

Shaibu (2023) noted that a couple of agricultural policies have been introduced in Nigeria: the Agricultural Transformation Agenda (ATA) 2011 and the Agricultural Promotion Policy (APP) 2016-2020. These policies target boosting food production, export and food security. Nevertheless, the policies' impact have been weak over the years, with poor outcomes. Highlighting some of the reasons for failures of agricultural policies, Munonye (2019) noted that the policies lack focus, continuity and consistency in programs they aim to address.

Agricultural Value Chains

Dubey et al. (2022) conceptualized a value chain as a process that integrates different activities such as producing, marketing, buying and selling for ease of access to different networks, markets, innovations, knowledge and technologies. In their conceptualization, Onuoha et al. (2023) stated that a value chain as a network of businesses collaborating to promote their products and explore market opportunities to generate effective and efficient services tailored towards improving their incomes. Dubey et al. (2022) further noted that value chains are important for the effective and efficient management of food production systems, and that agricultural value chains connote the set of activities, actions and actors who are involved in the chain of getting agricultural produce from their places of production to the final consumers. Highlighting the importance of agricultural value chain to poverty reduction in Nigeria, Onuoha et al. (2023) noted that connecting agricultural production with manufacturing, industry and service sectors and ensuring effective use of resources, including human resources, can contribute to economic growth in Nigeria, especially when the collective roles of processors, marketers and other players in the agricultural value chain are connected to the farmers.

While the primary agricultural value chain players in the rice sector are broad, including the farmers, agro-input suppliers, processors, transporters, distributors and marketers, this study's focus is on four of the value chain players; namely (1) rice farmers, (2) processors, (3) marketers, and (4) agro-input suppliers. The focus on these actors is because of their crucial roles in rice value chain, from cultivation to value addition that ensures the product ready for marketability to final consumers. This is not to say that other identified stakeholders are not important; however, the papers' focus is on these actors in the overall rice value chain.

Research Methodology

The research focused on Nigeria and used descriptive research design and documentary analysis to provide insights into the paper's aims. Secondary data were sourced from the FAO (2025) to highlight rice production trends in Nigeria from 2014 to 2023, Nigeria being the largest producer of rice in Africa. This was used to describe the rice production trend in Nigeria based on the first objective of the paper. The contextual issues concerning the rice value chain activities in objective one, and objectives two and three which focused on gaps in policy process and stakeholders' inclusiveness in policy process respectively were addressed using documentary analysis. Nonetheless, secondary data that show the trends in rice production are presented using charts and percentages.

Analysis and Discussion of Trends and Contextual Issues in the Rice Value Chain in Nigeria

This section presents the trends in rice production and contextual issues in the rice value chain, focusing on rice production, agro-input supply, rice processing, and marketing in Nigeria. They are discussed sequentially in the following subsections for cohesion.

Rice Production

The area of land under rice cultivation and quantity produced has been on the increase in Nigeria, reflecting more rice farmers who may be driven by limited livelihood opportunities in rural areas. Figure 1 shows that the area of land under rice cultivation in Nigeria increased from over three million hectares in 2014 to over 4.5 million hectares in 2023. Also, the quantity of rice produced in Nigeria between 2014 and 2024 increased from over six million tons in 2014 to over 8 million tons in 2023 (Figure 1).

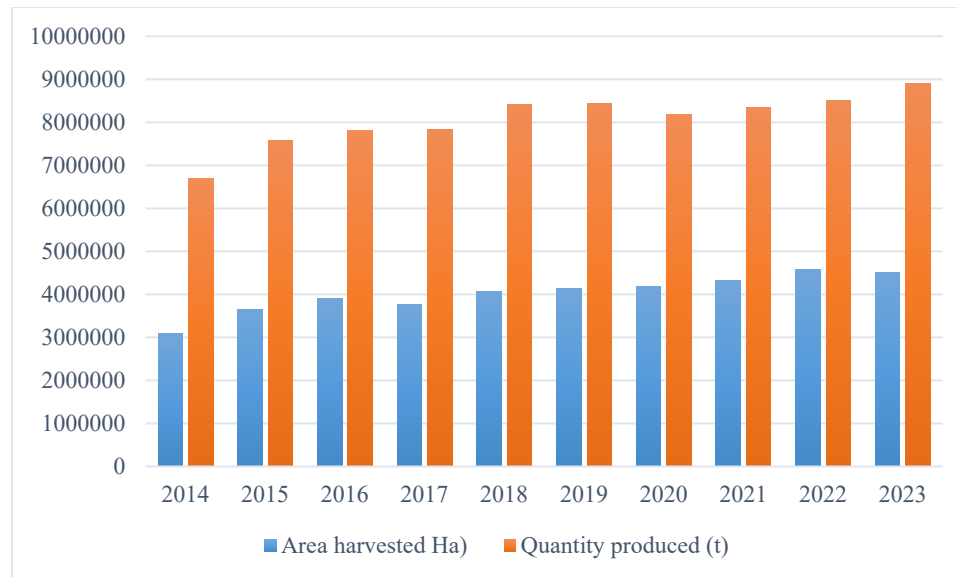


Figure 1: Trends in Area of Land under Rice Cultivation and Quantity of Rice Produced in Nigeria (2014-2023)

Source: Self-generated by the Author based on Computations from FAO/UN, 2025

For the ten-year period, the rice yield in Nigeria took a downturn, decreasing from 2.16 tons/hectare in 2014 to 1.97 tons/hectare in 2023 (Figure 2). Juxtaposing the production quantity and yield in Nigeria reveals that even though the area of land under rice cultivation and quantity of rice produced in Nigeria is high, output does not reflect efforts as reduction in yield ultimately determines the benefits from the efforts of the farmers in comparison to other resources invested. This means that what ultimately pays the farmers is generating more output from a smaller land area than cultivating more land with lower yield.

The lower yield in Nigeria has been a persistent challenge for rice farmers who lack modern technologies, irrigation facilities, sufficient credit, fertilizers and other inputs to boost their productions. This lack of concerted investment in the rice sector by the government continues to drive the demand-supply gap, which successive government regimes have attempted to fill with rice importation, a partial solution that increases government foreign spending.

In their study on risks in rice production performance in Kebbi State Nigeria, Buhari et al. 2024 found that the persistent subsistent level production due to poor access to modern technologies, inadequate access to credit facilities, and insufficient input supply continue to undermine rice production such that in Kebbi State, yield remains low, with farmers generating

40% yield from an hectare. In a similar study in Oyo State Nigeria, Oduntan (2024) reported that rice farmers are constrained by poor access to extension services, poor storage, high cost of inputs, high cost of transportation, lack of access to credit, pests and diseases, poor soil and high cost of hired labor. Where these limitations exist and remain unaddressed, although farmers may cultivate larger farm sizes which are readily available to them, yield will remain low.

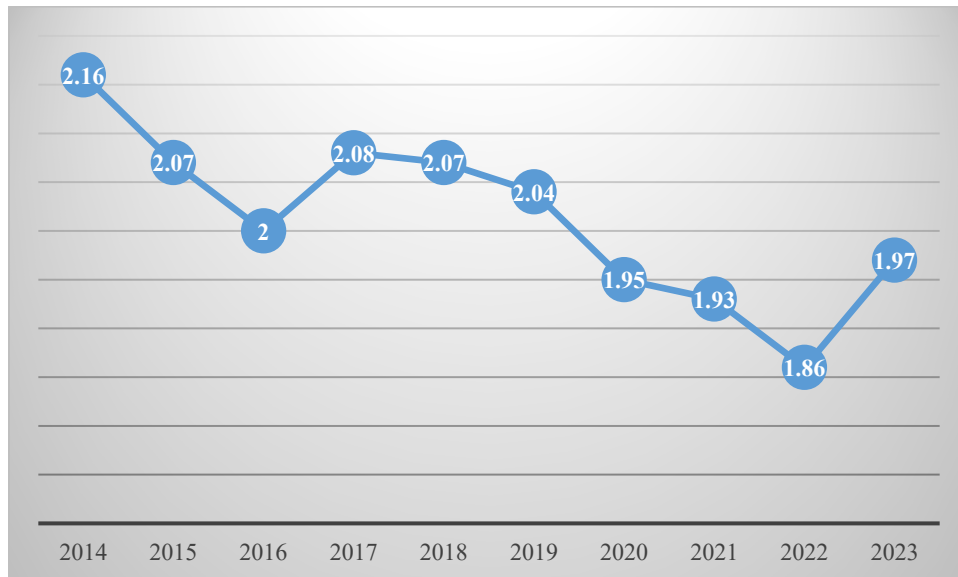


Figure 2: Trends in Rice Yield in Nigeria (2014-2023)

Source: Self-generated by the author based on computation from FAOUNS, 2025

When rice farmers in Nigeria cultivate large areas with low yields, the consequences are significant. Economically, they invest more in land preparation, labor, and inputs without proportional returns, leading to financial strain. The time and energy spent on managing vast fields with minimal output can cause physical exhaustion and health issues. Low yields also reduce household food availability, worsening food insecurity. Additionally, the inefficient use of seeds, fertilizers, and water undermines the sustainability of these inputs, discouraging future investment. This cycle of high effort and low reward can demotivate farmers, especially the youth, and threaten the long-term viability of rice farming. Improving access to modern farming technologies, expanding irrigation infrastructure, providing affordable credit and quality inputs, strengthening extension services, and promoting farmer education for sustainable and efficient rice production are necessary.

Agro-Input Supply

The starting point that guarantees the sufficiency in rice production that can meet the demand of the growing population in Nigeria is the farmers' access to productive inputs. Inputs such as access to land, labor, improved seeds, fertilizers, herbicides, pesticides and machinery, are critical for increased rice production. But, the high cost of farm inputs, limited land under irrigation in rice systems to ensure all-season production, limited adoption of research findings and technologies, insufficient fertilizer procurement and distribution, inadequate storage and

processing facilities, poor access to markets and marketing information, poor extension services, etc., continue to limit the performance of the rice sector in Nigeria (Nkuba et al., 2016; Balana et al., 2022; Chukwujekwu et al., 2022).

The low use of inputs in rice production contributes to the low yield per hectare in Nigeria. The FAOUNS, 2025 revealed a decline in rice yield in Nigeria from 2.16 tons/ha in 2014 to 1.97 tons/ha in 2023 (see Figure 2). The challenges associated with accessing these inputs reduce the usage by farmers, thereby affecting their rice yield even though the area of land under cultivation and the quantity of rice produced have progressively increased. The decline in rice yields clearly shows that beyond increase in cultivated rice land which may be driven by more entrants into rice production due to high unemployment rates and limited livelihood alternatives, especially for rural youths, access to input is an important determinant of output from the farmers' activities. Chukwujekwu et al. (2022) noted that funding the value chain activities of rice stakeholders will improve their welfare.

Rice Processing

The processing of quality rice has become an important determinant of rice consumption in Nigeria. The processing of better quality, stone-free, chaff and odorless rice that can compete adequately with imported rice that puts domestic producers at a disadvantage remains a battle to be won in the fight for sufficient rice production in Nigeria. Small-scale processors dominate the rice processing industry, accounting for almost 80% of the milled rice in Nigeria with the large processors accounting for only about 23% of processed rice (KMPG, 2019). The poor quality of locally produced rice contributed to the proliferation of foreign rice in Nigeria, a problem that continues to undermine the profitability of local rice producers in Nigeria.

While Longtau (2003) noted that the elites' preference for high quality processed foreign rice in Nigeria influenced government's importation of foreign rice in the first instance, the disservice of rice importation does not only affect the farmers, but also the input suppliers, processors, and marketers. This reflects a cyclical problem, with the failure of the government to address the problem of limited storage and processing facilities affecting the quality of locally processed rice. Singh et al. (2024) stated that limited access to storage and processing facilities will lead to post-harvest losses and reduction in the quality and market value of agricultural produce, a problem that is seriously affecting rice processing and storage in Nigeria.

Rice Marketing

The rice marketing value chain in Nigeria involves several actors and stages. The rice paddy traders who buy from the farmers and process it to polished rice or market it to processors, and marketers who buy from processing mills or processed rice and sell it to either the wholesale or retail marketers. Rice marketing also involves the distribution of processed rice from the rice mills to either the wholesalers or retail outlets, and to the consumers. In Nigeria, rice marketing from the processing points is carried out by independent retailers who sell in local markets to consumers or formal distributors who buy from large processors with branded rice and distribute it to markets (Aiyede, 2021). Branded rice from large companies accounts for about 30% of the rice sold to distributors using formal channels (Aiyede, 2021). A key determinant of the price of rice in Nigeria is the quality of processing.

Nkuba et al. (2016) identified some of the challenges of rice marketing to include limited

access to loans due to lack of collaterals, lack of supply side information, and fluctuations in rice supply along the value chain. They also noted that limited access to marketing information drives low market prices in Nigeria. Similarly, Olomola and Nwafor (2018) noted that rice marketing in Nigeria is challenged by poor infrastructural development, particularly bad roads that make it difficult for rural-urban connectivity.

Gaps in the Agricultural Policy Process that Affect the Rice Sector in Nigeria

The agricultural policy process is the active involvement of agricultural stakeholders in all stages of the policy development process for adequate targeting and increased performance. It is the engagement of different stakeholders to develop or revise existing policies (Mapila, 2014). The FAO (2008) noted that apart from the government, other players that are key in the agricultural policy process include landowners, farmers' organizations, cooperatives, NGOs, research institutes, and microfinance institutions. Highlighting the roles of local stakeholders in the policy process, Hargrove and Heyman (2020) noted that the failure to identify a wide spectrum of stakeholders affected by the issue could in turn affect the policy process. Similarly, Tjilen et al. (2024) noted that inaccurate and partial stakeholder identification results in situations whereby important stakeholders are left out, with local stakeholders' expectations and aspirations neglected.

In Nigeria, the government has implemented several policies to address the rice demand-supply gap and other critical aspects that affect the rice value chain. Most of these policies have focused on providing inputs to farmers to increase their production capacities, fiscal policies to provide credit, and trade policy regimes that include tariffs and trade liberalizations. While these policies achieved some successes, they were not sustainable, with one government regime terminating the policies of the previous government such that the policy outcomes are hardly assessed for impact since they failed to mature to a point to understand their impact on the value chain activities of the actors. Some of the reasons for the policy failures are as follows:

- (1) Policy development processes in Nigeria often lack an elaborate demand-side component as they have always been supply-side driven. In this sense, the government and its representatives engage most of the processes with limited participation of the stakeholders. In the study of Badiora (2020), some of the stakeholders interviewed noted that most of the representatives in the policymaking domain are from a particular segment of the stakeholder group, with some respondents highlighting ethnicity as sometimes the dominant factor in stakeholder representation.
- (2) In a similar scenario, the policy domain in Nigeria is dominated by public civil servants and political office holders who have a limited view of the indigenous perspectives of the problems (Idachaba, 2011). Although Badiora (2020) noted that most people hardly show interest in participating in policy processes, the issue of interest might depend on their experiences because when people are not sure about whether their views or livelihood concerns are seen as priorities, it will affect their interests in interacting with governmental systems. The stakeholders' views on value addition and diversification alternatives can adequately furnish policies that will address an array of rural problems that are self-defined. The continual limited voice

of local stakeholders from the policy process remains a critical division between the government's efforts in the rice economy and the actualization of self-sufficiency in rice production in Nigeria.

- (3) Agricultural policies that are aimed at addressing rice demand-supply gaps lack a pilot testing component, which is essential for tracking the effectiveness of the policies in achieving the desired goals on a small scale before nationwide implementation. Pilot testing is an essential step in reducing wastage of scarce resources as it helps to ascertain the workability of any policy for large-scale implementation. FAO (2005) pointed out that field-level pilots to test policies on a small-scale help to generate local knowledge that can more effectively convince policymakers than their theoretical arguments or experiences from outside the local environment.

Addressing the Rice Demand-Supply Gap through Stakeholders' Inclusiveness in the Policy Process

The relevance of stakeholders' participation in the policy process in Nigeria was emphasized by the Federal Ministry of Agriculture and Rural development (FMARD, 2015) by stating that stakeholders from the public and private sectors, civil society, farmers and supporting international partners, etc., need to actively participate in policy development and program implementation for the development of the agricultural sector in Nigeria. Their contribution is essential for bridging the demand-supply gap in the rice sector. Some of the gains for policy outcomes and improvement of the food security and welfare of the value chain actors are highlighted by several literature.

According to Ayoola and Ladele (2009), effective stakeholders' participation in the policy process in the agricultural sector will positively impact farmers' production. Dasgupta and Roy (2011) observed that participatory planning that is broad-based and decentralized with mechanisms for public participation of key stakeholders will help to validate and rationalize key considerations that will ensure diversity in agriculture. Rietbergen-McCracken (2025) noted that providing space for stakeholders to participate in policy decisions will ensure access to resources and greater involvement in local governance, improve access to inputs like land, lead to equitable distribution of benefits, improve access to production, trade information, markets and government services, and empower rural people to engage policymakers. Similarly, Babu et al. (2014) noted that stakeholders' inclusiveness in policy processes will improve stakeholders' ownership and effectiveness of policies and programs. In the same vein, the International Rice Research Institute (IRRI, 2016) also noted that participatory policy development will help to bring the voices of the poor and vulnerable communities to the development partners that directly interface with them and their participation in research activities at the field level, with help to develop products and services that are inclusive and demand-driven.

In designing and implementing policies to address increased performance of the rice sector in Nigeria, policymakers need to understand and access the gains of an inclusive process which outweighs the current process where stakeholders' inclusiveness is minimally done, with a limited understanding of their localized needs. Given that increased areas under rice cultivation and quantity produced will require improved access to supply-side commitments by providing the necessary inputs to bridge the demand-supply gap, an inclusive policy process remains the

missing link to addressing rice shortfall in Nigeria.

Conclusion and Recommendations

Inclusive policymaking that involves the agricultural input suppliers, farmers, processors and marketers is a key component in the agricultural policy process that is targeted at addressing the demand-supply gap in rice production in Nigeria. The paper highlights the low yield of rice for a ten-year period, even though the land area under cultivation and quantity of rice is increasing rice yield is on the decline with implications for food security and livelihood outcomes of the rice farmers. This analysis provides a basis for understanding that the contextual issues undermining the rice sector performance in Nigeria are not the problems of land for rice cultivation, but rather the input that are required for maximizing the potentials of the land for increased yield.

A major gap that has undermined the rice sector performance is the limited inclusiveness of rice value chain actors in policy decision processes, such that their perspectives of their problems are hardly understood, with policies failing to address their problems. Understanding their demand-side constraints to their livelihood activities can significantly enhance the performance of the rice sector and reduce reliance on rice importation in Nigeria.

To achieve the aforementioned outcome, the paper makes three recommendations. First, the government should address the myriads of individual and collective challenges that affect the rice value chain stakeholders through an inclusive policy process as this will ensure their voices contribute to understanding their localized problems and also co-create solutions to addressing the problems.

Second, the government should address the supply-side constraints by providing credit, subsidized improved seeds and fertilizers and irrigation and land preparation machinery. This will help farmers to maximize the outputs from their rice farms.

Third, the government and other partners should also provide platforms for improved access to market information as this will contribute to improving the rice yield in Nigeria with the resultant improvement in the food security of, not only the value chain actors. This action will also improve national food security, given the reliance of millions of Nigerians on rice as a staple.

Finally, given that this paper focuses on secondary data sources and documentary analysis means that it is not exhaustive in terms of the issues discussed. Thus, primary data that capture the views of these stakeholders can further reflect experiential situations of the issues discussed. Further research is therefore required, especially in understanding the constraining factors limiting farmers and how they can be integrated into policy processes for greater output and performance of the rice sector in Nigeria.

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