

# Innovation Lab for Food Security Policy

## Nigeria Agricultural Policy Project

State Policy Note 4

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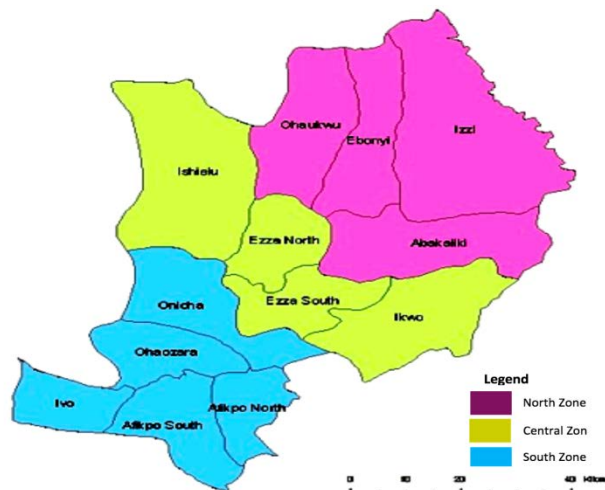
### Promoting Rice Productivity in Ebonyi State: Linking Data and Policy

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#### Introduction and background to Ebonyi State

Ebonyi State centers on latitude 6.1780° N and longitude 7.9593° E. According to the 2006 population census, Ebonyi State had a population of 2,176,947, with 1,064,156 males and 1,112,791 females (NPC, 2006).

Figure 1: Map of Ebonyi State showing the 3 agro-ecological zones



Source: Generated by authors from Google Maps, 2017

The state is located in the tropical rainforest belt of Nigeria and has an average annual rainfall of 1200-2000mm (EBADep, 2005). This tends to favor rain-fed agricultural production. Ebonyi State is one of the five states in the southeast zone of Nigeria and has a

#### Key Messages

- Rice yield in Ebonyi State increased from 2.7 to about 3.6 MT/ha between 2009 and 2011, followed by a dip of about 1 MT/ha in 2012. It was 2.6 MT/ha in 2015.
- The years associated with an increase in rice yield match with the launching of some of the government's flagship programs on rice, the establishment of new infrastructure by the private sector, and the support of development-partners.
- In addition to the provision of access to input and output markets, the recent increase in the price of rice is likely to stimulate further growth in the rice sector.

comparative advantage in the production of a number of food and cash crops such as rice, cassava and yam.

Ebonyi State is bounded in the north by Benue State, in the east by Cross River State, in the west by Enugu State and in the south by Abia and Imo States. The administrative structure of Ebonyi State is comprised of 13 local government areas (LGAs) as shown in Figure 1.

## Rice in Ebonyi State

Rice is the most prominent crop in the agricultural program of the state's current administration (Olawale, 2017). Rice is widely cultivated across the three agro-ecological zones of the state, making it one of the most important staple food crops. The crop is also a significant source of income for rural farm households. This is evident in the objectives of the Ebonyi State Agriculture Policy of 2010, which included the provision of an enabling environment for rice production in particular, and other important crops in general, as one of its intentions (Ebonyi State Government, 2010). Over the years, successive administrations in Ebonyi State have formulated and implemented policies and programs aimed at stimulating increased production of this important crop.

Some of the significant efforts in this regard include the establishment of the Ebonyi State Fertilizer and Chemical Company in 2004 and the building and installation of 80 MT/day capacity modern mills in each of the state's three agro-ecological zones in 2013 (Okorie, Onyeabor and Okereke, 2013). In addition, the current administration banned the sale of foreign rice in the state in 2016 (Omeihe, 2016). The ban was aimed at ensuring attractive commodity pricing for locally produced rice without competition, thereby motivating the local farmers to produce more of the commodity. The government has equally given necessary backing to this initiative by rolling out a number of support services in the form of input support to farmers and timely payment of counterpart funds to international development partner-assisted projects focusing mainly on rice production (Ituma, 2016).

To date, there are about 10,837 farmers profiled under the state government's direct rice production project, Fadama III Additional Financing Project and the International Fund for Agricultural Development IFAD-Assisted Project. Out of this number, 65% are

male while the remaining 35% are female (Ituma, 2016).

There is also the "One Man-One Hectare" program, initiated by the state government in 2016 (AgroNigeria 2016). Under this program, plots of land were acquired in various communities and allocated to farmers to produce crops especially rice. Such farmers were given loans in the form of capital inputs and agricultural extension services. This motivated many old and new farmers in the state to embark on rice production. In addition, the state government purchased over 40 tractors and various units of other rice production machineries and implements in 2016 (Olawale, 2017), both for institutional use and renting by interested individuals. This has not only reduced the cost of labor and drudgery in rice farming, but it also encouraged many young people to take up rice farming as an occupation.

Currently, the state government has demonstrated a considerable level of commitment towards the implementation of dry season rice farming with the establishment of irrigation facilities at various locations (Ituma, 2016). The statewide survey and mapping of soils across the 13 LGAs, commissioned by the state government in 2016, is another concrete effort towards enhancing rice production in Ebonyi State (Adebowale 2016). Complementing these are infrastructural developments such as the construction of rural feeder roads, grading of access roads to rural farm lands and profiling of farmers for the purpose of accessing credit for rice production under the Central Bank of Nigeria's Anchor Borrowers Program. The final outcome of these initiatives will serve to encourage the production of other important crops based on each locality's comparative advantage.

## Explaining the recent productivity gains in rice productivity in Ebonyi State

In light of the existing policies and programs, one would expect that rice production in Ebonyi State exhibits upwards trends in relation to some important productivity indicators such as crop yield and annual

crop output. The use of empirical field data enables us to assess the nature of such trends. This is done with the aim of exploring possible linkages between policies, programs, projects and other factors deemed relevant in explaining the observed trends. This policy note is therefore an attempt to look deeper at the issues raised above with a view to providing some basic information for evidence-based decision making.

**Table 1: Key rice production variables in Ebonyi State 2006-2015**

| Year | Area crop yield (MT/ha) | Cropped land area (000ha) | Output (000MT) | Output price/MT (N'000) |
|------|-------------------------|---------------------------|----------------|-------------------------|
| 2006 | 2.44                    | NA                        | 244.16         | 110                     |
| 2008 | 3                       | 97.89                     | 293.67         | 225                     |
| 2009 | 2.74                    | 108.14                    | 296.35         | 246.3                   |
| 2010 | 3.65                    | 111.31                    | 406.61         | 130                     |
| 2011 | 3.606                   | 113.02                    | 407.55         | 143.83                  |
| 2012 | 2.665                   | 110.6                     | 294.8          | 143.3                   |
| 2013 | 2.673                   | 116                       | 310.1          | 135                     |
| 2014 | 2.393                   | -                         | -              | NA                      |
| 2015 | 2.654                   | -                         | -              | NA                      |

Source: EBADEP (2016). Note: NA = Not Available

Table 1 presents some key variables indicative of the status of rice production in Ebonyi state between 2006 and 2015.

Figure 2 depicts the trend in annual rice yield in metric tons/hectare (MT/ha) in Ebonyi State between 2006 and 2015. There was a steep growth in the area yield of the crop from 2009 to 2011. This may be attributed to the effects of the presidential initiative on rice launched by the federal government in 2002. Indeed, under this initiative, farmers received some

incentives such as fertilizer and improved seed for NERICA rice variety (Anyanwu et al., 2010). These were in addition to an aggressive sensitization campaign on the part of the government to encourage farmers to take up rice production as a viable source of livelihood.

Conversely, the downward trend observed between 2011 and 2012, may have been linked to the floods of 2012 and some negative effects of politics on agricultural production. Anecdotal evidence reveals that most individuals in the state—including farmers—tend to get involved in election-related activities to the detriment of other activities, including farming. A direct implication of this is that most of the farmers may have failed to observe some of the critical agronomic practices which resulted in widening the gap between the potential and actual yield of the crop.

**Figure 2**



Source: Generated by authors based on data from EBADEP, 2015

While recent rice yields in Ebonyi State are below 2011 levels of 3.5 MT/ha, they are currently around 2.5 MT/ha, which is still at the higher end of the yield range in Nigeria (Liverpool-Tasie, 2016).

In 2013, there was an upward trend in rice paddy yield which could be associated with the launching of the Agricultural Transformation Agenda in Ebonyi State by the federal government. As a result, input subsidies were extended to the farmers by the federal government via the Growth Enhancement Scheme

(GES) platform (Okorie, Onyeabor, and Okereke, 2012). The upward trend declined slightly in 2014 but has resumed 2013 levels since 2015. The establishment of three modern rice mills in the three agro-ecological zones of the state in 2013 may have encouraged farmers to intensify rice production activities and enhance their agricultural practices. Moreover, the state government has been consistent in the payment of counterpart fund for development partner-assisted projects such as IFAD and Fadama III since 2013. Thus, some of the farmers may have benefitted from the improved input subsidies extended by these agencies, thereby boosting rice yields.

### **Challenges to rice productivity growth**

Despite the observed positive results in rice production with important gains in yields, outstanding challenges exist which need to be addressed by the state government. This policy note identifies some of the factors that constitute challenges to rice production in Ebonyi State.

The state lacks, in line with global best practices, well-articulated actionable policies on rice production. At the farm level, the late release of improved seeds and fertilizer negatively affects planting activities. Additionally, the limited availability of large-scale irrigation systems hinders dry season rice production.

On the output side, farmers do not have access to key markets for the sale of their harvests. This is a significant disincentive to appropriate investments in rice production.

The lack of feeder roads is also a constraint for the transportation of paddy from the farm gate and also has implications for the true cost farmers face to secure inputs such as chemicals and fertilizers purchased in major markets in cities. Farmers also lack the capacity to manage risks associated with flooding, rice diseases and pests. The destruction of rice fields by Fulani cattle also deserves the state government's attention. Moving forward, it will be

important for the state to implement a comprehensive and functional database for the effective planning and implementation of rice production projects. Increased autonomy in the administration of rice production programs and projects is also desirable.

### **Sustaining and improving rice productivity growth in Ebonyi State**

To preserve current levels of rice productivity and potentially increase it to levels attainable in Asia or the U.S.A., there are a number of actions that need to be taken. The state government needs to pay particular attention to the current challenges to rice productivity mentioned above. Ensuring that Ebonyi State rice farmers have timely access to necessary inputs and guaranteed markets for their output will be key to the continued success of the state in rice production. Since rice is the priority crop in Ebonyi State, the government would benefit from developing a road map for rice production in the state in form of a well-articulated and easy-to-implement rice policy document. In addition, continued funding for the State Ministry of Agriculture and the Agricultural Development Program would ensure effective and efficient service delivery. It is also important that agencies tasked with the responsibility of extending subsidies to farmers for rice production make timely delivery a priority.

Ebonyi State could learn from existing success stories from other states in Nigeria. More specifically, for the establishment of a functional electronic databank to register farmers, for the swift implementation and coordination of rice production projects, Ebonyi State could gain some valuable insights from Anambra State's databank system, operated by the Anambra Agric Control Center (ANSG, 2016). Further support to infrastructure development through the construction of farm/feeder roads for the movement of rice from farms and from rural to urban areas are also key. The trespassing of rice fields by herdsmen deserves the involvement of all the stakeholders for a collective solution. Lastly, the state government may

guarantee market prices of rice by off-taking rice paddy from farmers at reasonable prices

### Conclusion and key recommendations

The analysis in this policy note reveals a number of important issues for consideration in Ebonyi State. Rice is a priority crop in Ebonyi State which has received some level of attention from past and present administrations. This has positively impacted rice productivity indicators such as yield. Rice yield in Ebonyi State is currently around 2.5 MT/ha, which is at the higher end of rice yield obtainable in Nigeria. While the gains in yields can be linked to specific government programs, a number of proposals have been suggested to maintain current yields and achieve the full productivity potential of this important crop in the state.

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