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5 **Abstract**

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**Index terms—**

8 Major problems in the study area were identified as inadequate provision of funds/capital (79 percent) ,  
9 inadequate input provision (67percent)are forces leading to high cost of rice produced within the study period.  
10 Finally, corresponding recommendations of best management practices on how to tackle the outlined challenges in  
11 situations such as the pandemic alteration period in the future were made. Emphasis on relevance of Ebonyi State,  
12 women as the major available labor force in rice farm clearing glaringly noted could be encouraged with adequate  
13 funds, input, extension services and basic climate information especially in situation such as the pandemic era  
14 in 2019.Also this study highlighted labour shortage was overcomed due to increasing women participation within  
15 the period (79 percent) Ikwo women are crucial to improving agricultural productivity and food security in the  
16 state. Therefore, women farmers empowerment in this agricultural community is highly recommended to boost  
17 rice output in the community and the State at large.

18 **1 I. INTRODUCTION**

19 In Nigeria, research and development has focused on women's participation, access to productive resources, and  
20 decision-making responsibilities in agriculture and related sectors throughout the last few decades. Many studies  
21 argue that the gender gap that impacts agricultural output of many major crops such as rice in many developing  
22 countries is due to variations in men and women's duties, priorities, and access to resources and services at the  
23 community and household levels. In the case of the rice value chain in Nigeria, there As a result, rice (*Oryza spp.*  
24 ), the world's second-most-consumed cereal (after wheat), influences the lives of millions of people worldwide  
25 Akande T. (2020). Rice provides around 80% of the calories required by more than half of the world's population  
26 (FAO, 2020). In Nigeria, it has become a staple cuisine, with every household, both rich and poor, consuming  
27 it(Esiobu NS, Onubuogu GC (2020).The increase in demand could be due to increased population and income  
28 levels, as well as the convenience with which it can be prepared and stored Esiobu NS, Onubuogu GC (2020).

29 **2 II. PROBLEM STATEMENT**

30 The International Monetary Fund ??IMF] forecasted in April 2020 that the global economy would drop drastically  
31 by 3% and that the economy of Sub-Saharan Africa would contract by 1.60 percent in 2020, indicating that the  
32 pandemic phase will have disastrous repercussions on the global economy (IMF, 2020; CDC and Prevention,  
33 2020). In a worst-case scenario, the Economic Commission for Africa (ECA) predicts that economic activity in  
34 Africa as a whole will decrease by 2.60 percent, negatively impacting major economic sectors such as agriculture  
35 (ECA 2020). As a result of the foregoing, men and women's roles, priorities, and access to resources and services  
36 differed even more as the rice farming suffer. This paper thus enumerates the barriers that strained the rice value  
37 chain and aims at evaluating the barriers and challenges that distorted the rice farming in the state within the  
38 study period.

39 Aim : To find out the major barriers that strained the rice value chain more importantly the farming aspect. It  
40 therefore assesed the barriers and challenges that distorted the rice farming in the state within the study period.

41 **3 III. METHODOLOGY**

42 Study Area and sampling techniques: Ikwo is choosen as the study area because rice is their major agricultural  
43 produce in Ebonyi state as a whole. Therefore the entire Ikwo rice producing community was studied. Two

## 7 VI. RICE FARMING BARRIERS AS A RESULTING FROM COVID 19 CHALLENGES

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44 community was picked at random. A total of 76 farmers were studied. The list of the sample frame was obtained  
45 from the local community head. The study targeted the rice farming season of 2019 and 2020.

46 Data collection and Analysis: The questionnaire was used to generate the primary data used for this study  
47 while secondary data on rainfall onset, sensation, dry spell and flood impact was obtained from FMARD, Federal  
48 Ministry of Agriculture and Development report 2020. The socio-economic characteristics of farmer, major  
49 challenges facing rice farmers within the farming period 2019/2020 including the effect of COVID 19 the impact  
50 were captured in different sections of the questionnaire used for this study. Data analysis was done using  
51 Descriptive statistics such as percentages, mean and flow chart. According to Onu and Okunmadewa (2001),  
52 market performance includes the relative efficiency of production (that is, price relative to the average cost of  
53 production).

## 54 4 IV. BARRIERS TO RICE PRODUCTION IN THE PAN- 55 DEMIC PERIOD

56 Global food prices continued rising for the second consecutive month in July 2019 led by vegetable oils and dairy  
57 products. However, cost of rice in Ebonyi state is extremely high owing to persistent External Environmental  
58 factors resulting from the pandemic control measure(lockdown)and factors relating directly and indirectly to  
59 Climate change consequences, increase in demand for rice as palliative or inflation as well as the effect of the  
60 distorted rice value chain within the initial stage of the Pandemic starting in 2019 made an unprecedented price  
61 and demand shift in many parts of Ebonyi State. As a result of the above, bushel off rice that was #4000 before  
62 the covid-19, N11,500, N12,500 and at present is a bushel is sold as much as 18,000 naira in Ebonyi state markets,  
63 the city is already affected by hunger, thus many of the inhabitants are poor without formal education. Some  
64 Food Commodity Prices are increasing mainly because of local logistical problems and up till now the price of  
65 rice and other commodity persists in different localities even at this post pandemic period.

## 66 5 V. RICE FARMING CHALLENGES RELATED TO CLI- 67 MATE EVENTS

68 Climate change is one of the most serious threats to Nigeria agricultural sector and food security, because of its  
69 sensitivity and vulnerability to high ambient temperature and rainfall fluctuations. made an unprecedented price  
70 and demand shift in many parts of Ebonyi State. As a result of the above, bushel off rice that was #4000 before  
71 the covid-19, but is now N17,500, N18,500 respectively in markets, the city is already affected by hunger. This  
72 price fluctuations have Some unimaginable impact on the farmers take home income at the end of each farming  
73 season as shown in fig. 2 above.

## 74 6 Table 1

75 Source: Author "s analysis

## 76 7 VI. RICE FARMING BARRIERS AS A RESULTING 77 FROM COVID 19 CHALLENGES

78 The agricultural sector was not immune to the problem. According to the African Development Bank (AfDB),  
79 the continent's economy will decrease by as much as 3.40 percent throughout the research period (AfDB, 2020).

80 The COVID-19 pandemic outbreak in Nigeria was marked by severe precipitated rice crises, interrupting the  
81 rice value chain system and posing a significant threat to the rice and food value chains. Agriculture sector was not  
82 left out in this dilemma. The African Development Bank predicted that the economic contraction for the whole  
83 continent will be as much as 3. Rice was primarily used as a palliative during the epidemic, resulting in a scarcity  
84 of rice seedlings for rice growers. The food industry is one of the areas that was exempted from the lockdown  
85 since it is considered critical. During the lockdown, many households, especially rice farmers, experienced varied  
86 degrees of hunger and food instability.

87 The restriction on farmland mobility contributed to labor shortages in the rice industry, and the lockdown was  
88 announced just before the planting season began. This resulted in a labor scarcity, which resulted in production  
89 losses and a rice farm and market deficit.

90 Rice [Oryzaspp] is the world's second most widely consumed cereal crop, with millions of homes worldwide  
91 ??Akande,2020). Rice is used by about 80% of the world's population. Rice was primarily used as a palliative  
92 during the epidemic, resulting in a scarcity of rice seedlings for rice growers. The food industry is one of the areas  
93 that was exempted from the lockdown since it is considered critical. During the lockdown, many households,  
94 especially rice farmers, experienced varied degrees of hunger and food instability.

95 Crop production is predominately rice-based, also faced with increasing vulnerability as well. The increasing  
96 variability, intensity and erratic nature of rainfall, rising incidence of flood and soil erosion may be responsible  
97 for serious decline in production and in the high cost of rice over these years in the south east.

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## 98 8 VII. RESULTS AND DISCUSSION

99 Characteristics of farmers as shown below includes active participation of all age ranges and more importantly  
100 the women folk as much as 79 percent agree to effective women participation in rice farming especially in farm  
101 clearing and harvesting. The major active rice farmers are within the age range 41-50 and 51-60 usually this concides  
102 with farmers with the high farming experience over a decade. Rice was a major "palliative" product for use for  
103 the government, non-governmental organizations and the populace. This increasing stress on rice value chain,  
104 labor scarcity and mobility also led to increased burden on rice farmers in the Ebonyi State. This study pointed  
105 out the rice production systems barriers and the need for improved farming practices in place to increase yield,  
106 particularly now with the increasing count on barriers affecting rice value chain. The barrier of Pandemic and  
107 Climate related events are double threat for farmers. As a matter of urgency, farmers must respond to this new  
108 threat (COVID-19) by choosing measures that improve yield by minimizing all that constitutes a barrier to their  
109 yield and farming process. Also take measures that will ensure consistency in market supply and distribution  
110 across the distribution chain. Therefore, the challenges affecting rice production should be top priority. Farmers  
111 should respond to this new threat of COVID -19 by choosing methods that can improve rice yield without  
necessarily increasing labor intensity.



Figure 1: Objectives:?

Figure 2:



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Figure 3: Fig. 1 :

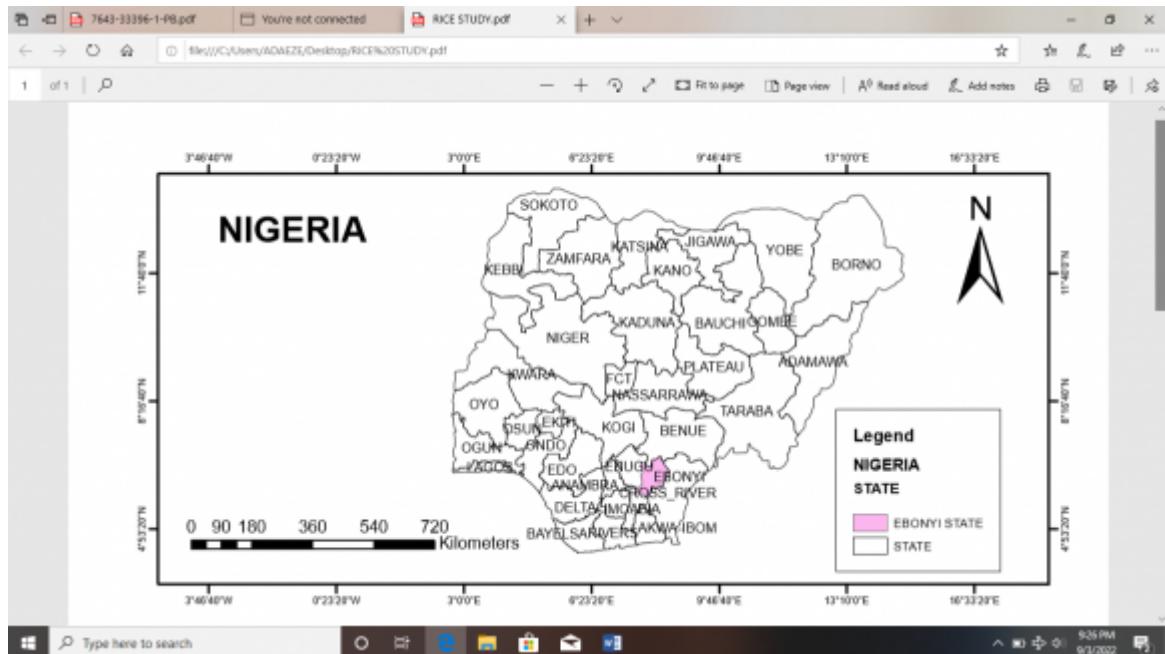


Figure 4:

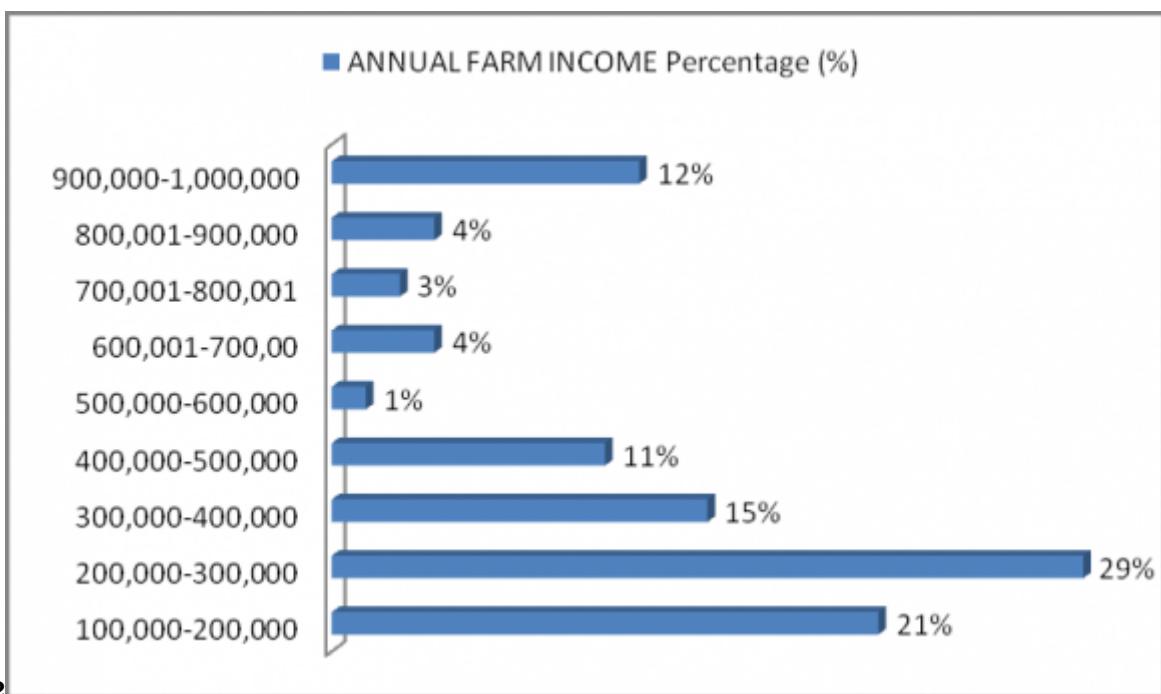


Figure 5: Fig. 2 :

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Figure 6: Fig. 3 :Table 2 :

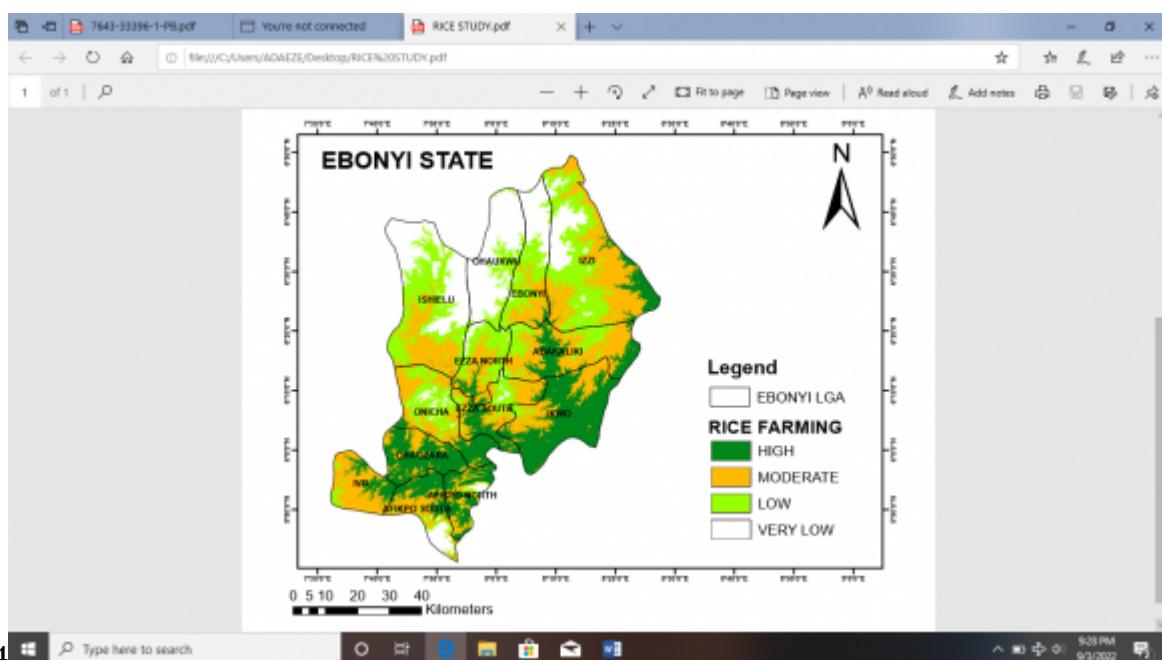
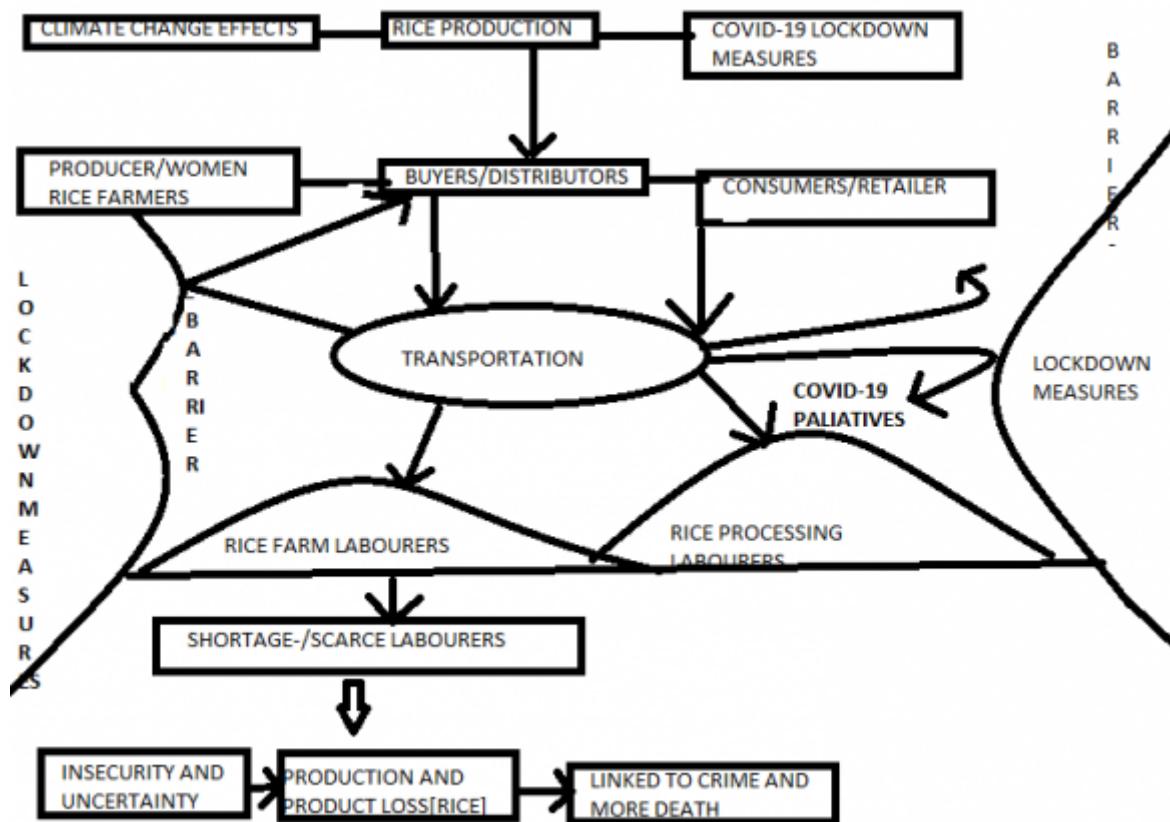


Figure 7: Figure 1 :Fig. 4 :

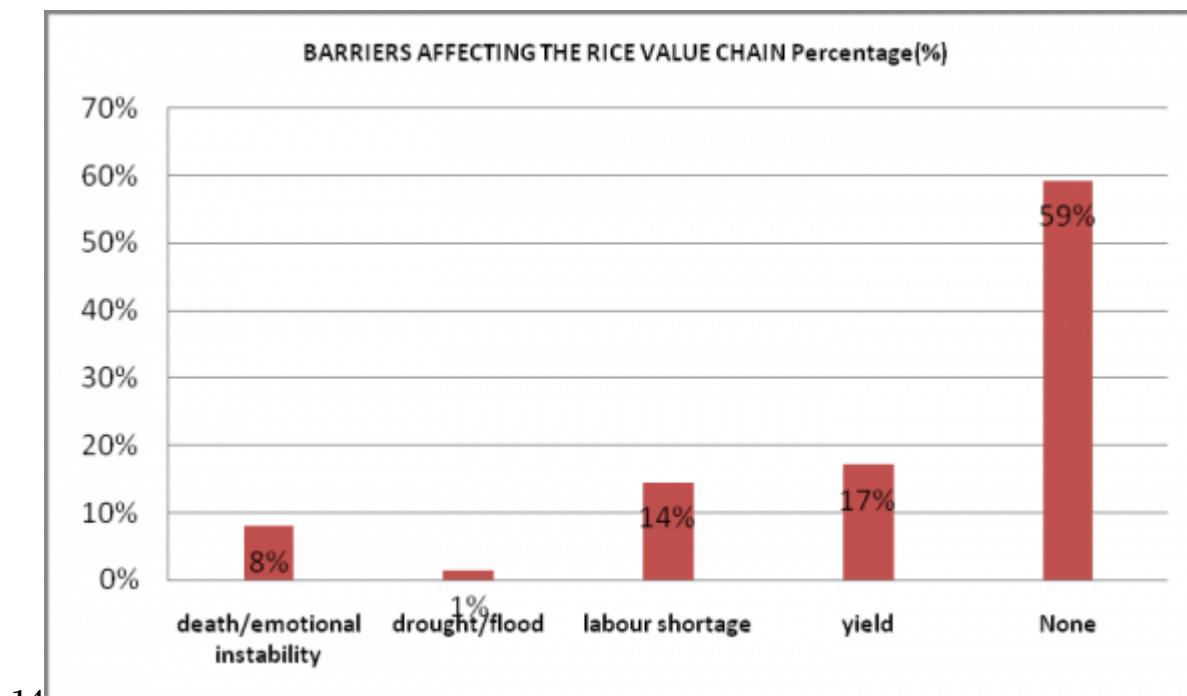


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Figure 8: Fig 5 :

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Figure 9: Fig. 6 :



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Figure 10: Fig. 1 :Fig. 4 :

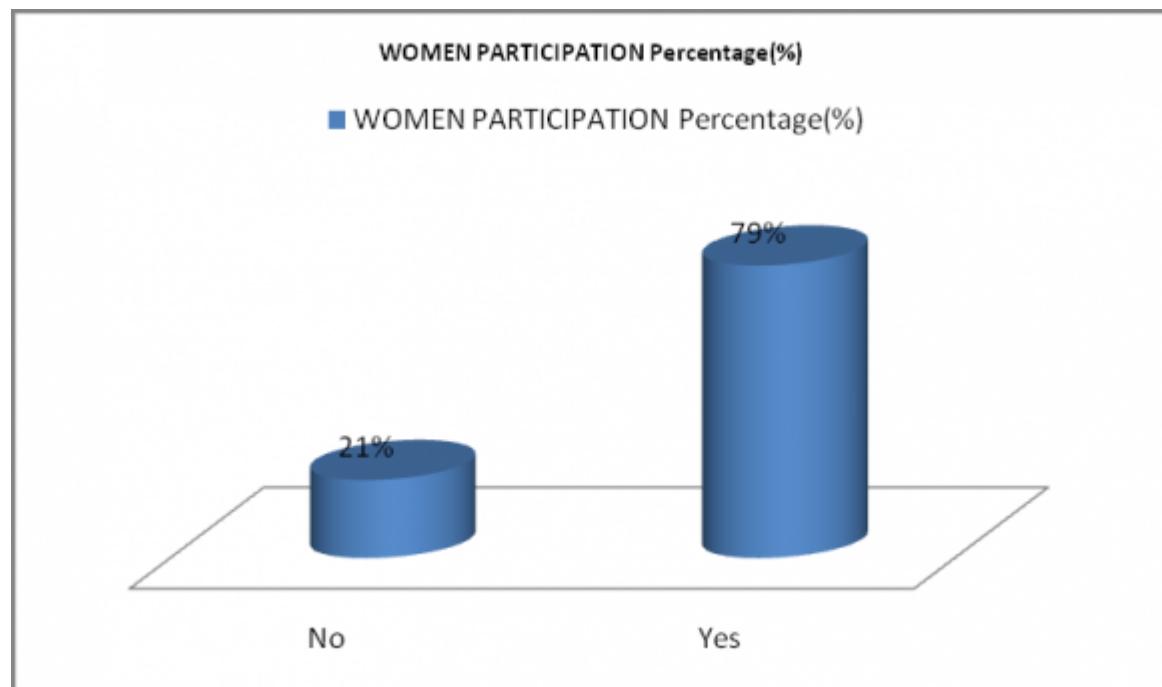


Figure 11:

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In many aspects, climate change and COVID 19's enlarged obstacles endanger women rice farmers' efforts to produce rice. As a result of global warming. Climate change and COVID 19 extended challenges pose threat to the effort of women rice farmers towards rice production in many ways.

Climate change as a global phenomenon is undermining the effort towards achieving the sustainable development goals (SDGs). The intergovernmental panel on climate change (IPCC) described climate change as the change in global climate patterns which can be identified by variability in climate properties over time. (IPCC 2018).

Over the past century, global average surface temperature has increased approximately by 0.60 Cand this has affected both plants and animals differently, this also affect economic growth because agricultural productivity is affected (Akin 2015). This become even more worrisome during the announcement of the first case of COVID-19 announced in Nigeria.

COVID-19 named SARS-COV-2 was first reported by officials in Wuhan City, China in December 2019 (World Health Organization, 2020).

Investigation by Chinese authorities identified human case with onset of symptoms in early December 2019 (Wang, 2020). The World Health Organization declared COVID-19 a global pandemic in March, 2020 (World Health Organization 2020).

The first confirmed case in Nigeria was announced on 27th February 2020, when an Italian Citizen in Lagos was tested positive for the Virus (NCDC,2020). This marked the beginning of the difficult engagement among farmers all over the world especially farmers in Ebonyi State. Rice value chain was severely affected within this period.2019/2021(Ibukun and Adebayo, 2021; GAIN, 2020). Climate change, as well as agriculture, food insecurity, and rice production problems were all aggravated by the epidemic.

Figure 12:

(2012) stated that agricultural marketing plays an important role in stimulating production and consumption and in accelerating economic development.

During the pandemic, many climate and environmental producing areas in the south east. Climate change and COVID 19 lockdown measures are the most significant during the study period. Rice has surpassed wheat as Nigeria's most important staple food and cereal crop. (NCRI, 2004; Akpokodje et al., 2001). With a yearly consumption growth rate of 4.4 percent (IFDC, 2008), it is the fastest increasing commodity in Nigeria's food basket (Akande, 2003). Nigeria is the top rice grower in the West African sub-region (Oyinbo et al., 2013).

restrictions

Figure 13:

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Social Sciences

The restriction on farmland mobility contributed to labor shortages in the rice industry, and the lockdown was announced just before the planting season began. This resulted in a labor scarcity, which resulted in production losses and a rice farm and market deficit are represented in a logical frame below (fig 4)

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tion  
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Figure 14:

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