

**FOOD PRICES AND THE CHALLENGE OF FOOD SECURITY IN BAYELSA
STATE, NIGERIA**

Abstract

High food prices are seen as synonymous with food insecurity. This is because it defiles one of the four cardinals of food security; food accessibility. To ensure the attainment of food security which is a common denominator in the United Nation's MDGs and SDG as eradication of hunger, food must be economically accessible by all and sundry. Bayelsa State has been bedevilled by exorbitant food prices as confirmed by NBS data released in March 2020 which placed the state as having the highest cost in 15 out of 43 food items reviewed. This placed it as the state where food is most expensive in the federation. This study employing the tool purposive structured interview and schedule sought the view of 400 traders from five markets in the state capital, Yenagoa. Also 15 food truck drivers were interviewed. Using frequencies and percentages, the result showed that the key contributors to high food prices in the state are high dependence on food importation from within and outside the nation as the natives are not farmers, activities of touts, oil pollution, absence of large mechanized farms in the state, poor road network among others. The study strongly suggest the harmonisation of taskforce collecting agencies to eradicate multiple levies that are currently ongoing. It also suggested improved investment in agriculture by both public and private sectors with comparative advantage in mind to ensure that the potentials of the state in agriculture are adequately harnessed.

Keywords: Food Accessibility, Agriculture, Climate Change, Agricultural investments, Aquaculture.

JEL Classification: Q110

Introduction

Food is one of mans' basic needs for survival. As identified by Maslow, It is the first on the list of mans' physical survival needs (Maslow, 1943). Food has been defined as any substance eaten or drunk by living things (World of Molecules, 2015). It is the main source of nutrients and energy for all living things. To underscore its importance to mans' existence, the High Commissioner for Human Rights enacted the right to adequate food as contained in CESCR, 1999, general comment 12. Also the United Nations in its Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) stressed the need for the eradication of poverty and hunger as a key indicator for the achievement of the MDG and SDG goals respectively (United Nations, 2015).

Owing to the importance accorded food by local and international organisations, access to food has become one of the pointers of the progress of a nation state (Gilbert & Morgan, 2010), (Osabohie, et al., 2018). This represents the view of the FAO when it stressed that Nigeria still accounts for large number of undernourished people despite the progress made so far globally in reducing food insecurity. (Food and Agricultural Organisation, 2011). Food security is said to have been achieved when *'people at all times has physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preference for an active and healthy life'* (Shaw, 2007). The above brings to fore the four dimensions to food security as Availability, Accessibility, Utilization and Stability. If these four dimensions are not met, food insecurity is prevalent.

Accessibility with respect to food security refers to the ability of individuals and households to reach food needed for healthy living economically, efficiently, timely and in the right condition. Food access is a function of market factors, food prices as well as purchasing power of the household which is determined by their source of livelihood and employment factors respectively, (Food and Agricultural Organisation, 2008). It therefore implies that, a once food secured person or community can become food insecure if there is an adverse change in any of the factors which influence food accessibility.

Bayelsa State is one of the South-South states of Nigeria. It is among the core Niger Delta States (Asanebi, 2016). Being home to the Ijaws, they are known for such sumptuous delicacies as fish pepper soup, Plantain (majorly unripe plantain delicacy called "Kekefia"), fisherman soup, "Banga" soup with starch etc. The Ijaw people are prominent in subsistent farming. As pointed out by (Okonta & Oronto, 2003), most of these subsistent farming are done by their women. The state being riverine has the fresh water and the salt water in some parts of the state, as such, produces both fresh water and salt water sea foods respectively (Bayelsa State Bureau of Public Investment, 2015). Apart from sea foods, given that the state is a rainforest, it is blessed with huge forest resources such as mangroves, wet lands and wild lives (Andrew & Bariweni, 2018).

Beside natural endowments, various governments in the state have invested so much towards fostering agricultural production so as to enhance food security. For instance, the immediate past administration of Hon. Seriake Dickson invested so much in rice production, Fish

farming, Cassava and Poultry production in various locations within the state (Omasteye, 2018). Also, the state has witnessed high influx of farmers from various parts of the country who now engage in different types of agriculture such as food crop production, livestock, forestry and fishery (Bayelsa State Bureau of Public Investment, 2015; Cookey & Sigah, (2020).

The need for food accessibility and affordability became pressing as human efforts towards enhanced agricultural production for sufficient food security have not yielded the desired result. Also, despite the natural endowments and the huge funds different administrations have spent on various agricultural programmes, the state is still very vulnerable to food price shocks which make it highly susceptible to food insecurity. This is confirmed by data made available by NBS which showed that the state has the highest price for 15 out of 43 food items studied under the review period which covered January 2017 to March 2020 (National Bureau of Statistics, 2020). This report confirms that accessibility to food which is a key component for food security is under threat as food prices are exorbitant in Bayelsa state. This is what has motivated this study.

This study therefore seeks to find answers to the issue of price hike in the state with a view to proffering possible solutions to the identified causes, using the Experience Survey Study Style. Our scope is limited to the 400 sample size as we adopted purposive sampling method and structured interviews so as to get first hand information from all the players. This limitation does not however, reduce the utility of the study, but rather makes it unique as we seek to ensure that food price stability and availability is achieved which is pivotal to the eradication of hunger from the state and the nation at large by 2030 as envisioned by the UN (United Nations, 2015).

This work is structured thus; following this introduction is the Review of Literature, Methodology adopted for the study, Presentation and discussion of findings, Recommendations, Conclusion and suggestion for further studies.

Empirical literature

Experts have dealt so much on the possible causes of food insecurity in the South-South region of Nigeria and Nigeria at large. Households in South-South region which had reduced number of meals was found to have increased by 14.1% in 2015. This was discovered by (Osabuohien, Eze, Osabohien, Uche Eseosa, & G., 2020) in their study of household access to agricultural credit and agricultural production in Nigeria using propensity matching score model. In their submission, they implored decision makers to eradicate impediments on the ease of accessing credit by farmers as this will boost their production and ultimately affect food production positively which will engender food availability and accessibility, by extension food security.

In a study by Omonona & Agoi, (2007), using primary data obtained from structured questionnaires that was randomly distributed at 7 locations in Lagos and analyzed using

percentages and tables, it was uncovered that food insecurity is a common denominator of some sort as it is seen to be heightened among households that have large number, female headed households, those with more aged people, households with low educational level and those who are either unemployed or are traders. The same study noted that food insecurity is less likely with households of professionals and highly educated population. Also, increased income they noted impacts food insecurity negatively.

Increased access to credit facility by farmers has been found to be a sure way of eradicating poverty among farmers and food insecurity in general. This was the discovery of Osabohien, et al. ,(2018) in their study; food security, institutional framework and technology using ARDL method of analysis. They found that the nation's high dependence on oil has exacerbated food insecurity due to negligence of the agricultural sector. Among other things, they advocated for synergy between governments at all levels and farmers to ensure implementation of social policies aimed at protecting the farming population from natural and man-made hazards which disrupts agricultural production in the country. They also argued that increased access to credit for farmers will enable them acquire improved inputs which will boost food production and accessibility thereby reducing the scourge of food insecurity. This view was supported by (Osabohien, Adeleye, & De Alwis, 2020), they buttress the fact that adequate funding of agricultural sector by ensuring hitch-free credit availability and provision of land for the sector will facilitate food security.

Accountability in agricultural governance has also been identified in addition to increased funding as a vehicle for the attainment of food security. This was the view of (Osabuohien, Ufua, Moses, & Osabuohien, 2020). Using descriptive and econometric tools, they found that improved agricultural production will in the long run positively aid achievement of food security in Nigeria, But that in the short run, there is a significant increase in the number of undernourished people as well as overall increase in the population of the country. They submitted that in addition to accountability in agricultural governance, proper care should be taken to ensure that programmes that will promote increased food security are implemented to the letter.

Distance to farm sites, land preparation and maintenance as well as farmers' experience have been found to impact negatively on food crop production in Nigeria. This was the submission of (Ojo, 2004) in his work; Improving labour productivity and technical efficiency in food crop production, where he engaged the use of descriptive statistics and stochastic frontier production function. He advocated for deployment of technology as a key farm input that will significantly improve the negative indices and so ensure improved output and by extension reduce poverty and food insecurity in the country.

Stressing the importance of technology for revamping agricultural outlook, (Onwuzuligbo, Ejikeme, & Ojiako, 2017),(Refat Faisal, et al., 2020) in their various works on using remote sensing for crop production forecasting hinted that vital information on food crop production such as crop yield forecast, land mass coverage for crop production and other input requirements will ensure improved agricultural output. Specifically, Onwuzuligbo, et al., 2017 observed with the aid of remote sensing that there is a likelihood of decline in the production of

all other food crops such as rice, maize and yam, while there is a predicted increase in cassava harvest in the period under review.

On food prices, (Okuneye, 2010) noted that rising cost of food in Nigeria is rooted in policies and programmes of current and past administrations which paid lip service to agriculture and food security. He noted that to correct the trend, there should be massive education for farmers at all scale, provision of updated market information for both their input and outputs as well as increased funding for the sector.

From the available literatures reviewed, no such study has been carried out in Bayelsa State. Also, there is dearth of literatures addressing the food accessibility aspect which is very peculiar to Bayelsa State and Nigeria at large. Therefore, the lack of empirical solution to the Bayelsa State case as evidenced in the extant literature creates a huge gap that begs for attention. This is the literature and knowledge gap this study intends to fill as we study food prices and the challenge of food security in Bayelsa State, Nigeria.

Methodology

Exploratory research design whose major emphasis lies on discovering insights and ideas was deployed for this study (Kothari & Garg, 2014). Experience survey study style was adopted owing to the fact that we wanted to get first hand information from food market frontlines which happen to be market men and women who deal directly with food distribution within the state. We also interacted with truck drivers who bring in food to the state.

The study area was Yenagoa Metropolis. Yenagoa is the capital of Bayelsa State and the hub of her economic activities. It is the collection point where traders and artisans from other parts of the state converge for exchange of goods and services.

We adopted purposive sampling method; structured interviews and schedules were used to elicit information from our respondents. This method was adopted because we want to find the reason behind the price hike in the state from the stand point of the sellers as well as transporters who bring food into the state. We were purposive in our interviews and schedules owing to the fact that not all traders in the markets of interest deal on food. Traders in other lines of business will not give us the evidence based finding we are looking for; hence our attention was strictly on food item sellers and transporters. We acknowledge the error of going out of scope for the interview conductors. To hedge against it, we conducted the interviews ourselves armed with structured questions for the respondents. Being aware of systematic errors, we hedged against it by visiting the various markets on non-market days which are Mondays for Okaka and Tombia markets, Tuesdays for Swali Market, Wednesdays for Opolo market and Thursdays for Kpansia Market respectively. Our timing was midday hours when the market was less busy to chat with our respondents.

A total of 400 traders both men and women were interviewed. 140 traders from Swali market given that it is the biggest market in the state, 65 traders each from Tombia, Opolo, Kpansia and Okaka markets respectively. The selection criteria for the traders were only those who deal on food stuffs. We equally chatted with 15 truck drivers who we met offloading various food items at the Swali market motor park. Frequencies and percentages were employed in presentation of our findings.

Data Presentation, Presentation of Findings and Discussion.

Data on food Price Extremes in Nigeria

S/ N	Food Item	Lowest Price By State (₦)	Highest Price by State (₦)	Price Differenti al (₦)
1	Beef, boneless	Adamawa (1047.18)	Bayelsa (1537.17)	489.99
2	Bread sliced 500g	Gombe (240.83)	Bayelsa (450)	209.17
3	Bread unsliced 500g	Yobe (175)	Bayelsa (428.13)	253.13
4	Chicken Feet	Bauchi (350)	Bayelsa (1259.89)	909.89
5	Gari white, sold loose	Kano (142.71)	Bayelsa (388.35)	245.64
6	Gari yellow, sold loose	Katsina (153.82)	Bayelsa (381.56)	227.74
7	Maize grain white sold loose	Borno (80.36)	Bayelsa (312.88)	232.52
8	Maize grain yellow sold loose	Borno (89.29)	Bayelsa (354)	264.71
9	Onion bulb	Borno (120)	Bayelsa (400.08)	280.08
10	Rice agric sold loose	Kebbi (264.81)	Bayelsa (601.41)	336.6
11	Rice local sold loose	Sokoto (246.06)	Bayelsa (522.16)	276.1
12	Rice Medium Grained	Kogi (261.07)	Bayelsa (621.21)	360.14
13	Rice, imported high quality sold loose	Sokoto (357.62)	Bayelsa (685.08)	327.46
14	Wheat flour: prepacked (golden penny 2kg)	Ondo (595.5)	Bayelsa (835.25)	239.75
15	Yam tuber	Yobe (127.27)	Bayelsa (496.22)	368.95

Source: Nigerian Bureau of Statistics, (2020)

The data above extracted Nigerian Bureau of Statistics indicates that out of 43 selected food items whose prices were studied between January 2017 and March 2020, Bayelsa State has the highest price in 15 of them as shown on the table. This is a disturbing statistics as the state did not witness lowest price in any food item, hence it was not reported here.

Presentation of Findings.

Personal Profile of the traders

Table 1: Gender Distribution of the Traders

Gender	Male	Female
No. of Respondents	168	232
Percentage of Respondents (%)	42	58

Source: (Field Survey, 2020)

Table 1 above shows the gender distribution of the traders. 168 traders representing 42% of the respondents are male, while 232 traders representing 58% are females.

Table 2: Age Distribution of the Traders

Age Bracket	18 – 30 Years	31 – 45 Years	46 – 60 Years	61 years and Above
No of Respondents	92	222	68	18
Percentage of Respondents (%)	23	55.5	17	4.5

Source: (Field Survey, 2020)

Table 2 shows the age distribution of the respondents. 92 traders representing 23% of the traders are within the age bracket 18 – 30 years, 55.5% which represents 222 traders are between 31 – 45 years, 68 traders representing 17% of the respondents are between the ages of 46 and 60, while 18 traders representing 4.5% of the respondents are 61 years and above.

Table 3: Showing the length of Stay in Business of the Traders

Years	0 – 2 Years	3 – 5 Years	5 Years and Above
No of Respondents	120	240	40
Percentage of Respondents	30	60	10

Source: (Field Survey, 2020)

Table 3 shows the length of stay in food business by the traders. 120 traders representing 30% of the respondents have spent 0- 2 years in food business, 240 traders representing 60% of the traders have spent between 3 to 5 years, while 40 traders representing 10% of the respondents have spent over 5 years as food vendors.

Table 4: Showing Place of Origin of the Respondents

Place of Origin	Bayelsa State	Other South South States of Nigeria	South Eastern Nigeria	Northern Nigeria	South Western Nigeria
No. of Respondents	120	150	100	20	10
Percentage of Respondents	30	37.5%	25%	5%	2.5%

(%)						
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Source: (Field Survey, 2020)

Table 4 shows the place of origin of the traders. 120 traders representing 30% of the food traders are from Bayelsa State, 150 traders representing 37.5% of traders are from other states in the south south geopolitical zone of the country, 100 representing 25% of the traders are from the south east, while 20 and 10 representing 5% and 2.5% are from Northern and Western Nigeria respectively.

Table 5: Showing the Causes of Food Price Hike within Bayelsa State; the Traders' views.

View of Respondents	Food Importation	Activities of Touts and Task Force Operators	Geographical Attributes of the State	Effects of Climate Change	Oil Activities in the State	Youth Apathy	Inadequate Mechanised Farms
No. of Respondents	268	348	204	184	332	324	268
Percentage of Respondents (%)	67	87	51	46	83	81	67

Source: (Field Survey, 2020)

Table 5 shows the traders view of the factors responsible for high food prices in Bayelsa State. 268 Traders representing 67% of our respondents believe that high food importation due to cultural antecedents of the Ijaw People of Bayelsa State is responsible for high food bills. 348 Traders representing 87% of the respondents are of the view that activities of Touts and multiple taskforce operators is behind high food bills in the state. 51% of the respondents representing 204 of the traders feel that the geographical location of the state is the cause of high food cost. Climate change was blamed as the cause of high food bill by 184 traders representing 46% of the interviewed traders. Oil endowment of the state and the subsequent activities has been blamed as the cause of high food cost by 332 traders representing 83% of the respondents. 324 traders representing 81% and 268 traders representing 67% of the respondents respectively believe that youth apathy towards agriculture and inadequate mechanised farms in the state are responsible for high food bills in the state.

Personal Profile of the Drivers

All the 15 drivers we interacted with are all male.

Table 6: Showing the Age Bracket of the Drivers

Age Bracket	18 – 30 Years	31 – 45 Years	46 Years and Above
Number of Respondents	6	7	2
Percentage of Respondents (%)	40	46.7	13.3

Source: (Field Survey, 2020)

Table 6 shows the age distribution of the drivers. 6 drivers representing 40% of our respondents are between the age of 18-30years, 7 drivers representing 46.7% are between the ages of 31-45 years while 2 drivers representing 13.3% of the interviewed drivers are 46years and above.

Table 7: Showing the Length of Stay in Business of the Drivers.

Length of Stay in Business	0 – 2 Years	3 – 5 Years	Above 5 Years
Number of Respondents	4	7	4
Percentage of Respondents (%)	26.7	46.7	26.6

Source: (Field Survey, 2020)

Table 7 shows how long each of the drivers has spent in the business of food truck driving. 4 drivers representing 26.7% of our respondents said they have spent less than 2 years driving food trucks, 7 drivers representing 46.7% said they have spent between 3-5years as food truck drivers while 4 drivers who represent 26.6% of our respondents have spent over 5 years as food truck drivers.

Table 8: Showing the Causes of Food Price Hike, Truck Drivers View

Views of Respondents	Activities of Touts and Task Force Operators	Poor Road Infrastructure	Unique Location of Bayelsa State	Corruption, Political Influence and Youth Attitude
No of Respondents	14	12	8	6
Percentage of Respondents (%)	96	80	52	41

Source: (Field Survey, 2020)

Table 8 shows the views of the truck drivers about the causes of high food cost in the state. 14 drivers representing 96% of our respondents' feels that the activities of touts and multiple task force operators are the cause of food price hike. 12 drivers representing 80% of the respondents feel that poor road infrastructure within Nigeria is responsible for high food bills. 8 and 6 drivers representing 52% and 41% of the drivers believe that the unique location, corruption, political influence and the attitude of the youths are the causes of high food cost.

Discussion of Findings

Causes of Food Price Hike within Bayelsa State; Food Traders' views.

Heavy Dependence on Food Importation due to Cultural Antecedents: 268 traders representing 67% of our respondents believe that the culture of the Ijaw people is one of the key factors responsible for food price hike in the state. Historically, the Ijaw man is not a farmer by nature compared to other neighbouring clans. It was believed that most of the subsistence farming that they were known for was largely done by the women. This singular reason made it impossible for them to be competitive when it comes to food production. Consequently, as population started swelling owing to the creation of the state out of the old Rivers State in 1996, the state depended heavily on food imports from within and outside of the country as the local farm produce could not sustain the food demands of the growing state. The high food import bill in the state to them is a major factor responsible for high food prices.

Activities of Touts and Task Force Operators: From our findings, 348 traders representing 87% of our respondents attributed high food bills in Bayelsa State to activities of touts and multiple task force operators within the state. Given that the state is a net food importer, most of the food within the state comes through various transportation routes. But touts and task force operators extort so much from these transporters who bring in food to the state. On several occasions, the traders lamented that some of the transporters refuse coming into the state or they factor in those illegal fees and fines that are being extorted from them into the transportation cost of food items coming into the State. This translates to higher food prices for the final consumer given that every player in the already elongated food supply chain builds in their profit too.

Geographical Attributes of the State: 204 traders representing 51% of our respondents believe that the geographical location of the state impacts food production and by extension food prices negatively. Given that the state is majorly riverine, water logged and the marshy nature of the environment makes it very expensive to develop even for agricultural purposes. This encourages the current high dependence on food importation. But it was also argued that the terrain can still support the production of certain food crops like rice which thrives in water logged areas. Again the explanation can be found in the fact that the natives are not originally farmers or put differently they are not large scale farmers.

Effects of Climate Change: 184 of our respondents which are 46% of the traders we interviewed think that climate change and global warming have dealt heavy blows on agriculture within the state as elsewhere. This manifests in the annual flooding the state has been witnessing in the past few years. Prominent among them is the 2012 and 2018 flood where the state was ranked as one of the worst hit nationwide. These severely impacted on food production as lots of farmlands were submerged by the flood.

Oil Activities in the State: We gathered from 332 traders representing 83% of our respondents that activities of oil companies in the state has left so little to desire. This is

supported by the views of (Waafa, 2017) in which he stated that crude oil discovery, exploration activities and subsequent exportation from the Niger Delta has been the story of resource curse. Oil spills and other environmental harmful practices have left nothing to desire of the state and the region at large. Pollution of vast portions of both land and water of the state makes it extremely difficult for food production to thrive. Remediation and clean up of the polluted region has suffered so much set back as stakeholders are paying lip service to it. This is a major setback to food security within the state and indeed the Niger Delta region.

Youth Apathy towards Work and Agriculture in Particular: In the view of 324 traders representing 81% of our interviewees, the youths of the state and the Niger Delta region at large have very negative attitude towards agriculture and work generally. The ‘resource curse’ as earlier mentioned has made most of the youth to neglect lots of the productive areas of human capital development in pursuit of compensation and rents from oil companies. Others engage in illegal mining and refining of petroleum products which adds to environmental degradation currently going on in the state. As reported by (Ochuba, 2019), Farmers population in the state is tilting away from the youths to the middle and aged population with vast number of the young farmers comprising of women. This is a disturbing development as the future of agriculture and indeed food security is at stake in the state.

Limited Number of Large Scale Mechanised Farms within the State: 268 traders representing 67% of our respondents feels that the absence of large scale mechanised farms within the state impacts food security adversely. This in their view is because the advantages accruable from large scale farming which includes mass production, specialisation amongst other eludes the state. The ongoing subsistence farming has proved greatly inadequate for the attainment of food security in the State.

Causes of Food Price Hike in Bayelsa State; Food Truck Drivers’ views.

Activities of Touts and Multiple Task Force Operators: 14 drivers out of the 15 drivers we interacted with representing 96% of our respondents expressed bitterness at the activities of multiple task force operators within and outside the state attributing it as a major contributor to exorbitant food prices. This according to them adds to the cost of bringing food into the state. Some claimed that not all drivers are willing to bring food to the state due to the ugly experiences with touts and task force operators.

Poor Road Infrastructure within the Country: Out of the 15 respondents here, 12 driver representing 80% of our respondents believe that the poor state of road infrastructures within Nigeria is the chief cause of high food prices in Bayelsa State. As have been established that the state is a net food importer, events that affect the importation of food will affect food prices, so the poor road network within Nigeria adversely affects food supply within the state. The need for regular repairs and maintenance of the food trucks occasioned by poor road infrastructure contributes to high cost of food transportation, which translates to high food prices.

Unique Location of the State: The unique location of the state at the extreme of the country bordering the Atlantic has been attributed as one of the key factors responsible for high food price in the state. This was the view of 8 drivers representing 52% of our interviewees. They believe that if the state had been situated as transit routes, accessing the state would not have been as it is currently. In their words “you cannot access major places in Bayelsa State if that is not your original destination unlike other states that you can easily access while enroute to a different state entirely.

Corruption, Political Influence, and Attitude of the Young People: Corruption among the political class was equally blamed as being one of the causes of food price hike in the state. This view was expressed by 6 drivers representing 41% of our respondents. They are of the opinion that the political class has not been fair in handling issue of development in all sectors of the economy, also that they have contributed greatly towards youths’ apathy to work as they empower them wrongly during political seasons and most of the youths never get to have a normal life afterwards. By political season we are referring to electioneering periods.

Recommendations

Judging from the facts before us, the situation is bad; but not irredeemable. It is our view that if well targeted and articulated strategies are deployed, the trend will not only be reversed, but the state will be placed on the path of food security. Among these strategies are:

Harmonisation of Revenue Collecting Agencies within the State and the Federation as a Whole: The government of the state should deliberately harmonise all revenue collecting bodies to ensure a unified front as against the current multiple tax system. That way all interested parties will have précised idea of how much they are going to pay as revenue within the state and so reflect it in the cost of transportation of food to the state. This will also ease business planning.

Increased Government Investment in Agriculture: This will take the form of adequate budgetary allocation towards creating enabling environment for agriculture to thrive. There should equally be increased monitoring to ensure that approved budget is actually spent on what it is proposed for. That is, sincerity of purpose on the side of the government is strongly required to achieve food price stability and food security.

Setting up of Social Security Investment for Farmers: This will take the form of insurance and social trust funds against natural and man-made hazards to protect farmers from unforeseen happenings. This will hedge them from untold hardship emanating from such natural hazards as flood.

Facilitate Improved Organised Private Sector Investment In Agriculture: Government should invite and encourage organised private sector investment in agriculture within the state. This can take the form of enhanced access to genuine arable lands, perfecting title to such lands, tax incentives, and adequate power supply amongst others. This will not only

boost food production and preservation, but will enhance the attainment of food security and reduce unemployment.

Proper Channelling of Oil Rents and Compensations: The so called ‘resource curse’ if properly managed can be turned to ‘resource blessing’. The rents, royalties and compensations that are being paid by International Oil Companies (IOCs) and their subsidiaries should be invested in large scale agricultural production within their host communities. This the state can achieve in collaboration with the leadership of the host communities by getting the IOCs to invest directly such funds as mentioned above to large scale mechanised farms with the state of arts equipments that can compete favourably with any such farms anywhere in the world.

Increased Youths Involvement in Agriculture: If the organised private sector and IOCs can invest massively in large scale agricultural activities within the state and make it attractive, it will take away most of the touts and idle youths roaming the street back to agriculture for gainful employment. This is a must do to ensure food security is achieved in Bayelsa state.

Exploit Comparative Advantage in Agricultural Investments: This is encouraging the state to exploit the principle of comparative advantage in her investment in agriculture. Deliberate and well thought out investments should be done in such areas as rice production, fish and other aquaculture, plantain production etc. This is because the state has natural capacity for the production of these foods, a little push in form of public or private investment will assist the state to attain self sufficiency in their production.

Optimal Utilisation of BIODC in Odi: Farmers and indeed agricultural enthusiastic should maximise the presence of Bio-resources Development Centre Odi, Bayelsa State for procurement of improved seedlings and other agricultural inputs. This measure if explored will result in improved yield as most of the seedlings have been improved against adverse weather effects and to yield better harvest.

Reintroduction of Agricultural Extension: The reason for this is to enable the extension workers engage the local farmers by way of massive enlightenment on the need for large scale production where possible and the use of modern improved inputs. Also, given that the state has large number of migrant farmers, the extension workers will identify and interact with them with a view to extracting information such as how they access land for their current production amongst others. This is vital as it will ensure that policies are promulgated that will cater for their proper integration into the state’s food supply chain.

Conclusion

Summarily, the need for food security cannot be over emphasised. Accessibility in form of affordability and availability are the hallmark of food security. The people and government of Bayelsa State and indeed all the stakeholders should wake up to the urgent demand for affordable food within her shores. The study suggests as follows (1) need to leverage on comparative advantage by producing those food crops which thrives in riverine settings.

Foods such as rice which thrives very well in water logged area should be accorded priority by government and agricultural investors. If properly driven, the result will be self sufficiency in rice production. (2) Government investments in agriculture should be properly channelled and supervised to ensure that the aim of such investments is not defeated. (3) Farmers should embrace the use of improved agricultural inputs both seedlings and machines to enable them overcome the unique topography of the state. (4) We suggest urgent harmonisation of all revenue collection agencies within the state to ensure that double taxation and harassment by touts are curtailed. If these and our earlier suggestions are religiously implemented, they will positively impact the state's attainment of the Sustainable Development Goal (SDGs) and other Human Development Indices (HDIs).

Further studies are suggested to get the views of both the native and migrant farmers about food prices and food security in Bayelsa State. This is pivotal for the achievement of food security in the state and Nigeria at large.

REFERENCES

- Andrew, C., & Bariweni, P. (2018). Opportunity Cost of Forest Conservation in Wilberforce Island, Niger Delta Nigeia. *Appllied Science, Environment, Management* , 1965-1968.
- Asanebi, D. (2016). A Concise View of Niger Delta Region of Nigeria: An Interpretation of a Nigerian Historian. *International Research Journal of Interdisciplinary and Multidisciplinary Studies* , 56-63.
- Bayelsa State Bureau of Public Investment. (2015, Jan 15). *About Bayelsa*. Retrieved June 17, 2020, from Investinbayelsa.by.gov.ng:
<https://www.investbayelsa.by.gov.ng/bipa/index.php/invest-bayelsa>
- Cookey, I.F., & Sigah, D.A (2020). Climate Change and Performance of the Agricultural Sector in Nigeria: A Disaggregated Approach. *International Journal of Research and Scientific Innovation*, Vol 7, Issue 6. pp 48-57. ISSN 2321- 2705
- Food and Agricultural Organisation. (2008). *Food Security Information for Action, Lesson 1*. FAO and EU.
- Food and Agricultural Organisation. (2011). Prevalence of undernourishment and progress Towards World food Submit. In FAO, *The State of Food Insecurity in the World 2011* (p. 45). Rome: FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS.
- Gilbert, C., & Morgan, C. (2010). Food Price Volatility. *Philosophical Transaction of the Royal Society* , 3023-3034.
- Kothari, C., & Garg, G. (2014). *Research Methodology methods and Techniques*. New Delhi: New Age International (P) Limited, Publishers.

- Maslow, A. (1943, Jan 14). *The Neurotypical Site*. Retrieved May 7, 2020, from The Neurotypical Site: https://www.theneurotypical.com/maslows_basic_needs.html
- National Bureau of Statistics. (2020). *Selected Food Item Prices in Nigeria (Jan 2017 to Mar 2020)*. Abuja: NBS.
- Ochuba, O. (2019). Flood Insurance: A Mitigant for Flood Induced Agricultural Losses. *Unpublished Seminar Work*.
- Office of the High Commissioner for Human Rights. (1999). *refworld*. Retrieved June 15, 2020, from CESCR General Comment No. 12: The Right to Adequate Food (Art. 11) : <https://www.refworld.org/pdfid/4538838c11.pdf>
- Ojo, S. (2004). Improving labour Productivity and Technical Efficiency in Food Crop Production: A Panacea for Poverty Reduction in Nigeria. *Journal of Food, Agriculture and Environment*, 227-231.
- Okonta, I., & Oronto, D. (2003). Where Vultures Feast: Shell, Human Rights and Oil. In I. Okonta, & D. Oronto, *The Niger Delta: A people and their environment* (pp. 246-289). London: Verso.
- Okuneye, P. (2010). Rising Cost of Food Prices and Food Insecurity in Nigeria and its Implication for Poverty Reduction. *CBN Economic and Financial Review*, 39, 4.
- Omasteye, S. (2018, Feb 9). *Dickson Turns to Agriculture for Revenue, Job Creation, diversificaton*. Retrieved June 17, 2020, from nationonline: thenationonlineng.net
- Omonona, B., & Agoi, G. (2007). An Analysis of food Security Situation Among Nigeria Urban Households: Evidence from Lagos State, Nigeria. *Journal of Central European Agriculture*, 397-406.
- Onwuzuligbo, C., Ejikeme, J., & Ojiako, J. (2017). Enhancing Food Security in Anambra State, Nigeria Using Remote Sensing Data. *Environmental Reviews*, 27-44.
- Osabohien, R. A., Osabohien, E. S., & Urhie, E. (2018). Food Security, Institutional Framework and Technology: Examining the Nexus in Nigeria using ARDL Approach. *Current Nutrition and Food Science*, 154-163.
- Osabohien, R., Adeleye, N., & De Alwis, T. (2020). Agro-financing and Food Production in Nigeria. *Heliyon*, 50-62.
- Osabuohien, R., Eze, O., Osabohien, E., Uche Eseosa, E. O., & G., O. (2020). Household assess to agricultural Credit and Agricultural Production in Nigeria: A propensity Score Matching Model. *South African Journal of Economic and Management Sciences*, 23 (1), 67-83.
- Osabuohien, R., Ufua, D., Moses, C., & Osabuohien, E. (2020). Accountability in Agricultural Governance and Food Security in Nigeria. *Brazilian Journal of Food technology*, 1902- 1913.
- Refat Faisal, B., Hafizur, R., Nur Hossain, S., Sultana, N., Mohammad, I., Ahsan Habib, S., et al. (2020). Intergrated Application of Remote Sensing and GIS in Crop Information System-A case study

on Aman Rice Production Forecasting Using MODIS-NDVI in Bangladesh . *AgriEngineering* , 264-279.

Shaw, D. (2007). *World Food Summit, 1996. In: World Food Security*. London: Palgrave Macmillian.

United Nations. (2015, September 25). *#Envision2030: 17 goals to transform the world for persons with disabilities*. Retrieved May 7, 2020, from un.or:
<https://www.un.org/development/desa/disabilities/envision2030.html>

Waafa, T. (2017). Environmental-related Human Right Violation in Niger Delta Nigeria. *International Journal of Humanities and Cultural Studies* , 355-375.

World of Molecules. (2015, March 31). *Food Molecules*. Retrieved June 15, 2020, from Worldofmolecules.com: <https://www.worldofmolecules.com/foods/>

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