

**THE CONCEPT OF VALUE CHAINS IN AGRICULTURE, CLIMATE ACTION  
AND ENVIRONMENTAL RESOURCES**

**GLOBAL ISSUES & LOCAL PERSPECTIVES**

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**Published By:**

**Society for Agriculture, Environmental Resources & Management (SAEREM)**

**First published 2024**

**SAEREM World**

**Nigeria**

**C 2023 Eteyen Nyong**

**Typeset in Times New Roman**

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**SAEREM BOOK CHAPTERS First Published 2025 ISBN 978-978-60709-7-1**

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ENVIRONMENTAL RESOURCES (GLOBAL ISSUES & LOCAL PERSPECTIVES)**

SAEREM BOOK CHAPTERS First Published 2025 ISBN 978-978-60709-7-1

Printed at: SAEREM World

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## **Preface**

This book adopts an exegetical approach as well as a pedagogic model, making it attractive agriculture and environmental economics teachers, professional practitioners and scholars. It eschews pedantry and lays bare the issues in such clarity that conduces to learning. The book elaborates on contemporaneous *The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources* issues of global significance and at the same time, is mindful of local or national perspectives making it appealing both to international and national interests. The book explores the ways in which climate change, food security, national security and environmental resources issues are and should be presented to increase the public's stock of knowledge, increase awareness about burning issues and empower the scholars and public to engage in the participatory dialogue climate change, food security, national security and environmental resources necessary in policy making process that will stimulate increase in food production and environmental sustainability.

*The Concept of Value Chains in Agriculture, Climate Action and Environmental Resources: Global issues and Local Perspectives* is organized in three parts. Part One deals with The Concept of Value Chains in Agriculture, Part Two is concerned with The Concept of Climate Actions and Part Three deals with the Concept of Value Chains and Environmental Resources.

**Eteyen Nyong/ Ignatius Onimawo**

**April 2025**

## Chapter Seventeen

### **Strategy to Improve Youth Participation in Large Scale Rice Production for Food Security and Sustainable Development in Kogi State.**

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## **Introduction**

Agriculture play a vital role in economic development and poverty alleviation of many developing countries including Nigeria. Globally, agriculture provides food for people, raw materials for industries and the largest employer of labour (CBN, 2021). The role of the agriculture according to Iwena (2020) include provision of food for man and livestock, provision of income for farmers, as well as job creation, regional development and raw materials for industries. Agriculture serve as a major source of foreign exchange earnings for the nation. An estimated 75% of the world's population are from the rural areas, which involve farming activities as their sustenance, especially the youths who are the leaders of tomorrow (World Bank, 2018). Youths are the future generation which are expected to participate in food production (Proctor and Lucchese, 2018). Umeh and Odom (2017) said that wheat and Rice is one of the major cereal crops of the tropical regions of the world. Among the staple food crops in Nigeria. (Nwele, 2016) said that about 60 per cent of

the world population depends on rice which is the fourth major cereal in Nigeria after sorghum, millet, and maize. In opinion of Erobor (2020), Rice (*Oryza sativa*) is one of the multi-value chain crops contributing to food security, employment and income generation in Nigeria, that Rice is cultivated in almost all the states in Nigeria and across all the major ecological zones covering close to 3.7 million hectares of land (Ilu, 2016). Food and Agriculture Organisation in Nigeria (2023) emphasized that Nigeria's rice production rose from 3.7 million metric tons in 2017 to 4.0 million metric tons in 2018. ThriveAgric (2020) revealed that Nigeria produces the largest quantity of rice in Africa after Egypt with an average production capacity of 8 million metric tons and as of 2019, Nigeria produced about 55% of Africa's total rice volume of 14.6M and also ranked as the 14th largest rice producer in the world.

Despite its production capacity, Nigeria has been ranks as the second largest rice importation in the world (Aminu 2017). This is because rice is a staple food for both rural and urban people, as it accounts for over 20 per cent of the total weekly food consumption of a typical Nigerian household (Federal Ministry of Agriculture and Rural Development (FMARD), (2017). (Aminu 2017) reported that , production of rice increased annually at the rate of 3.7% yet, only 75% of local demand could be met by domestic production as it was estimated that the annual rice demand in Nigeria as at 2015 was about 5.9 million metric tons, while local production was about 2.7 million metric tons (Sahel, 2016). While ThriveAgric (2020) put Nigerians' yearly rice consumption at almost 7 million tons, Klynveld Peat Marwick Goerdeler (KPMG) (2019) specifically stated that Nigeria being the 11th largest rice consumer globally consumes 6.7 million metric tons of rice yearly out of which about 3 million metric tons are produced, resulting in deficit supply of about 57%. Importation of the rice becomes necessary so as to meet the supply deficit of rice. It was also reported by (Akinwumi 2016) that the nation expends over USD\$11 billion in

the importation of wheat, rice, sugar and fish every year with rice accounting for about USD\$3.56 billion. According to PricewaterhouseCoopers (PWC) Nigeria (2018), at the household level, rice accounted for 10% of household food spending,

In addition to be a food security crop, rice is an essential cash crop for smallholder farmers in Nigeria who consume only one-fifth of their production while they sell the remaining 80 percent, hence, generating more income for them than any other cash crop (KPMG, 2019) view that Participation of rural youth in rice production is very important as this will boost food security by narrowing the gap between rice demand and supply in Nigeria, reduce rice importation, improve the socio-economic status of rural households and, encourage the development of vocation-oriented agriculture among the youth (Bello 2017). This will assist to curb youth unemployment and migration from rural to urban centres since interested youth can find profitable business along the value chain in order to boost local production of rice. Nigerian government came up with some programmes to encourage rice production in Nigeria, these include, the Nigerian National Rice Development Strategy (NRDS) set up in 2009, aimed at making the country self-sufficient in rice production, by raising paddy rice production from 3.4 million tonnes in 2007 to a targeted 12.8 million tonnes in 2018. Umeh and Odom (2017) stressed that, to achieve this level of production, the following areas must be considered and these includes; – the improvement of post-harvest processing and treatment; fertilizer and farming equipment availability; development of irrigation and extension of cultivated lands; and seeds making. The presidential initiative on Rice, which was implemented from 2001 to 2007 centred on developing rice production, processing and exports, also aimed at achieving self-sufficiency and increased exports by 2007. Despite all policy measures by successive governments, the local rice production has not increased to meet the increased demand (Aiyedun, 2016). Ministry of Agriculture (1995) was of the opinion that the inability of Nigeria rice to meet the domestic demand could be attributed to low productivity, inability of older farmers to accept new technology, and large proportion of rice cultivation in the

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hands of small scale and old farmers. As a result of this, national Agricultural Transformation Agenda tagged Agricultural Transformation Action Plan (ATAP) was established in 2012 through the development of value chain in selected key crops such as rice, cassava, sorghum, cocoa and cotton. In view of Agbonika (2021) youth engagement in rice value chain is very necessary in order to boost the agricultural sector's contribution to the nation's Gross Domestic Product (GDP) and Gross Human Index (GHI). The contribution of agriculture was averagely 47 per cent between 1965 -1969, this declined to 35 per cent between 2002-2004, and to 17.6% in 2007 (FAO, 2018). Youth engagement in agriculture generally has significant impact in increase production (Agbonika 2021), said that youth engagement in rice production and its value chain has the potential to bring about self-sufficiency in national rice production. The demand for polished, odourless, stone less rice has been on the increase by urban dwellers, raising the desire for importation despite the fact that rice is grown in all zones of the country.

Youth in the opinion of Dimelu and Olaitan(2018) are young adult between the age range of 12-25 years that have energy or vitality to work. Youth in the context of this study are young people who have graduated from secondary school or higher institutions where some of them learnt agriculture but are yet not employed. Some of these youths depend on their parents for living. Some that their parents could not meet their needs engage themselves in social vices like kidnapping, drug abuse armed to get quick money to meet their needs. The consequence of these behaviours are that they create in security problems in their community and nation; some of the youths lost their lives, some are imprisoned for long time leading to waste of resources to their parents and the nation. Yet the situation

Continues annually, as youths graduate without jobs. Some of these youths can be encourage through motivational strategy that could be provided by stakeholders in agriculture such as



community, government, companies, (those that make use of rice for their products) and educational institutions, to enable them engage in large scale rice production for their livelihood.

In Kogi state it was observed by the researcher that rice is highly valued as it is used as food for man and in preparation of livestock feeds. As the population is growing the demand for rice is high both for man food and livestock feed, but the production of rice could not meet the demand of people. So government has over the years importing rice from other countries because the farmers who produce rice in the state are subsistent farmers. Therefore, to increase rice production to meet the need, it is necessary to encourage unemployed youths through motivational strategy that could be provided by the stakeholders.

Motivation as defined by Offorma (2016) is a condition which initiates, guides and maintains behaviours until some goal is reached. Ngwoke (2016) sees motivational as the internal state or mental or psychological state in an individual which compels energizes, sustains and the individuals' activity towards a goal. Motivation in this study is an attempt aimed towards initiation, arousal and sustenance of interest of youth in agriculture to engage in and remain in large scale rice production in Kogi state. Strategy is an activities carried out by someone in order to solve a, difficult situation. Hornby (2010) stated that strategy is a new plan for dealing with a particular problems or to achieve a particular purpose. strategy in the context of this study in any activity that could be carried out by community, government, companies, and educational institutions to encourage youths to participate in large scale rice production in order to reduce unemployment problems and other hands boost agricultural production especially rice production.

Ebong (2020) defined production as the utilization and technical transformation of resources into outputs such as land labour and finance by youth to produce rice.

**FOOD SECURITY:** The World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active  
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life”. Commonly, the concept of food security is defined as including both physical and economic access to food that meets people’s dietary needs as well as their food preferences. The USDA opined that “food security for a household means access by all members at all times to enough food for active, healthy life. Food security includes at a minimum, I. The ready availability of nutritionally adequate and safe foods, and ii. An assured ability to acquire acceptable foods in socially acceptable ways (i.e. without resorting to emergency food supplies, scavenging, stealing, or coping strategies quantities of food available on a consistent basis.

Sustainable development has been defined by many scholars in various ways. According to Nwogu (20118) the well-being of any nation largely depends on its sustainable economic development. Hassan (2018) defined sustainable development in terms of reduction in the level of poverty, illiteracy, unemployment and income inequality. In the view of Okala (2019} sees sustainable development as the attainment of number of ideas of modernization such as a rise in productivity, social and economic equity, improve institutions and values. Kundan in Ugoh (2018) argued that continued sustainable development is only possible when concrete steps are taken to make the youth acquire skills that will enable them to be self-reliant and therefore become the tools for achieving development and its sustainability. Therefore, the purpose of this study was to identify the strategies to motivate youths to participate in large scale rice production for food security and sustainable development.in Kogi State.

### **Statement of problem.**

Kogi State is blessed with a suitable climatic and soil conditions favourable for agricultural production but still, a high population of the youths are unemployed. Kogi State is an agrarian state that has a large expanse of land suitable for the production of a variety of crops and animals. The climatic and soil conditions also favour the production of both arable crops. Due to favourable conditions, crops like yam, cassava, maize, sorghum, rice, groundnuts, soyabeans are produced on

a large scale. Despite all the favourable conditions for agricultural production to grow crops, most youths migrate from rural areas to urban in search for formal employment from other sectors of the economy. The work of agricultural production such as rice is left in the hands of the aged people who are no longer strong and peasant farmers, they are mostly illiterates and are unaware of agricultural innovations. This triggered the researcher to investigate into strategies to motivate the youths to participate in large scale rice production for food security and sustainable development.

### **Purpose of the study**

The general purpose of the study was to investigate the strategies to motivate youths to participate in large scale rice production for food security and sustainable development. Specifically, the study sought to;

1. Investigate the strategies to improve youths participation in large scale rice production for food security and sustainable development.

### **Research questions**

- 1: What are the strategies that could be provided by community to improve youths participation in large scale rice production in Kogi State?
- 2: What are the strategies that could be provided by government to improve youths' participation in large scale Rice production in Kogi State?
- 3: What are strategies that could be provided by business companies to improve youths participation in large scale in Rice production in Kogi State?

4: What are the strategies that educational institutions could provide to enable youths participate in large scale rice production?

## **Methodology**

### **Design of the study:**

A survey design was adopted. A survey design in view of Nworgu (2016) is the process by which the entire population or samples are studied by collecting and analyzing data from the group through questionnaire.

### **Area of study**

The study was carried out in Kogi east senatorial district of kogi state.

### **Population of the Study**

The study was carried out in Kogi State made up of three agricultural zones; namely Ibaji, Idah and Bassa. The population for the study was fifty five made up twenty three Lecturers, Five Lecturers from the department of agricultural education college of education Ankpa , Eighteen lecturers from the department of crop science, Agricultural extension, and Agricultural economics all from Kogi State university Anyigba., Fifteen (15) community leaders, Eight (8) company executives, and Nine (9) ministry of Agriculture officials. The community leaders were selected purposively through their status. The entire population of fifty-five (55) were involved in the studied because of the manageable number, so there was no sampling.

### **Instrument for data collection**

The instrument for data collection was structured questionnaire developed from the literature reviewed from the study, which the respondents required to respond to. The questionnaire was designed for the Lecturers, community leaders, company executives and ministry of agriculture. Four sets of questions were developed and used for collecting data from the respondents; One set was developed for community leaders to find out what strategies could communities leaders use to improve youths participation in large scale rice production, second set was developed for ministry of Agriculture officials to find out from them what government could do to improve the youths participation in large scale rice production, The third set was developed for company executives to find out what company could do to improve youths to participate in large scale rice production , while the fourth set was developed for lecturers to find out what educational institutions could do to improve youths participation in large scale rice production. Each questionnaires items had a 4-point rating scale of Strongly agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD) with corresponding value of 4,3,2, and 1 respectively.

### **Validation of the instrument**

The set of questionnaire were face validated by the three experts from the department of Agricultural Education Federal college of Education Odugbo Benue State. The internal consistency of the items was determined through the use of Cronnbach alpha method with coefficient of 0.86 for community leaders, 0.80 for ministry of Agriculture officials, 0.82for company executives and 0.84 for the lecturers

### **The reliability of the instrument**

To determine the internal consistency of the questionnaire items, ten copies of the questionnaires were given to extension workers in Lokoja L. G A. which is outside the study area. The copies of the items distributed were collected from the extension workers and analyzed. The reliability of

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the instrument was established using the cronbach alpha procedure and the coefficient of 0.74 was obtained.

### **Method of data collection**

The researcher made visit to the selected areas and administered the copies of the questionnaire to the respondents. The copies of the questionnaire were collected by the researcher after one week.

### **Method of data analysis**

Mean and standard deviation were used to answer the research questions. In taking the decision on the value of the mean, arithmetic mean of the response options of 4,3,2 and 1 it was calculated and result was 2.50. This was used as cut-off points. Any item with a mean value of 2.50 and above was regarded as an item agreed upon by the respondents as a strategy to motivate the youths to participate in large scale rice production, while any item below 2.50 was regarded as an item which the respondents disagreed upon. Standard deviation was used to determine the closeness of the opinion of the respondents to the mean or one another. Any item with a standard deviation less than 1.96 indicated that the respondents were close to the mean and one another in their responses.

### **Results**

The results for the study were obtained from the research questions answered through data collected and analyzed.

**Research question 1:** What are the strategies that could be provided by community leaders to improve youths participation in large scale rice production in Kogi State?

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Table 1

Mean Rating of the responses of community leaders on strategy that community could provide to improve youths participation in large scale Rice production.

N= 38

s/n	Item Statement	X	SD	Remark
1	Make land available for youths interested in Rice production.	3.16	0.19	Agreed
2	Make available services to youths interested in Rice production	2.58	0.18	Agreed
3	Extend community security services to protect the youths to participate in Rice production .	3.06	0.20	Agreed
4	Guarantee youths farmers the use of community water for their Rice production	2.85	0.23	Agreed
5	Support marketing of the production of the youths Rice production	3.34	0.21	Agreed
6	Accept youth farmers into any progressive farmers association	2.86	0.19	Agreed
7	Protect any youth farmers from any community cultural rituals that can affect them negatively.	2.99	0.24	Agreed

Data in Table 1 showed that all the 7 items had their means ranged from 2.86- 3.37. This revealed that the means were above the cut-off point of 2.50 indicating that the respondents agreed that all the 7 items were required as strategy that community leaders can provide to improve youths participation in large scale Rice production in Kogi State. The table also showed that standard deviation ranged from 0.18 to 0.24 which indicated that respondents were close to one another in their responses.

**Research Question 2:** What are the strategy that could be provided by government to improve youths' participation in large scale Rice production in Kogi State?

Table 2

Mean Rating of the responses of government on strategy that they could provide to improve youths participation large scale Rice production.

s/n	Item Statement	X	SD	REMARK
1	Grant youth some finance to start Rice production	2.90	0.21	Agreed
2	Guarantee collateral ter on credit for youths	3.19	0.19	Agreed
3	Guarantee collateral to cover on credit for youths	2.60	0.18	Agreed
4	Support the acquisition of improved Rice varieties for production	3.01	0.24	Agreed
5	Provide tools equipment's and machines to supplement finance	3.70	0.20	Agreed
6	Sponsor conferences or workshops for youths to obtain innovations in Rice production	2.76	0.22	Agreed
7	Create access to youths for cheap Rice production	3.78	0.23	Agreed
8	Support the purchase of the products of Agricultural enterprise for graduates through government consumer cooperatives	2.79	0.18	Agreed



9	Sponsor profitable research activities to assist youth farmers in solving problems in their Rice production	3.25	0.19	Agreed
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Data in Table 2 revealed that all the nine items had their mean ranged from 2.60—3.78 were above the cut off point of 2.50. This revealed that the respondents agreed that all the 9 items were required as strategy that government could provide to improve youths participation in Large Scale Rice production. The table showed that the standard deviation for all the 10 items ranged from 0.18—0.24 which indicated that the respondents were close to one another in their responses.

**Research Question 3:** What are the strategy that could be provided by companies executive to improve youths participation in large scale in Rice production in Kogi State?

Table 3.

Mean Ratings of the Responses of Company executives on strategy that companies' executive could provide to improve youths participation in large scale Rice production.

N=32

S/N	Item Statement	X	SD	REMARK
1	Permit entry of youths into company premises of their choice for enquiry	2.80	0.31	Agreed
2	Provide information on innovation in Rice production	2.91	0.21	Agreed
3	Sponsor research activities that are of interest industry and youth farmers in Rice production	3.18	0.18	Agreed
4	Provide managerial services to assist youths in Rice production	2.87	0.21	Agreed
5	Patronize raw materials produced by youths in Rice production	3.45	0.19	Agreed

6	Sponsor the acquisition of farm inputs such as tools, machines, rice varieties and agricultural chemicals for graduates	3.05	0.20	Agreed
7	Sponsor conferences and workshop that can help youth farmers improve in Rice production	2.67	0.18	Agreed
8	assist youth farmers in their processing and packaging of their products at affordable rates	3.40	0.19	Agreed
9	Assist in providing production activities in youths Rice production	2.79	0.19	Agreed
10	Provide counselling services to youths in Rice production.	2.80	0.17	Agreed

Data in Table 3 revealed that all the 10 items had their mean ranged from 2.67 – 3.26. This showed that the means were above the cut-off point of 2.50 indicating that the respondents agreed that all the 10 items were required as strategy that companies’ executive could provide to improve youths In Kogi State to participate in large scale rice production. The Table also revealed that all the 10 items had their standard deviation ranged from 0.17- 0.24 which indicated that the respondents were not too far from the mean and close to one another in their responses.

Research Question 4 : What are the strategy that educational institutions could provide to enable youths participate in large scale rice production?

Table 4

Mean Ratings of the Responses of Lecturers on strategy that education institutions could provide to motivate youths to participate in large scale Rice production.

S/N	Item Statement	X	SD	REMARK
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1	Provide activities for Rice production.	3.17	0.27	Agreed
2	Purchase facilities for Rice production	2.95	0.19	Agreed
3	Bearing Risk in Rice production.	3.50	0.22	Agreed
4	Marketing activities in Rice production.	2.80	0.21	Agreed
5	Obtain insurance cover for Rice production	2.67	0.19	Agreed
6	Growing of Rice.	3.18	0.17	Agreed
7	Supervising Rice production	2.95	0.21	Agreed

Data in Table 4 revealed that all the 7 items had their means ranged from 2.67- 3.50 which indicated that the respondents agreed that all the items were required as strategy that educational institutions could provide to encourage youths to participate in large scale Rice production, The Table also showed that the items had their standard deviation from 0.17- 0.27

Which indicated that the Respondents were close to the mean and one another in their responses.

### **Discussion of the Result**

The result of the study revealed that seven (7) strategies that could be provided by community leaders, nine (9) strategies that could be provided by the government, ten (10) strategies that could be provided by companies and Seven (7) strategies that could be provided by educational institutions were all agreed by the respondents as motivation for encouraging youths participating in large scale Rice production in Kogi State.

The findings of the study is in conformity with the finding of Dimelu and Olaitan (2018) in a study on motivational initiatives for enhancing skills empowering of youths in Home Economics

occupations for work towards peace in Niger Delta, where it was found out that 11 motivational initiatives could be provided by the Government 12 motivational initiatives could be provided by the community and 9 motivational initiatives could be provided by the companies for the skills empowerment of youths for work. Umeh and Odom (2020) supported that, to achieving the high level of rice production, the youths should be motivated in the following areas; – the improvement of post-harvest processing and treatment; fertilizer and farming equipment availability; development of irrigation and extension of cultivated lands; and seeds making. (KPMG, 2019) said that, Participation of rural youth in rice production activities is very important as this will boost food security by narrowing the gap between rice demand and supply in Nigeria, reduce rice importation, improve the socio-economic status of rural households and, encourage the development of vocation-oriented agriculture among the youth. in view of (Bello 2017) motivating youths in rice production. will assist to curb youth unemployment and migration from rural to urban centres since interested youth can find profitable business along the value chain in order to boost local production of rice.

The findings of this study is in agreement with the view of Igwe (215) who stated that community leaders should provide land for agricultural purpose to encourage large scale production in agricultural industry, The finding also agree with the view of Odafi (2010) that government should encourage farmers in the agricultural industries through founding , provisions of improved crop varieties, improved breeds of animals , The finding of the agro based industry was supported by the submission of Olaitan (2020) who stated that agro-based industry should permit individual interested in agriculture should have access and exposure into agricultural innovations through the company interaction with such individuals.

## **Conclusion**

In Kogi State, Rice is one of the major and arable crops that is highly valued. There is high demand of Rice for livestock feeds, for processing industries, for home consumption, and export for foreign exchange. Most of the farmers in Kogi State grow rice at subsistence level while there is need for large scale production. The youths could be involved in production of rice if they are motivated. This study aimed at the strategy to motivate youths to participate in large scale Rice production to meet

the high need or demand for rice products. It was found out from the study that 7 strategies, 9, strategies 10 strategies and 7 strategies could be provided by community, Government, companies and educational institutions respectively to motivate youths to participate in large scale Rice production.

It was recommended that the motivational Strategies in this study should be implemented by the stakeholders concerned to encourage the youths to engage in large scale Rice production.

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