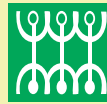




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# JUST TRANSITION IN NIGERIA: Case of Agriculture and Petroleum Sectors

By  
*Dr Godwin Uyi Ojo (Ph.d)*  
and  
*Hauwa Mustapha*

*Supported by: FNV (Mondial) & Friends of the Earth (FOE)*



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## INTRODUCTION

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The contents of this book explicate the need for system change as an enabler for Just Transition. By drawing from the Agriculture and Petroleum sectors, it describes and analyses the concept of Just Transition as a fair shift from the present modes of production and consumption to a low carbon economy that protects the environment and the rights of workers and the community.

The term Just Transition has been gaining increasing attention within the last five years. However, it has been in public discourse since 1993 when Tony Mazzocchi, a visionary labour leader in the United States of America (USA) conceptualized it. Although he saw the transition as inevitable, he however argues that it should not lead to loss of livelihoods for workers that had laboured in the fading sector or production systems. In his words, “Paying people to make the transition from one kind of economy to another is not welfare. Those who work with toxic materials on a daily basis in order to provide the world with the energy and the materials it needs deserve a helping hand to make a new start in life”.

The concept has gained fervent urgency mainly due to the rise of environmentalism, concern for sustainable development with an increasing global interest to combat Climate Change in the last two decades. In particular, environmentalists and environmental groups'

campaign banner headlines of “leave the oil in the soil” required a roll back on oil and gas extraction or even an outright shut down of petroleum activities. Just Transition means gradual shift towards a post petroleum economy by shifting from dirty energy such as oil, gas and coal to clean energy such as solar, wind and mini hydro. This has implications on the rights of workers which obviously environmentalists had not fully contended with.

As part of the responses to Climate Change and the rights of workers, the work of the International Trade Union Confederation (ITUC) stands out to define a new pathway that recognizes changes in the dominant modes of production, consumption and overall lifestyle. The Labour Unions slogan of “No job on a dead planet” speaks to this increasing reality. In this context, Just Transition is about promoting social dialogue towards a low-carbon world, in ways that provide and guarantee decent jobs, and social protection for all workers affected by global warming and Climate Change policies.

The concept of the Just Transition is expanded further by the Just Transition Alliance. They defined Just Transition as a “set of principles, processes and practices that build economic and political power shift from an extractive economy to a regenerative economy”. The idea is to ensure a regenerative economy in which production and consumption take place in ways that avoid wastages. Although there have been changes and transitions in the past, however, none was ever so clearly described as being based on the principles of justice. Making the transition just and equitable especially from the perspective of the

rights of workers and gender is central to Just Transition. Thus, the core concern of Labour Unions is to be inclusive, democratic, and not lead to avoidable redundancies and loss of benefits.

This study is innovative and unique first, as one of the first few to conduct an empirical survey aimed to bridge the gap of knowledge on Just Transition particularly in Africa and to address the dichotomy between environmentalists and Labour Unions. It is also relevant because it utilizes multiple case study approach to conduct field work in selected communities in Nigeria with a deliberate and conscious attempt to mainstream gender all through the project. While there were moments of tensions between the two principal researchers representing the trade unions and the civil society, it was also instructive as a learning process to find common ways of articulating and engaging Just Transition in such ways that are beneficial to workers, communities and the policy processes on Just Transition.

The study focuses on two prime sectors namely the agricultural and petroleum sectors in the context of Just Transition in Nigeria. This is due to the high level of employment and dependence of the population on the two sectors. Studies conducted in the immediate past and present revealed that despite the improvement in science and technology, agriculture sector in Nigeria is still dependent on climate conditions and its dynamics. The sector also remains the major source of livelihood for most rural community dwellers who are largely smallholder farmers in an informal sector. It is believed to provide employment for 60-70% of the population with women constituting a



large proportion of this figure. It is also a source of raw materials for many industries in Nigeria.

Indeed, many reports have indicated that more than 70% of those engaged in agriculture in Nigeria are ironically poor and are largely women. These women suffer from gender disparity with respect to access to land and agricultural resources even as they are worse affected by the vagaries of the changing climate.

The petroleum sector on the other hand is a major money-spinning investment for Nigeria accounting for over 85% of national revenue. At the same time, it is a major contributor to environmental degradation and the Climate Change crisis owing to the fact that the bulk of the greenhouse gases emitted into the atmosphere is derived from energy production through the burning of fossil fuels. The use of petroleum resources is cross sector and permeates every facet of national life. Its pervasiveness in the economy in terms of financial contributions and in terms of power makes this sector a critical one for consideration.

Though women do not form a significant portion of those employed directly in the petroleum sector, they nevertheless form the bulk of those who are affected by its consequential impact on environmental pollution, health hazards and livelihoods.

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Godwin Uyi Ojo and Hauwa Mustapha

Benin City and Abuja, 2019

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# EXECUTIVE SUMMARY

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# CHAPTER 1

## EXECUTIVE SUMMARY

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Land-grabbing, deforestation, livelihood destruction, heavy dependence on chemical fertilizers and pesticides and impacts on communities from the agriculture and petroleum sector activities have collectively contributed to social and environmental degradation and human rights violations. Defending communities' rights and climate justice struggles have some resonance with civil society groups and labour union struggles for rights of workers to decent jobs.

This study draws from the International Labour Organisation Just Transition Guidelines with an outcome that corroborates the fact that Just Energy Transition from fossil fuels is currently accepted by both environmentalists and Labour Unions as inevitable.

To achieve its objective the study focused on four states representing the petroleum exploitation and the agriculture sector activities in Rivers, Bayelsa, Niger and Benue States. The focus on the petroleum and agriculture sectors is informed by their relevance to Nigeria's economic mainstay, high level workforce, and relevance to Just Transition. The interactive method employed by the study enabled a broad scope of mobilizing and engagement between Civil Society Organisations (CSOs) and Labour Unions in Nigeria in objectives to define what the just energy transition will look like in terms of environmental protection and conservation, decent jobs, fair

compensation, adequate training and a reasonable time frame. It will also require a joint mobilization of the private and public sectors to work together for a Just Transition.

This study realizes that as good as the call for a Just Transition is, achieving and delivering justice in reality although a highly contested space must begin to move towards consensus to support the transition that is desired. Economic decarbonisation and transition from dirty energy to clean and environmentally friendly energy sources, from industrial farming to a different form of food production in traditional agroecology practices are firming roots in the local communities that require urgent support. Yet, this may not be inherently socially or economically just, especially in terms of equity and gender considerations. The anxiety and uncertainty on Just Transition is worsened by the limited access to social protection of workers and the vulnerability of women who form the bulk participants in the informal economy as well as the ways in which Climate Change impacts can deepen poverty and socio-economic vulnerabilities.

The way forward requires that both Labour Unions and CSOs deploy tools of synergy and deepen their knowledge and practices to conduct advocacy and awareness building that is required for Just Transition.

### 1.2.1 Socio-Economic Context Of The Study Area

Nigeria is one of the fastest growing populations in the world and will overtake the USA by 2050. According to the National Bureau of

Statistics, its estimated population of 201million (49% female and 51% male) shows that resources will become more scarce requiring proper management. The most populous black nation on earth has a land area of about 962,000km<sup>2</sup> with varying vegetation due to different weather conditions of Monsoon tropical rainforest forests and mangrove forests in Southern Nigeria, Savannah in the middle belt and northern region (See Figure 1). Studies show that the country has been showing a gradual but consistent increase in temperature pattern with a 1.1 degree Centigrade increase in about 100 years between 1901 and 2005. This is higher than the global mean temperature increase of 0.74oC recorded since 1860 when actual scientific temperature measurement started. It is feared that if this trend is left to continue, Nigeria could be targeting an average increase of 3.5OC in temperature by the year 2100. Though there has been a general declining rainfall pattern since 1970 especially in the north, the coastal areas in the south have been experiencing a gradual increase in rainfall pattern and flooding especially noticeable in coastal regions of Bayelsa, Rivers, and Cross River States.

The diversity of the weather conditions makes the country rich in varieties of natural resources and minerals such as oil and gas, coal, bitumen, bauxite, and a host of over 20 others. In terms of agriculture, almost every crop can be grown in Nigeria from the tropical areas to the Savannahs. While oil and gas are predominantly in the south, agriculture is the mainstay of Northern Nigeria with a recent increasing activity in mining of precious metals and stones and recently gold mining.

The spread and type of economic activities also informed the choice of States selected for the study which is Niger and Benue States (agriculture) and Bayelsa and Rivers States (petroleum). In reality, over 70% of Nigerians are predominantly farmers and fishers. The extent of Just Transition in these sectors and locations are provided in Chapter 3 of this study.

The selection reflects dominant economic activities and livelihoods from the two regions even though agricultural activities are predominant both in southern and northern Nigeria. Indeed, some foreign direct investments have driven multinational companies to acquire vast lands for mono-crop plantations for palm oil and banana farms. This aspect is outside the focus of this study but is relevant for future research. However, beyond exploration activities, petroleum production is yet to commence in the north. Coming after the national and state elections and contestations, the selection of research locations were also based on the relative peace in the areas and willingness of the State level Labour Union leaders on ground to collaborate with the key researchers.

### 1.2.2 Research Techniques

This study deployed a qualitative approach to research and uses formal and informal interviews of respondents. Focus groups and questionnaires were also administered and analysed across the agricultural and the petroleum sector workers, civil society groups, labour union leaders, communities, youths and women. In all, 8 focus



group discussions were held, 200 questionnaires administered and 30 interviews conducted across Niger, Benue, Rivers, and Bayelsa States (See Appendix 1). About 42% of the respondents, focus group discussion participants and interviewees were women.

Planning meetings between NLC representatives and ERA representatives held in Benin City to provide a road map for the research. The study selected two States Niger and Benue from Northern Nigeria for the Agriculture sector, and Rivers and Bayelsa States for the petroleum sector from Southern Nigeria. Appendix II presents the organizations and communities visited as described below.

In Niger State, three focus group meetings were held with the State office of the National Union of Agricultural Workers and Employees in Minna; Ministry of Agriculture, River Basin Development Authority; Niger State Ministry of Agriculture; and Sunti Golden Sugar Cane Plantation. 10 interviews were conducted while 20 questionnaires were distributed and completed. Meetings were also held with farm workers and the focus group meeting with the State Executive Council (SEC) of the Nigeria Labour Congress in Minna. Whereas the total interviews conducted were less than anticipated, the responses nevertheless provided evidence on the transition of Agricultural sector in northern Nigeria.

In Benue state the team held two focus group meetings with the Lower Benue River Basin Development Authority (LBRBDA) located in Makurdi.

In Rivers state we held two focus group meetings with oil host community in Ebubu and Labour Unions in the health sector including the NUPENG state officials in Port Harcourt. Ogoni land was restive with violence and communal clashes that were not unconnected to the clean-up challenges at the time hence we could not visit at the time.

In Bayelsa State, the team held two focus group meetings in Ikarama community, civil society groups, academicians and lawyers in Yenagoa. We also visited the oil pollution sites by Shell ruptured facility in Ikarama and dozens of youths calling for clean-up and protesting the non-payment of compensation for destroyed crops and farmlands in the community. Interviews were conducted including a visit to the state ministry of petroleum and Climate Change.

### 1.2.3 Research Challenges

There were challenges that made travelling and field work difficult. It was an election year, and not surprising, there were pockets of violence in Rivers State that compounded the already existing insecurity and increasing banditry. In general, the various respondents were cooperative and participated in the research. However, misconception about the research saw some unions not cooperating as they did not respond positively to phone calls and emails sent to them about the research. Whereas the northern and southern parts of the country visited by the research team had various security challenges, the general atmosphere felt by the team was more calm in the agricultural sector of the northern part of the country than the southern oil rich

community. Photographs and stops for observations and interviews were in some cases done in haste due to the palpable air of insecurity.

The distance covered was also a factor in an attempt to provide a North-South balance. On the second day of the field work in Niger state, starting early in the morning, we made about 9-hour round-trip drive from Minna to the Sunti Golden Sugar Estates on the border village of Mokwa. The field visit was conducted in haste to avoid travelling at night. Due to the insecurity in the area, community participation was organized through the Sunti staff members and labour union representatives in an enlarged focus group discussion.

The general level of insecurity in the country and the particular cases of insurgency in many northern states including, Niger and Benue left some unease and tension within the researchers which was heightened with reported cases of gunmen attacking several communities in Shiroro local government area on and about the days we were on the field.

#### 1.2.4 Key Research Questions And Rationale

Key questions related to respondents' general understanding of Climate Change and what constitutes Just Transition using the agriculture and petroleum sectors as entry point of the discussions. There were also specific questions directed to the agriculture workers and Labour Unions as well as the petroleum sector and their workers and Labour Unions. Some key questions relate to what is Climate

Change? What is Just Transition in relation to agriculture? What is Just Transition from petroleum sector? There were other open-ended questions (See Appendix III on key research questions and questionnaires administered).

It was also interesting to understand the perceptions around these terms and what it means for the workers particularly in relation to employment, livelihoods and redundancies. Other stakeholders interviewed included academicians, host communities to oil facilities, and host communities to farm plantations, civil society groups and government officials. Various actors spoke from their perspectives and interests in ways that sometimes were contradictory to the elements of a Just Transition however the concerns of income and livelihoods were not lost in the conversations.

Given these complexities, it is therefore reasonable to ask: What can be done to ensure that climate impacts are reduced, job transition is secured in a just manner and labour is not adversely affected in Nigeria? What are the adaptation strategies to Climate Change? What are the Governments, Labour Unions and other organizations at all levels doing and can do to arrest this situation? This book provides insights and recommendations to these issues.

To present the book, a descriptive and analytical approach was adopted to provide contrastive elements to show trends and areas of differences in the two sectors. This relates to both individual and organizational knowledge base and awareness on Just Transition,

indicators to demonstrate the level of preparedness for Just Transition, and perceptions about the future of their trade or occupation in the two sectors.

### 1.3 Outline

The book is divided into Chapters:

*Chapter 1* presents the Executive Summary including basic definitions of Climate Change and Just Transition. This theme is further discussed in relation to both the agriculture and petroleum sectors.

*Chapter 2* presents a conceptual analysis of Climate Change and Just Transition.

*Chapter 3* presents case studies on the agriculture sector in Niger state and also the cases in the sector from Benue state. In contrast;

*Chapter 4* presents cases from the petroleum sector from Bayelsa and Rivers states. It also presents some principles of Just Transition.

*Chapter 5* draws from the field work to provide comparative analysis of the two sectors including some forms of agenda setting for the social actors.

*Chapter 6* provides the conclusions and recommendations to the government, Labour Unions, civil society groups, and communities. In all, the low knowledge about Climate Change and its relations to Just Transition provides opportunities for capacity building for all the stakeholders and in particular for unions and environmental groups to provide a common roadmap for Just Transition.

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# CONCEPTUALIZING CLIMATE CHANGE AND JUST TRANSITION

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## CHAPTER 2

### CONCEPTUALIZING CLIMATE CHANGE AND JUST TRANSITION

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The link between Climate Change and Just Transition is that the former is a known global problem while the latter is an emerging solution that is yet to be fully comprehended. The impact of carbon emission on Climate Change, as well as the linkage of this action with human activity makes it easy for us to view Climate Change and of course Just Transition from a human angle of development. The amount of carbon in the atmosphere is leading to rising earth temperature that is leading to severe impacts and extreme weather conditions in different parts of the world. The recent examples of Tsunamis, cyclones, typhoons and flooding in Mozambique and Philippines, and massive flooding in parts of Nigeria show that its impact is horrendous leading to wanton destruction of lives and property.

Just Transition presupposes that the prevailing economic model that is built on carbon economy is faulty and unsustainable thereby requiring a low carbon economy. A low carbon economy will require major shifts in the prevailing modes of production and consumption that includes greener technologies and reduction of greenhouse gases in the atmosphere. In terms of how these impact livelihoods, the agriculture and petroleum sectors have been selected as case studies in Nigeria.

## 2.1. Climate Change and Agriculture Sector

Different theories have been used to explain the socio-economic effects of Climate Change on agriculture in Nigeria. In the study we adapt the Agro-Ecological Zone Model (AEZM) that uses experimentation on specified crop grown under different climate conditions. The AEZM usually allocate or assign crops to specified agro-ecological zones, the yield of the crop is therefore predicted based on the zone. This can be applied to investigate the extent to which Climate Change affects land and crops and the coping mechanisms of farmers and by extension the labour components that drive these.

Climate Change has affected all parts of the country and this has impact on the agriculture and petroleum sectors. In the agriculture sector, it is projected that as climate impacts intensify, food production will become more difficult for farmers. Thus, yields of major crops like cassava, yam, maize, rice and sorghum are likely to decline in the year 2050. Agricultural activities affected by Climate Change include: livestock rearing, fisheries, forest products gathering, changes in production cycle, declining soil fertility, and irregular rainfall distribution and general farming.

The impact of Climate Change on agriculture becomes pronounced through serious and severe flooding, droughts, water stress, increased temperature, weather fluctuations and extreme weather events. Specifically, women and children have been known to be worse affected being the ones that most easily suffer from homelessness, food insecurity and health challenges after flood while the men leave the



communities in search of drier lands for alternative livelihood. In addition, women and children bear more of the brunt of water scarcity by walking long distances to find water for domestic and livestock use, all these is in addition to the role of the women as caregivers and home keepers.

The crucial challenge is therefore how to shore up the socio-ecological resilience of farmers' adaptation strategies to Climate Change in a gendered process. According to the Inter-governmental Panel on Climate Change (IPCC) resilience is defined as the “capacity of social, economic and environmental systems to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain their capacity for adaptation, learning and transformation”. Adaptation to Climate Change therefore suggests taking proactive steps to ensure social and environmental systems develop resilience to the effects of climate. This is in line with Nigeria's Climate Change Policy and Response Strategy to “strengthening integrated agricultural intervention plan to reduce the sectors vulnerability to Climate Change and enhance its productivity for food security and poverty reduction.”

Indeed the national gender policy which states “...equal access to political, social and economic wealth creation opportunities for women and men...”, and the SDG goals which emphasizes on equality with respect to access to land and resources are all relevant prerequisite to achieve economic empowerment and climate adaptation towards a Just Transition.

Farautat *al.*, (2012), and Ozoret *al.*, (2012) list some components of farmers' coping strategies informed by changing weather conditions. They include changing planting dates, construction of drainage or dam within the farm, groundwater harvesting and irrigation schemes, increased use of farm inputs such as manures. Others include; food production, food processing and storage, and food distribution and marketing to minimize post-harvest losses. Similarly, stress on water due to Lake Chad receding by about 60% in size in the last two decades has been attributed to persistent droughts and Climate Change that is implicated in the continuous farmers-herders' conflicts, migration, land degradation and the exacerbation of poverty.

## 2.2. Agro-Ecology

In the context of agricultural transition, integrated traditional farming system embodies the concept of agro-ecology which offers opportunities to transform the farming practices and systems to a better alternative than present models used. The current model promotes industrial scale farms with heavy chemical inputs such as herbicides, pesticides and inorganic fertilizers to boost crop yields. This prevailing pattern also promotes land-grabbing through land appropriation and displacement of small-farmer holders to make way for large scale plantations such as sugar cane and oil palm plantations. It is also a major source of greenhouse gas emissions. Pollution from herbicides, pesticides, and inorganic fertilizers often find their way into the food chain thereby making the food unhealthy for consumption. Its displacement of small-scale farmers has increased

unemployment, insecurity, gender inequality and contributes to food shortages in Africa especially in Nigeria.

In contrast, proponents of small farm holding have been noted to provide employment for millions of people in Africa, and the farm practices of integrated farming actually produces greater yields in varieties of tubers, grains, cereals, fruits, vegetables, and many more. Unlike the large farms that utilize chemical inputs and often monocrop, small scale farmers doing subsistence farming are content to preserve the earth through mixed cropping and agroforestry from traditional and organic farming.

Some scholars have provided some studies on agro-ecology which provide some direction of what transition can be in theory and practice. Rosset and Altieri (2017) define agro-ecology as studies to explain the functioning of agro-ecosystems as a set of ecological principles and practices that permit farming in a more sustainable way, without using dangerous chemicals. In terms of transition, it is “a movement that seeks to make farming more ecologically sustainable and more socially just”. This practice has been widely referred to as Just Transition. Since agro-ecology embodies transitional farming practices, some basic principles define the practice garnered through accumulative learning by local knowledge, observational and experimental learning. Following after Koohafkan and Altieri (2010); quoted in Rosset and Altieri, (2017: 10-11), some key principles include the following:

- i. High levels of biodiversity, which plays a key role in regulating ecosystem functioning and also in providing

ecosystem services of local and global significance,

- ii. Ingenious landscape, land and water resources management and conservation systems that are used to improve the efficiency of agro-ecosystems,
- iii. Diversified agricultural systems that provide a broad variety of products for local and national food sovereignty and livelihood security,
- iv. Agro-ecosystems that exhibit resiliency and robustness to cope with disturbance and change (human and environmental), minimizing risk in the face of variability,
- v. Agro-ecosystems nurtured by traditional knowledge systems, featuring many farmer innovations and technologies, and
- vi. Strong cultural values and collective forms of social organization, including customary institutions for agro-ecological management, normative arrangements for resource access and benefit sharing, value systems, rituals, etc.

The implication of the principles is that it ensures higher genetic diversity. According to a research finding, small farmers maintain no less than 2 million crop varieties and about 7,000 animal breeds in some 350 million farms on a global scale. The crop species diversity is not only high; an integrated approach also provides livestock, livestock feed, perennial crops and vegetables, firewood, and human food. They also exchange seeds with their neighbours preferring communal sharing to commoditization of food systems.

This alternative way of farming rooted in agro-ecology is presented as the alternative rather than big large-scale farms that are largely monocropping and therefore have deleterious consequences on man and his environment. The concept of agro-ecology is “at a crossroad” because of tendencies towards co-optation by mainstream industrial agriculture practices and global food system largely big agribusiness. However, agro-ecology as an alternative would require that farm systems transform or maintain these basic ingredients of farming practices. In this case, the best forms of agricultural transition would be the ones that adapt more and more local practices to technological innovations to produce maximum yields per plot and with less harm to the environment. Agro-ecology, therefore, is not an alternative but a return to traditional practices in modernity, which has implications for integrating gender diversity. However, the extent of integration within the concept of agro-ecology is explored in the empirical chapters.

### 2.3. Climate Change And Just Transition In The Petroleum Sector

Through the United Nations Earth Summits, there has been a sustained global focus on the impact of conventional energy such as oil, gas, coal and other conventional energy sources as the main contributors to greenhouse gases in the atmosphere. The use of these energy cuts across sectors and its impacts are harmful to the environment, ecosystem resilience, and rural livelihoods. The transportation and agriculture sectors' consumption of petrol-diesel engines and livestock inputs for fuel contribute higher than any other sectors (IEA???).

In Southern Nigeria, the extraction of oil and gas in commercial quantities started in 1956. Studies in petroleum economy of Nigeria show that oil and gas expanded quickly to become the economic mainstay accounting for about 85% of national revenue receipts. It has also led to provision of some basic infrastructures such as hospitals and road networks that are however in deplorable conditions. With oil development about 5,000 workers are employed in the sector and accounting for Nigeria emerging as the highest in capital base of Africa's economy.

While some argue that oil is a blessing for Nigeria, others hold the view that oil boom has become oil doom. This is mainly due to the resource curse syndrome or the Dutch Disease associated with countries of little productive capacity from a rentier-state economy that is mainly based on consumption of goods and services. While the social and environmental degradation from extractive activities impact on rural farming and fishing occupations, persistent gas flaring from associated gas is one of the environmental hazards that contribute to Climate Change. About 8 billion cubic metres of natural gas is flared per year in Nigeria.

Apart from being a monstrous economic loss, gas flaring adds an estimated 25 million tons of carbon dioxide to the atmosphere. Nigeria's Nationally Determined Contributions pledges to generate 13GW of off grid solar systems, reforestation, climate SMART agriculture, end gas flaring and to reduce Greenhouse Emissions by 2030. The NDCs indicates that 64 million tonnes of carbon dioxide per

year will be prevented from reaching the atmosphere from this source. Other researchers give divergent estimates indicating a problem of data collection and validation. The Department of Petroleum Resources of the Ministry of Petroleum Resources estimates that Nigeria flares 400 million tonnes of natural gas per year from a total of 178 flare stacks scattered on and offshore of the Niger Delta.

The acid rain caused by gas flaring usually poison streams, rivers and others, thereby destroying aquatic organisms. The proximity of farms to gas flare stacks has a direct correlation to agricultural productivity. It is estimated that there is 10% loss in yield at 1000m, 45% loss at 600m and up to 100% loss at 200m from a flare stack.

Similarly, frequent oil spills contaminate the soil and water bodies reducing fish catch and lowering farm yields. Our coastal communities are already experiencing increasing coastal erosion and loss of infrastructure. Industrial activities, such as canalization for movement of oil companies' equipment have led to the destruction of mangrove forests, destroying marine ecosystems and increasing the vulnerability of labour and exposed coastal communities. These conditions do not just affect agriculture but also ecosystems, and human health, especially women who are at the lower level of the income ladder.

To implement the Paris Agreement of 2015 to keep global earth temperature rise below 1.5 degrees in the development pathway would require a drastic cut back of the prevailing energy sources.

While mitigation requires cutting back on emissions and increasing coping strategies that are relevant to the transition to low carbon economy, it is the future of workers that is also at stake. For Nigeria, in terms of energy transition, it is about “promoting diverse energy mix with increasing proportion from renewable and other sources using clean technologies.”

In the Just Transition, workers in the fossil fuel sector face real risks of redundancy if they are not prepared for the coming changes. Workers perfecting internal combustion engines may produce state of the art cars only to find that the world has moved on and their skills are no longer needed. A Just Transition ensures that as economies move to lower emissions or decarbonized production, the changes in labour and production needs global climate stabilization fund that is committed to providing transitional support for workers and communities tied to the fossil fuel industry. This way, livelihoods are secured and society at large is not bewildered by the rapid changes. Energy transition is about people, about labour, and they must be at the Centre of the changes that incorporate equity and quality to ensure a Just Transition.

#### 2.4. National Economic Diversification Policy In The Petroleum And Agriculture Sectors

Nigeria is a signatory to the Paris Agreement and has made some commitments for its implementation to address Climate Change and cut back on Co<sub>2</sub> emissions. It has made a commitment of 45%



conditional and 20% unconditional emission reductions of Co<sub>2</sub> and to end gas flaring by 2030. Although Nigeria's nationally determined commitment (NDCs) is rather ambitious, the country is yet to provide a road map to shift from oil dependence. Ironically, it has recently intensified oil prospecting in the Chad Basin in northern Nigeria as part of effort to increase daily oil production.

The country plans to increase its daily oil uptake from an average 2.5mbpd to about 5mbpd. But environmentalists and scholars monitoring the waste in the industry and oil theft argue that Nigeria's oil production is already in the region of 4-5mbpd given the huge oil theft going on at the international and local levels. They contend that Nigeria's economy is ill because its lifeblood is drained away by oil theft, and between 400,000 to 500,000 barrels of crude oil are stolen every day in Nigeria. The violent resource conflicts from petrol-dollar industry fuelled militant struggles that decimated the population with acts of vandalism and sabotage of oil facilities and the rolling out of military might. The effect remains obvious during the research as Niger Delta oil fields remains militarized.

Interestingly, Nigeria's economic growth has been linked to petroleum and agriculture development. Within the last five years, the Nigeria government spurred by declining oil revenue has rolled out diversification policy through its Economic Recovery and Growth Plan (ERGP). According to some data there has been a steep decrease over a decade in Nigeria's oil revenue with implications on the economy. Given this economic down turn, a national policy thrust shifting

toward the promotion of non-oil exports with emphasis on agricultural development was inevitable.

Apart from declining oil revenue, the country is also deficient in the net food supply depending on a host of countries for food imports even though it is blessed with vast arable land to support both staple and cash crops. Up to the mid-70s, Nigeria was a net exporter of food and agriculture as the economic mainstay. For example, in the early 60s about 80% of rice consumption was produced in Nigeria. By 1990s, only about 20% was produced in Nigeria with the country spending millions of dollars to import rice and other cereals from USA, China, Thailand, India, Brazil, Vietnam, and many other countries. The recent government policy to ban importation of cereals and poultry products, and the removal of foreign exchange for certain agricultural produce provide the opportunity to boost national agricultural production.

In 2014, the country rolled out 200 billion Naira to support agriculture, that is however yet to be fully deployed because of bottleneck bureaucracies. Apart from effort to diversify the economy to agriculture, Nigeria has keyed into the implementation of the United Nations programme on Sustainable Development Goals (SDGs) which is to eliminate hunger and malnutrition, and minimizing the gap of inequalities. The SDGs have a unifying cross-cutting edge for also recognizing shifting to cleaner energy access for all in line with SDG 7. To this end, Nigeria is a leading global player to join Poland, France, and Fiji by issuance of Sovereign Green Bond of about EUR 50 billion secured in 2018 making it first in Africa and fourth in the world.

Although these shifts are significant, yet it remains to be seen how national policy for economic diversification contributes to Just Transition. The next chapters focus attention on describing and analysing data from the field work.

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# **CASE STUDIES ON THE AGRICULTURE SECTOR**

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## CHAPTER 3

### CASE STUDIES ON THE AGRICULTURE SECTOR

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#### 3.1. Niger State River Basin Authority

With its capital at Minna, Niger State is the largest state in Nigeria with land coverage of 76,363 kilometres. It has an estimated population of 5.556 million of which more than 80% depends on agriculture for their livelihood. It is home to three of the major hydroelectric power stations in Nigeria and the largest National Park whose famous wild life has virtually disappeared. It has an average annual rain fall of 1,350mm and an average temperature of 33oC. It is opined that the highest temperature in several years was recorded at 50oC in the first quarter of 2019. The fertile soil and hydrology of the State permits the cultivation of most of Nigeria's staple crops with opportunities for grazing, freshwater fishing and forestry development.

The section is presented based on indicators developed in the conceptual understanding of the agriculture sector in relation to community and farm workers responses, government responses and CSOs and Labour Union responses. These indicators constitute elements of climate integrated farming that recognizes ecological processes within the frame of agro-ecology. In general, Table 1 presents

some set of indicators and responses of social actors. While responses from Niger state is provided in section 4.2.1, Section 4.2.2 presents that of Benue state.

Niger state is part of the Federal government plan to boost water resources and agriculture management through the Niger River Basin Development Authority (NRBDA) established in 1976. The aim was to boost agriculture through partial commercialization to provide agriculture extension services to local farmers for sustainable land and water resources management. The purpose of the NRBDA is to foster development and acceptance of wide scale irrigated agricultural practice and other water conservation and development technology. The NRBDA provided boreholes and helped farmers appreciate the practice and benefits of irrigated farming and conducted several pilot irrigations schemes. Its aims to improve food production through drought, erosion and flood control led to the support of local farmers in areas over 12,000 hectares.

### 3.2.1 Understanding Climate Change And Underlying Causes

In all the focus group discussions and community and farm workers responses to all the questionnaires and interviews, very few people indicated knowledge of the concept of Climate Change. However, when explained in the context of impacts on agriculture from changes in the weather conditions the understanding becomes clearer in their realities of life.

Communities and farm workers responses from Niger state show a clear understanding of Climate Change in the context that the weather season has undergone a significant change over many years. 85% of them were able to describe experiences of Climate Change in the last twenty to thirty years. Some examples of Climate Change described were cases of rivers and streams that have dried up over the years, and rainy season that used to begin between March/April has shifted gradually to the present late May/June. Respondents also related to experiences of extremities in temperature and heat waves, changes in the pattern and amount of rainfall, they claimed have affected agriculture cycle, late planting and harvest. They said that land fertility has been affected resulting in decrease in crops yields for over three decades.

Not given to the subject of greenhouse gases, the workers are hardly aware of the human causes of Climate Change and mostly attribute it to “nature... and acts of God”. There is a general acceptance that fertilizer and chemical inputs like pesticides affect the quality of agriculture output and by extension human health; however, participants show insufficient understanding of its impact on the environment and air pollution. Bush burning and felling of trees are also understood to destroy the environment and exacerbate Climate Change, but they failed to relate it to issues surrounding deforestation, fuel-wood dependence and the role they play in this. However, Table 1: presents some elements of transition being evolved as local traditional agricultural practices that were discussed below.

In the farms, there is dependence on chemical fertilizer premised on the

belief that it softens the soil and thereby increases yield. A member of the agriculture workers' union says "fertilizer softens the ground and the herbicides help to easily clear the weed" this statement is generally corroborated by the responses of workers, farmers and management. The understanding of the harmful effect of the use of chemical pesticides is not seen to be linked to Climate Change but nutrition and health. On the other hand, farmers and community members are generally aware and knowledgeable about the harmful effects of bush burning and tree felling to the environment. According to a female respondent, the loss of trees in the community due to several years of tree felling for fuel wood and other domestic and economic uses have led to the loss of the natural beauty of the community. She stated that, "the trees used to provide shades for relaxation after tiring from farm work, they also protected our crops from too much sunlight or rain but now they are gone."

In general, with stories of experiences of changes in climate and the visible impact on health, social culture and livelihoods, workers are thereafter able to appreciate the threat of Climate Change to the future of work and community life.

### 3.2.2 Understanding Just Transition In Agriculture

Similarly, as in the case of Climate Change, community and farm workers responses to all the questionnaires and interviews show a lack of knowledge about Just Transition. However, when explained in the context of a gradual shift in agriculture practice from their practices and coping mechanism, the understanding becomes clearer.



The frustration that comes with the suggestion of Just Transition is due to the lack of alternatives. A question asked by a worker was “so if the current use of chemical pesticides and wood felling is harmful to the environment, what can we do? We cannot access gas or electric cook stove neither are they affordable.”

Others are not aware about organic fertilizers in large quantities and asked, “How can we get enough organic fertilizer to meet our farm needs?”

Many respondents cutting across workers and community members are very sceptical about a transition due largely to the fear of loss of land and the general unknown. There are specific concerns that bother on land ownership, size, prospects of employment and alternative energy source particularly for domestic use.

### 3.2.3 Integrated Approach to Farming and the Songhai Farm

#### Experience

The 'Songhai' farm in Niger state is an integrated farm model with activities that include fish farming, poultry, oranges, plantain, cassava, vegetables, pawpaw and ruminants. The farm which started about three years ago uses 100% organic material with 100% waste and wastewater recycling.

Energy use on the farm is a mix of fuel wood for cassava processing (10%), diesel powered generator (60%) and some national grid electricity (30%). The farm is developing the use of biomass as an

alternative source of energy. There is a plan to include the use of solar power in the next phase of physical expansion which is expected to commence in the next two years.

Discussion on Just Transition with workers on 'Songhai farm' indicated that extension workers are getting timely information on weather and the planting period for transmission to farmers while there is continuous training for workers on improved varieties of seedlings which is passed on to farmers and communities.

#### 3.2.4 Responses To Issues On Just Transition In Agriculture

Even where there is no policy that specifies Just Transition, the state government owned 100% organic farm project has incorporated Climate Change into its processes with a Climate Change desk officer and a deliberate policy to practice climate SMART agriculture. Training for in-house workers for the construction and maintenance of biomass energy is also in place. About 20 workers were trained annually on the Songhai integrated farming experience for about two months in Togo and South Africa in 2017/2018 (See also Table 1).

The trained workers in turn train more workers locally as well as youth and community members on SMART agriculture practice at no cost. The training include what is relevant to modern agriculture. The training is a practice of integrated farming, use of organic fertilizer and biomass technology developed within the farm premises by the trained workers. Some of these workers were fish farmers, cassava farmers and

processors, Climate Change officers, Directors, and Managing Director of the Upper River Basin Development Authority.

Government officials from the Ministry of Agriculture engaged in discussion on the general policy direction on agriculture with respect to changing agricultural policy. They stated that there is an on-going plan that is being put together to integrate Climate Change within climate smart agriculture. At the moment farm workers were not involved in the process and there is no deliberate integration of gender as a policy into the process. The Union members used the opportunity to request government official to include farm workers, trade Unions and CSOs and communities in the process. It was heartening to understand that the government officials pledged to expand the process to be more inclusive to accommodate the listed stakeholders and particularly women.

### 3.2.5 How Prepared Is Your Union For Just Transition?

Although there are some elements of agriculture transition, however, there seems not to be any deliberate preparation or engagement of the issue by the unions. This is because the union workers and their union leadership are not seeing the larger picture of the threat of Climate Change to their jobs. Also, there is no sufficient knowledge on proactive strategies and this attitude is worsened by the lack of a Just Transition policy by the government particularly at the state and local government levels. Not surprisingly, the Unions also did not have a transition policy.

The Labour Union for agriculture workers and others understood the knowledge gap in Climate Change and agriculture issues. They make the commitment to organize sensitization of farmers and communities on the issues. The Union demanded for improved agriculture extension services to be funded by government through capacity building, training and provision of facilities such as smart phones and transport. They canvassed the need for government to employ more agriculture extension workers to support transition in agriculture sector in the communities. They also requested that government should provide more information on environment management in areas of deforestation to reduce felling of trees and provide cheap alternatives to use of fuel wood for cooking and heating.

### 3.3 Sunti Golden Sugar Estates

Sunti Golden Sugar Estates (SGSE) is a subsidiary of Flour Mills of Nigeria (FMN) Plc located on the banks of River Niger near Mokwa in Niger state. Of the 17,000 hectares land holding, 3,000 hectares have already been planted with Sugar cane with a potential of 10,000 hectares by 2019.

The Mill has installed the latest technology in cane milling and processing with 3,500 tons of cane per day and expandable to 4,500 tons of cane per day to producing 100,000 metric tons of polarity sugar for local industries annually. It plans to generate approximately 10,000 direct jobs at full capacity from the current 3,000 jobs, and 3,000 small scale out-growers.

Owned by Crown Flour Mills, the farm started actual production, in

2018. It was initially owned by the federal government, but was sold to a private business owner who later sold it to the Nigerian flour mill in 2017. Between, the ownership of the federal government and the private business, most activities on the farm reduced without significant output. So far, an average of 15,000 tons of brown sugar is being produced for industrial use. The farm employs about 3000 workers (about 900 regular workers while others are seasonal).

### 3.3.1 Recycling

From the focus group discussions and interviews, the farm workers and management personnel have adopted sustainable sugarcane farming practices including recycling of wastes generated. This includes the use of the 'bagasse' fibre residue from the cane to burned and turn the boilers to provide co-generation energy for the mill. It is also producing 'molasses' for animal feed and fertilizer as by-products thereby contributing to import savings that is worth over US\$50 million annually for Nigeria. Molasses from the sugar cane is also sold as animal feeds. Water is sourced from an artificial dam and it is 100% recycled. The value of the farm estate is currently at N50 billion worth of assets.

### 3.3.2 Technological Application For Agriculture Transition

It is the quality of sugar and how it can be produced in an environmentally friendly way that is a major concern in agriculture transition. According to the company, it has currently installed a state-

of-the-art technology large enough to handle the sugar cane produced in the area. The overall reduced extraction {an internationally recognized measurement of the performance of the cane preparation and milling plant} is expected to be as high as 95.5%. It is said to have a measurement of true amount of sucrose approximately 99.3%.

The remaining cane fibre is moved to the boilers where it is burned to generate steam that is at 415 degree centigrade. The steam is then used to drive the turbo alternator which can generate up to 6Meggawatts of electrical power that is used to power the factory machines, 500 housing units, and contributing to the irrigation power requirements.

A wastewater treatment plant has been installed in the factory to collect and purify wastewater from the farm and recycle for use for both farm irrigation and to meet human domestic needs. It is also supplying water to the fish-ponds currently owned by the communities within the farmland. Reduction in the wastewater through reuse and recycle will contribute to environmental management and reduce stress on the environment and water resources (See also Table 1).

### 3.3.3 Alternative Income Generation And Community-Company Relations

Since the farm has been in existence for over 57 years, it recognized the importance of “good community relations to ensure sustainable and profitable operations.” There are 12 communities in the immediate surroundings of the company and this has put pressure on the company over the years. The total host communities are 28

communities from Mokwa, Rabba and Sunflag in the West and Ketso in the East in the vicinity of the project. Neighbouring communities from within and around the SGSE are currently benefiting from the company's Corporate Social Responsibility (CSR); such as a 30-kilometre road from Mokwa to the farm estate, a network of feeder roads built within the estate to reach surrounding villages, flood protection dykes and walls at Ketso community. In addition, these roads are also extension of road network to the expanding farmlands.

Five surrounding villages are currently benefiting from provision of drinking water through boreholes, tanks and water reticulation. They are also benefiting from three schools constructed by SGSE with provision of teachers, school uniforms, desks and chairs, and other educational equipment. The educational support was also aimed at providing labour force that is currently in shortfall in the company. As a means to encourage the workers, all farm workers' Bank Accounts were processed by the company to which the community showed appreciation after confirming bank credit Alerts of payments.

The company donated 8 classrooms building to the community and employed teachers to teach the youths as part of its corporate social responsibility. Although the aim is to prepare them as a source of cheap labour in the future, however, it is important to stress the high rate of illiteracy and banditry in these communities which opportunities for education and employment might help to address.

### 3.3.4 Fish Farming As Alternative Income Earnings

According to the Company-Community liaison officer, the sugarcane plantation and the company CSR is to ensure an amicable neighbourliness through a mutually beneficial partnership. He said the plantation provides jobs for the community members especially the youth, and also training for farmers while the community in turn ensures security and peace. About five communities are currently being incorporated into the plantation's community development program from which 20 cooperatives have been established.

Some aqua-culture farming is being put into place for the benefit of the communities with Sunti and Batagi communities already benefiting. In 2018, the SGSE planned to embark on fish-farming as part of its corporate social responsibility for the communities. By June 2019 when the researchers visited, 2 medium sized fish ponds were constructed and operational for two communities. The ponds were stocked with 5,000 fingerlings each and at the time of visit we observed that they were already due for harvesting in few weeks as many were already above 1kg. The fishpond construction, feeding and maintenance costs were borne by the Sunti farms. The ponds are managed by nominated community youths representing their communities as a learning process so they can step this down as community developments in their communities.

The proceeds from the sale of the existing fish-ponds will go directly to the selected pilot communities. They also plan to stock natural



surrounding lakes and ponds with fish to sustain community activities related to fishing. Such profit will enable them to employ some youths and produce the fish on a larger scale of about 10,000 fingerlings each. A conservative cost benefit analysis showed that sales in the next month or so will generate about N5 million each for the two communities. According to the Sunti-community relations officer, the company is set to partner with other communities as well as consider fish farming for staff benefit.

### 3.3.5 Sugar Cane Out-Growers Scheme

Out Growers Scheme is in the pipeline. Out growing schemes are being put into place for the benefit of the communities with Sunti and Batagi communities already incorporated in the scheme. About 17 members of the community have been trained in Malawi for two weeks on the concept and practice of the out growers' scheme. Training for workers include technical and administration.

The capacity of the expanded factory is one million tons of cane per season. Certainly, the farm is unable to meet this demand hence it is relying on the strategy to empower sugar cane out-growers to meet rising demand. The company has initiated a pilot out-grower's scheme to find the best model with over 50 local farmers engaged.

### 3.3.6 Community-Company Conflicts

The farmland is secured under Deeds of Ownership in 1975 as a government farm estate. Although the land was initially acquired by

government, it has changed hands severally to third parties. During the land acquisition process, communities residing within the estate were said to have been compensated and given evacuation order. However, some community members refused to move and partly also, there was no firm implementation plan by government to resettle them at the time of appropriation. Those communities which remained scattered within the plantation farm and their homes are now under threat.

In the last few months, it is now posing some community concern especially now that the farm is going full throttle and expanding. While some community members are calling for fresh payment of compensation because they were not the recipients at the time it was paid, others are requesting a resettlement plan to a new location. According to the Sunti Community Liaison Officer, the company's CSR is a response to good neighbourliness and to support the communities so they can live peacefully with company operations.

### 3.3.7 Environmental Considerations

The Sunti farm management is aware of environmental problems of deforestation and Climate Change and the likely problems from their farms. It has started discussing an afforestation programme to afforest degraded forest areas in the communities. However, remedies have not moved beyond demonstration of few species of wood not more than 30 already planted. Although nurseries were mentioned, there was none in sight and the date of actual commencement of the afforestation programme is yet to be firmed up.

Change in technology: Apart from afforestation other Climate Change inducing practices of setting cane farms ablaze during harvesting will be eliminated by the purchase of harvesters in the coming harvesting period. This will reduce vegetation and biodiversity loss in the farmlands and the hazards of fire outbreak.

Organic fertilizer is desirable for the farm, however at the moment only about 20% of the fertilizer input is generated as organic, while the balance is inorganic. There is a plan to go organic in the next two years.

### 3.3.8 Training of Personnel

As a response to better agricultural practices, Sunti has conducted several training for their farm workers. About 20 workers were trained in Malawi and South Africa on sugar cane out-growers programme and processing. In particular, cane harvesters will be introduced for the cane harvesting and this will displace farm workers harvesting manually. To this end, some of the farmers to be displaced are being trained to become out-growers to supply cane to the factory.

Workers are being trained and re-skilled towards changing technology at the cost of the employer. One senior farm worker joined the farm as a 'general farm worker' and labourer in 2016. After undergoing some training in 2018, his job has shifted and he is today a farm supervisor after benefiting from training that provided him with additional skill and knowledge. His position and income have also changed in the last one year.

### 3.4 Case Studies from Benue State

According to the National Bureau of Statistics demographic survey (NBS, 2017), Benue State has a population of 5.74million with its capital in Makurdi. Much of Benue State falls within the Benue valley/trough which is assumed to be structurally developed with marine sediments. Due to its soil fertility and its rich agricultural produce, the state is nicknamed the food basket. Although over 75% of the state is a farming population yet it is at the bottom of the poorest states in Nigeria (NBS 2018). The temperatures fluctuate between 21 – 37 degrees Celsius in the year making it conducive for agriculture. The major mineral resource exploration is mainly in Kaolinite in commercial quantities.

#### 3.4.1 Lower Benue River Basin Development Authority

The Lower Benue River Basin Development Authority (LBRBDA) is located in Makurdi, Benue State. It was established by the federal government of Nigeria along with eleven other River Basin Development Authorities by Decree No.25 of 1976. The department of Agricultural services of the Lower Benue River Basin Development Authority (LBRBDA) conducts all the operations of the agriculture input sector including farm extension services, integrated water services and commercial division. Its mandate includes the development of water resources potentials of the country for agriculture, domestic and industrial uses. In addition, it is mandated to maintain, manage and control flood and erosion for watershed management.

### 3.4.2 Knowledge About Climate Change

The farm workers had no knowledge of the concept of Climate Change as being related to greenhouse gases. Only the Managing Director, Engineer Mohammed O. Adra understands Climate Change and its principal facilitators as fossils, extractives and agricultural practice especially the use of chemical inputs. He stated that some of the consequences of Climate Change are the increasing herder/farmer clash due to desertification and shortage of water resources. Transition in terms of policy and practice has necessitated staff training at an average of 20 persons annually to meet with the changing demand of the water resources for the farm. Although the current source of energy is fossil fuel, they understand the need to add solar to the energy mix. The process is being slowed down due to lack of funds.

### 3.4.3 Integrated Farming

Drawing from the Songhai experience, a Songhai Integrated Model farm has been established in Makurdi in 2018. It has already completed two farming cycles of perennial crops. According to LBRBDA (2019: 17), the significance of the Songhai farm is reviving agricultural production through the use of “nature-based agricultural practices” and to develop new approaches to farming systems that rely much on the combined inputs from local experiences” The record stated that it is a “cost effective means to boost food production using organic method in production and create employment for the youths” (Pp. 17).

Farm workers and some community members conducted site visits

and responded to questions. We observed twelve medium sized fish-ponds with capacity to accommodate one thousand five hundred table sized fish per pond. Fishery and poultry enterprises in the LBRBDA have also been revamped. In May 2018, two thousand fingerlings were stocked and sold in November, but by June 2019 when we visited, seventeen thousand fingerlings were nearing maturity for sale.

In 2018, one thousand broilers were stocked as a demonstration but by June 2019 they have expanded to over ten thousand broilers, turkey and guinea fowl. An incubator for one thousand eggs per cycle was installed to hatch fertilized eggs. The birds are free to roam within the confines of the perimeter fencing.

Other demonstration farm crops included rice, sweet maize, okra plot, sweet potatoes, carrot, and dwarf pawpaw plantation. They also grow vegetables including cucumber. Farm workers explained the ecological importance of agro-forestry to boost biodiversity in the farm including the cultivation of the *Moringa Oleifera* plant which leaves are used to feed the birds as it possesses medicinal value for humans and livestock.

The LBRBDA planned to set up a rice processing factory and the construction of 4 additional units of Green Houses. By “thinking out of the box and working closely with farmers and to utilize small adoptable irrigation technologies”, LBRBDA is poised to contribute its quota to food security through irrigation agriculture in order to meet the tremendous food needs of Nigeria (Pp. 18). Organic fertilizer is

made from cabbage and the unusable farm produce are covered up with the earth and mixed with the waste from the birds. It takes about two weeks for it to be ready for use. The new administration since 2017 embarked on staff motivation including promotion, staffing and training in total of 125 staff in 2017.

#### 3.4.4 Agricultural Extension Services

To provide Agricultural Extension Services in areas of livestock, fishery, forestry and crop development; revamp cooperative societies; engage in commercial activities for revenue generation, land development and promotion of irrigation agriculture, LBRBDA has 18 projects spread across its four catchment States (Kogi, Benue, Plateau, and Nasarawa in the North Central geopolitical zone). This effort focuses on Benue and visited farms growing improved rice, maize, soya beans etc. The Agricultural Extension Services which provide farm irrigation services to farmers was revamped including the provision of farm inputs. Between 2017/2018 farming season support to local farmers amounted to one hundred and fifty tons of fertilizer, one thousand litres of agrochemicals, and five tons of improved rice, maize, soya beans seeds covering a total of one thousand and fifty hectares of farmland through collaboration with the private sector.

#### 3.4.5 Provision of water for irrigation farming and conflicts

The project was meant to provide irrigation water for irrigation farming and to combat the increasing desertification in the Sahel savannah region. The abandonment of the project for a long period has

contributed to internal migration and increased tension between farmers and herders due to scarcity of water for farming and livestock. Some of the activities embarked upon included rural electrification in Ningev in Vandeikya LGA, and the rehabilitated water works.

In the process of its establishment and as the establishment expands, it has acquired community land. The communities who feel neglected by the government are demanding adequate compensation. To resolve this, the management and the community hold regular meetings to strengthen relationship. The community demand is to benefit from water resources for irrigation farming which has not been functional for more than two decades even after most of their land has been acquired by the government. This is being resuscitated and the company promised to renew water supply once it is fully operational.

#### 3.4.6 Conflicts Resolution To Reclaim Lost Farmlands

In March 2017, a committee set up by the farm received complaints from farm managers about the trespass of individuals and organizations on the farmlands. A multi-stakeholder approach was approved by management and this led to stakeholders meeting comprising principal officers of the farm, Chiefs, Elders, and youths of the communities with security agencies as observers, the meeting held on 26th October 2017 at Obagaji farm in Benue state. In the meeting, community representatives informed the project team that the LBDRDA only functioned for about 5 years of its existence when it was set up and was left fallow for many years hence in such situation of “abandonment of the project, encroachment” is bound to occur.



The management condemned the trespass as illegal and requested the community to stop encroaching into the farm since it was being revived to empower the community to boost agriculture production of the communities. The communities tasked the management staff to make available to them tractors, agrochemicals and fertilizers, improved seedlings and dam for irrigation farming to boost production and other purposes for water supply that is lacking in the area.

Although it was a multi-stakeholder meeting, female participation was limited. From the photos it was a male affair in the communities with about two women from the ministry.

#### 3.4.7 Visit to a Small Farm Holder

There is evidence of integrated farming but there is less focus on cassava. The private farms were located in an expanse of land of over 10 hectares. The farm was shared out to some community members including retired government personnel now involved in farm work. They farm crops such as cassava, rice, and recently there is increasing poor yields hence they are now farming mainly rice. They depended on cow dung for organic fertilizer in the past for cassava but are now using chemical inputs for the farm.

Farm workers demonstrate a clear understanding of the impact of Climate Change but were also not able to relate it to greenhouse gases in the atmosphere. Just Transition is understood more in terms of a shift towards a less destructive soil practice and a method that enhances

more output, mechanization and better human health. The destructive impact of chemicals on the quality of food, human health and the environment is understood only in the context of chemicals e.g. fertilizer, herbicides and pesticides.

The cost of producing organic fertilizer is high from cow dung and perishables are now scarce. They used to rear livestock but the conflicts have prevented them. The Fulani-herdsmen that used to live in harmony with them have become a thing of the past.

#### 3.4.8 Just Transition

Interviews with some community workers showed that there is no knowledge of Just Transition. They heard it for the first time through the researchers. However, from the discussions, the farmers were willing to embrace a Just Transition that improves their yield and income which have been dwindling over the years. The question for them is how they can get enough supply of organic fertilizer to meet local demand. A farmer lamented that in 1999 when he started farming, he could get an average of one hundred bags of maize on about one hectare but this he said has shrunk to barely twenty bags from the same size of land. He now uses more maize seeds and fertilizer on the land with less crop yield. In this case, 80% of the farm workers did not apply organic manure even when they are aware of its benefits.

They are aware of the benefits of organic farming but are not able to produce large quantities to meet up with the needs for their rice

farming. They were not aware of extension farm workers even though they were right under their nose and complained that they do not see the extension workers. In the process, the research team linked the extension worker at lower Benue farm to the local community farmers.

The largest farm in Benue State is owned by a government official. The rice farm sits on a size of 300 hectares of land and it depends 100% on organic fertilizers. It recycles wastewater for the water supply for its crops, farms and livestock such as cow, piggery, and chicken.

During the visit, we met with a government Agricultural Extension officer who was trained for integrated farming but has been unable to put her training to practice due to lack of transportation and facilities to enable her organize community workshops for local farmers who could thereafter take advantage of the extension officers' services. Indeed, there is an obvious gap between training of agriculture workers and benefits to the farmers and communities.

#### 3.4.9 Gender and Just Transition

Gender issues are pertinent in discussing the transitions in agriculture or in industrial production. According to the International Labour Organisation (ILO), “between 1995 and 2015, the global female labour force participation rate decreased from 52.4 to 49.6 percent, and so did the male labour force participation rate from 79.9 to 76.1 percent.” It is thus an established fact that women are more likely to be unemployed than men and this trajectory will move into the decarbonized economy except careful social engineering is ensured for full inclusion.

Excluding women in decision making will compound responses to global warming since they are more at risk of job losses as well as damage to health by the impacts of both Climate Change and transitions aimed at tackling the climate crises. In Nigeria, the challenge includes the fact that women form a bulk of workers in the largely unprotected informal sector and transition to low carbon economy will place a heavy burden on them.

Women have limited access to social protection, a matter that is very clear in the informal economy and Climate Change impacts can deepen poverty and socio-economic vulnerabilities among them. In both the formal and informal sectors, to ensure that Just Transition has a gender lens and does not present injustices merely wearing a green coat, it is essential to consider the accumulated gender bias built by patriarchy and other privileges tied to sex roles that are to the disadvantage of women.

From the farms under, an average of 60% of the farm workers were women and more than 85% of these are seasonal workers. In one of the leading farms there are about five hundred female workers but only 5% are on permanent employment while the remaining 95% are seasonal workers mostly drawn from the community. The seasonal workers are employed for weeding, harvesting, cutting, cleaning, cooking and administrators.

The farm Supervisors opined that women are not able to do some of the menial jobs such as lifting and working under hard conditions. The

culture of the communities dominated by patriarchy has impacts on the nature of jobs that the women do due to “cultural barriers that hold women back in carrying out certain “technical and hard activities.” While some culture allows women to climb, chop wood, carry luggage, others simply do not. But Just Transition would require that such women may decide what work they feel they can do so that the power relation that biases economic activities often against the female gender will be eliminated.

That said, some women are playing leading roles in administration. In the Benue farm, there is a Senior Management Staff for Agricultural Extension to conduct extension services to the people. However, it is not clear the level of her engagement with the communities due to lack of transportation and other logistics to the communities.

Table 1: Showing Elements of Transition in Agriculture

Elements of Transition in Agriculture		Niger state			Benue state		
S/No		NRDA	Sunti	Songhai	LBRBDA	Songhai	Private
	Knowledge about causes of Climate Change	3	3	3	3	3	3
	Knowledge about impacts of Climate Change	4	3	3	4	4	4
	Knowledge on what Just Transition is	4	4	4	4	4	4
	Knowledge about reasons for Just Transition in Agriculture	4	4	4	4	4	4
	Integrated farming approaches	4	3	5	4	4	3
	Mixed cropping (varieties)	4	3	5	4	4	4
	Mixed farming	4	3	5	4	4	4
	Shift to organic manure	4	3	5	4	5	4
	Changes in planting season	4	3	4	4	3	4
	Livestock & crops	3	2	5	3	3	5
	Technological application	3	2	3	3	3	2
	Retraining of personnel	3	2	2	3	2	4
	Out-growers Training	3	4	4	3	3	3
	Environmental considerations	3	3	2	3	4	3
	Extension Services personnel training	4	3	2	3	2	3

	Recycling of farm residues	3	2	1	4	3	3
	Recycling of waste water	4	3	2	3	4	3
	Construction of drainage	3	4	1	3	2	2
	Irrigation farming	2	2	2	2	2	2
	Alternative income from fish farming	2	2	2	2	2	2
	Expanded farmlands	2	2	2	2	2	2
	Agro-ecological practices	3	3	4	3	3	4
	Agroforestry	3	4	4	3	4	4
	Benefits sharing	4	4	3	4	3	5
	Rich biodiversity	3	3	5	3	3	3
	Strong cultural values	2	2	2	2	2	2
	Traditional knowledge	3	3	3	3	3	3
	Reliance on weather forecasts	1	1	2	1	2	1
	SMART Agriculture	3	2	2	3	2	2
	Co2 abatement	4	4	3	4	4	3
	Community involvement	3	2	2	3	3	2
	Community benefits	3	2	2	3	4	3

1. Very high
2. High
3. Average
4. Low
5. Very low

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# **THE PETROLEUM SECTOR IN THE NIGER DELTA**

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## CHAPTER 4

### THE PETROLEUM SECTOR IN THE NIGER DELTA

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4.1.1. Rivers State has an estimated population of 7.304million (NBS demographic survey 2019) and a land area of 21,850km<sup>2</sup>. The state is covered by a network of rivers, mangrove swamps and creeks. The water ways serve as means of transport and livelihoods along the coastal communities. Cash crop farming, fishing, and fruit farming are among the major sources of livelihoods for the people of Rivers. The state has a large deposit of oil and gas with major activities in exploration and production.

4.1.2. Bayelsa State has its capital at Yenagoa and an estimated population of 2.27million (NBS 2017). The state lies at the heart of the Niger Delta and has the longest coastline, among the littoral states and it has the highest deposit of oil and gas in the country. It has a total land area of 9100km<sup>2</sup>, with a web of interlocking rivers, creeks and streams which constitute about 45% of the State (Bayelsa State Government Climate Change Policy, 2011).

The impact of Climate Change in Bayelsa State is visible through the gradual but consistent increase in temperature and precipitation as manifested in regular floods, tropical storms and rise in sea level and infestation of inland waterways. The changing climate in Bayelsa has a major outcome affecting, agriculture, livelihoods, the environment and general development.

According to state documents, “Deforestation and associated biodiversity loss, air, water and land pollution from oil industry activities and poor waste management practices in both urban and rural areas and poverty” are posing serious threats to the environment and people. It is this reality with the implication of Climate Change that propelled the government of Bayelsa State to develop a Climate Change policy document which “provides sector specific strategies and response options for mitigation and adaptation to Climate Change.”

#### 4.2.1 Knowledge And Understanding Of Climate Change

Discussion on Climate Change from both Rivers and Bayelsa states were similar being neighbours who also host majority of oil deposits and facilities as well as the pollution. Interestingly, 90% of the oil workers, Labour Unions and community members showed some understanding of the concept of Climate Change. Some linked it to changes in the pattern of precipitation and temperature over many years. Others referred to how little streams have completely dried up while fishes in small rivulets around the houses in the villages have disappeared. While the disappearance of some of the streams could be associated with urbanization and oil pollution, respondents were aware of the linkage between Climate Change, gas flaring and oil spillage. On what Climate Change means to the petroleum sector, one worker stated that “it is the process of planet heating up, it is man-made and it involves the emission of fossil fuel, pollution, gas flaring and deforestation.”

However, there were a few respondents who will not agree that it is the exploration of oil and gas that are necessarily polluting the atmosphere to the extent of contributing to Climate Change. Thus, a female respondent opposed to 'leaving the oil in the soil' saw this as a ploy to rob the communities of their God given resource for development. "Is this the new way the government wants to use to deny us and take over our resources?" she asked. Others who share a similar view with her said the oil companies should devise a cleaner way of exploration and make it beneficial to the communities. Indeed, others echoed the sentiments around oil/gas exploration where it is believed that it is the exploitative and destructive practices by the oil companies and the government that need to be reorganized and not necessarily to block the wealth of the community and the state. Others simply argued that since oil and gas is a money-spinning resource, "Why don't we come out with a method of exploration that is devoid of pollution so that we can enjoy the economic benefits of oil in a cleaner state?"

However, in the context of environmental concerns, there was a common understanding that alternatives should be sought. Interestingly, some obvious Climate Change impact on agriculture was traditionally explained as witchcraft. It was reported that a woman confessed that her witchcraft was responsible for a special specie of white cocoyam called 'Mama Kokoko' that is now in extinction or rare in the Niger Delta region. Our assumption based on the description which showed similar sample that the fragile plant could have been affected by the oil polluted land.

Others discussed the environmental degradation from oil spills and gas flaring and the violent impacts of oil as a basis to shift from oil and gas. In Ikarama community, a recent spill from Shell facility was the cause of community protests led by dozens of youths. They gathered near the spill sites claiming that Shell has abandoned them and calling for clean-up and compensation for their destroyed crops and farmlands. In Ebubu community, Rivers state, youths lamented the neglect of Shell since the first oil spill in 1978, and till date, Shell has failed to clean up their environment.

However, in the context of the on-going Ogoni clean up, they said that a contractor and fifty youths have been mobilized to a polluted site in Ebubu community as part of the clean-up process but the job of the youth is however common in the area of gatemen/security, and other menial jobs. They claimed that they were being paid slave wages (less than \$100 per month), no appointment letter, no condition of service, no social protection coverage and simply no formal engagement procedure, no clean up kits and gears, making them exposed to the pollution hazards. They are simply casual workers who are hired and fired at the will of the oil managers or their 'big time' contractors. Since the rainy season started, they said the sites are under lock and key and no work being done. From the problems associated with oil and gas it was easy for the youths to accept the notion of leave the oil in the soil.

In Koluoma communities, a massive oil spill that lasted over 40 days destroyed the mangrove and fish stocks. The community is facing sea encroachment from sea level rise so dramatic that the community will

come under water in few years. Based on the impacts, communities such as 'Koluoma II' have no problem identifying with a new energy model from oil and gas.

#### 4.2.2 Understanding Just Transition

The discussion on Just Transition was far more complex in terms of gains and losses both to the oil workers and their unions. None of the respondents showed familiarity with the concept of Just Transition. However, on further discussion with the groups, a clearer understanding was made bothering on the political economy of oil and gas with issues of responsibility and rights. The right to a clean environment and good health as well as the right to livelihoods and decent jobs all premised on the responsibility of the employers to deploy clean production method and for government to

be sincere in its responsibility for the security and well-being of its citizens.

In terms of changes being experienced, some respondents recognized the need for a shift away from fossil fuel dependence. They said that frontline oil companies operating in Nigeria are changing their names to reflect 'energy' but what practical steps they were taking toward energy transition were unclear. Some respondents cited the example of Otedola Energy based in Lagos that has reportedly sold 60% of its shares from Forte Oil and invested it in renewable energy development. They acknowledged that indeed the oil companies are changing their names and outlook however, not much is changing with respect to their operations and the protection of the environment.

Also, in the oil sector, there are no known new jobs created so far. Therefore, there is need for trade unions to begin to change their perception on the world of work and strategize towards the future reality.

In particular, others referred to the worsening situation in the oil industry where community folks, security personnel, and oil workers connive in the persistent oil bunkering and illegal artisanal refinery which is posing serious threats to the people and environment of the region.

Based on this understanding, 75% think that we should shift away from petroleum/gas exploration and use, 20% said No, while 5% stated not sure.

#### 4.2.3 How Prepared Are We For The Just Transition?

While respondents generally agree that very few people are engaged as workers directly in the oil/gas sectors, the benefit of oil within the community is largely opportunistic and a power relation that is fuelled by the oil producers. So, while a few of the community members are engaged directly within the oil companies Corporate Social Responsibility (CSR), more are benefiting from some facilities such as scholarship, health and education which nevertheless are distributed as a palliative to secure trust and peace. The management of this process almost always leads to divisions and antagonisms within and between communities.

At the union level, the member grappled with the issue of what can be done to achieve Just Transition. A unionist said, “I will begin an intensive sensitization starting with my immediate family, stop tree felling, and bush burning as means to hunt for animals.” Others stated that the Unions should embark on sensitization program for their members and to be aware that the end of oil is approaching. Table 2 outlines some elements of Just Transition in the petroleum sector that were discussed below. They include some coping strategies to curb redundancies to training of personnel as new opportunities for development.

#### 4.2.4 Job Losses And Redundancies

When it comes to jobs and redundancies, 'no-nonsense' labour unionists rise to the occasion. The fear of loss of jobs and redundancies was a rude shock to oil workers and the Labour Unions. If the transition will be implemented, then the “fear of redundancy and termination of appointment should be addressed”. Others stated that, “while oil workers want to embrace the transition, we are a bit sceptical about job security”. For example, “how many jobs can be created and how can it be as financially rewarding as what we have now?” It was an eye opener to understand that the Typesetting/Secretary's positions and Stenographer unions were gradually phased out due to the wide spread computer literacy, hence oil and gas workers will also become irrelevant at some point in the future.

Related to job redundancies was the level of compensation packages to the workers. They argued for Social protection, that, "Payment of compensation to those workers for loss of jobs should be designed to ensure that it is effective". It was also useful to learn that while employers bought new computers and conducted training for their staff upgrade, others had to train themselves and bear the cost. Still, several others lost their jobs, with many others out of job or changing jobs by acquiring new skills and occupations. This aspect was considered unfair and unjust that unionists' workers should not be made to pay the cost of a Transition.

The union members held strongly that they would negotiate benefit packages for job redundancies and encourage others to develop new skills. To be sure, while some skills retraining and new technologies will continue to drive the transition from fossil fuels to renewable energy, the workers stated that, "they have not currently received any training on new skills required to prepare them for the transition." They argue for the need for the government and oil companies to invest in new technology for clean energy transitions.

It was difficult to steer the debate on whether or not the oil companies should be part of the energy transition since unionists do not want massive layoffs. But they agreed to put pressure on the oil companies particularly Shell to put in place social protection and special severance packages for staff who may lose their jobs in the process of transition in the oil sector. It was instructive to learn that both the oil workers and Petroleum, Natural Gas Senior Staff Association of Nigeria



(PENGASSAN) members already have some level of these packages for their workers such as life insurance, and other terminal benefits such as contributory pension and gratuity that require revision to take cognizance of the Just Transition process.

That the oil companies are already changing their names from 'oil' to 'energy' companies indicates a transition process which however requires the effective participation of workers and communities to ensure it is a Just Transition that is mutually beneficial and does not short-change workers.

#### 4.2.5 Alternative jobs

The oil workers and communities were not quite sure if they were prepared for a future without oil/gas exploration. Only 55% said they were prepared while 34% said No, and 7% said they do not know. Interestingly, a Senator who tabled a bill for the ban on petrol-diesel cars to support electric cars was defeated by his colleagues showing that the time for such bill has not come. About 10% of the respondents were of the opinion that, “if we do not use our oil, then, who will use it?” In contrast, another community member stated that “we have the oil and gas but we no longer have our lives.” There is now community distrust, fighting, deception, and poverty from Shell (Owei?) and other benefit captors. So, if we stop oil it will do us better as a nation.

The workers and community members agree that the oil/gas sector has not created employment for a substantial number of youth and

working class adults, indeed it has rather created a huge inequality gap between the handful that have the “oily” jobs and the majority whose sources of livelihood have been destroyed by pollution and have become “onlookers”.

Worse still is that the inequality gap has created a lot of social vices and destroyed the social value system of the community. Prostitution, hooliganism, restiveness and now kidnappings are common within the community whereas few oil workers display wealth. Single parenthood is common where young women and older adults are saddled with the responsibility of taking care of young children and grandchildren alone.

Alternative sources of employment could be harnessed in the water transport, tourism, cash crop farming (rubber, palm oil, limestone, and steel industry), fishing and poultry, livestock but these areas remain largely undeveloped.

In terms of timeframe, time spacing of the transition was a heated debate among the communities and oil workers/union members similar to government officials. Some union members and community representatives argued that Just Transition should not be “sudden” and should not commence until “an enabling law that adequately protects the interest of workers in the transition process are put in place. They also argue for legislative and executive advocacy and the rights of workers to know.”

They also noted that Labour Unions and workers are far behind in the discussion and thanks to ERA and NLC for this educational research. They called for the inclusion of trade unions in the Just Transition process and challenged their own trade unions such as Trade Union Congress (TUC), NLC, PENGASSAN, and National Union of Petroleum and Natural Gas Workers (NUPENG) to come up with an enabling bill for Just Transition. Irrespective of political differences and affiliations, the trade unions in Nigeria work together on a common agenda when collectively threatened believing that “an injury to one is an injury to all.” They also stated the need for the unions to take cognizance of the “changing face of the world of work” and “to move beyond labour rights” to focus on Climate Change and Just Transition by embarking on social reorientation during their annual retreats, conferences, and workshops with the support from other CSOs especially ERA.

In terms of Just Transition, it is not officially in the agenda of State governments. According to a government official, we need sensitization and training to change the status quo. Others stated that, “We cannot predict timing of the transition because we have not even begun to plan”.

#### 4.2.6 Community Response To Just Transition In The Petroleum Sector

Community responses to Just Transition was a mix of nostalgia, anger and anxiety for a productive alternative, in the words of a community respondent, “we must not depend on petroleum and gas alone”

suggesting that communities are ready and willing to embrace energy mix. Incidentally the Bayelsa state government response to Climate Change recognizes energy mix as part of Just Transition process. Others were simply on campaign mode and stated that, “we can stop oil/gas operation by not patronizing the product.” Table 2 presents some elements of the Just Transition in the petroleum sector discussed in the sections below.

There are community effort at developing alternative energy source e.g. a device was said to have been developed locally which can power boats and generator without petrol or diesel. Generator powered by water and solar energy are purportedly developed and used in water boats that are used for fishing and transport. The researchers, however, did not see any of these gadgets nor their inventors.

On alternative jobs, respondents believe that there are many other unexploited opportunities for job creation which could fill in the gap for some job losses in the transition process e.g. investment in the waterways and in agriculture especially cash crops. Others are transportation, recreation and tourism.

While a few community illustrious sons who are able to pay the bills have supplied their communities with solar powered energy source to be used mostly in the evenings, Government has also made efforts to provide some solar street lighting for parts of Yenagoa and surrounding communities. Some community members mostly women attest that ERA has trained some women and provided some solar lighting systems and energy saving cooking stoves to them at

subsidized rates, but they are unhappy that such packages were not sustained. How many people can ERA reach and when next will they be in the communities in the region? Some end users raised the issue of costs and durability of the imported renewable energy products and maintenance costs.

Many of the community members said they were prepared as some forms of gadgets were already in use in their homes. While 40% stated that they have at least one form of solar energy for lighting or cooking stoves, 60% have not used any of these products. Given the gains attached to Just Transition that may favour more communities, over 80% of the respondents stated that “we are prepared for an alternative source of energy away from petroleum and gas because they pollute our environment, water and destroy our crops.”

A woman said that, “if we change to Just Transition, will the oil companies also shift from oil and gas to renewable energy?” She pointed out that oil companies were still looking for oil at the time of speaking. Attention was also drawn to a successful community project where Bonny Utility Company working with Shell and other private businesses now generates its electricity from gas flared. Although this does not qualify for what Just Transition means, same community aspired to the use of gas flared to generate electricity.

Some concerns of the community included oil as the source of conflicts and destruction of the environment. According to some community members, oil and gas exploration has affected “our community because it causes violent conflicts, communal clashes, killings and

enmity.” It is good that the transition happens very soon because, “we want the oil companies such as Shell to vacate our communities so we can have a clean environment.”

Yet, some were very sceptical of Just Transition as to its feasibility due to the lack of transparency and accountability in the oil industry that may be replicated in the renewable energy sector. A community member argued that the “lack of sincerity in government, the companies and community leaders will not allow Just Transition to happen soon”. “Who can trust them”, said another. Some gave up on the process, and noted that, “the same process of oil exploitation, insincerity, and other lack of compliance to the national laws currently being practiced will continue even under a renewable energy regime.” This level of distrust was high suggesting that Just Transition has a high wall to climb over.

#### 4.2.7 Perceptions On Government Readiness For Just Transition

According to government officials, some legal lacuna exists to prevent oversight functions in the oil industry and this has worsened the state of environmental degradation. A director in the Ministry stated that while the laws are made at the federal level on oil and gas, implementing them at the state level is difficult. For example, when there is incidence of spill, once the Joint Investment Venture JIV has been conducted, the state or region has no power to follow up on monitoring clean up and remediation process. To the oil companies, monitoring is seen as intrusion from the state but environmental concerns arising from oil spills and clean up should be left to the state.

Unlike Rivers State, Bayelsa State has a well-developed document called adaptation to Climate Change. It presents suggestions and recommendations on adaptation, resilience and coping mechanisms to adopt to combat Climate Change. Regrettably, such provisions are yet to be implemented, locked away in the filing cabinet of the state petroleum ministry.

In terms of transition, we are very much concerned but handicapped to effect changes. Look around, we rely on diesel power plants for energy, and it would be good to have solar systems in the workplace.

In some communities and parts of Port Harcourt and Yenagoa, state governments' solar streetlights are evident. Some communities such as Opume, and neighbouring communities are benefiting from clean technologies such as street lights and phone charging stations. In Opume community, the community library is now fully powered by solar lighting system.

Table 2: Elements of Just Transition in the Petroleum Sector

S/N	Elements of Just Transition practices in the Petroleum sector	Actors (Bayelsa and Rivers States)			
		Labour Union workers	CSOs	Communities	Government
	Knowledge about causes of Climate Change	2	2	2	2
	Knowledge about impacts of Climate Change	2	2	2	2
	Knowledge on what Just Transition is	4	3	3	4
	Knowledge about reasons for Just Transition in Petroleum Sector	4	3	3	3
	Preparedness for the Just Transition	4	3	3	3
	Jobs Losses and Redundancies	3	3	3	3
	Social protection packages	4	4	4	3
	Severance allowance	3	4	4	3
	Pension and gratuity	3	4	4	3
	Training of personnel	3	3	3	3
	Use of Solar lighting	4	4	4	4



	Reduced use of petrol	4	3	4	4
	Reduced use of firewood	2	2	3	2
	Knowledge of Electric cars	4	4	4	3
	Reforestation	3	3	3	2
	End to gas flaring	3	2	2	3
	Halt oil and gas production	4	2	3	4
	Energy generation projects	5	3	4	4
	Energy saving bulbs	3	3	3	2
	Use of energy cooking stoves	4	3	3	4
	Acceptance of Just Transition	2	3	2	2
	Awareness of benefits of Just Transition	3	3	3	4
	Alternative jobs	3	3	3	3
	Reduced use of kerosene	3	3	3	3
	Reduced use of petrol	4	3	4	4
	Reduced use of firewood	2	2	3	2
	Knowledge of Electric cars	4	4	4	3
	Reforestation	3	3	3	2
	End to gas flaring	3	2	2	3
	Halt oil and gas production	4	2	3	4

Good                    1  
 Very good            2  
 Not so good         3  
 Bad                    4  
 Very bad              5

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# EMERGING ISSUES

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## CHAPTER 5

### EMERGING ISSUES

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The study focused on understanding the level of knowledge about Climate Change and social actors' preparedness for Just Transition. With multiple cases, it conducted comparative analysis of the elements of a Just Transition within the concept of Climate Change in the agriculture and petroleum sectors in Nigeria. Both State and non-State actors; government officials, politicians, Labour Unions, civil society groups, NGOs, have roles to play in the promotion of Just Transition. While different initiatives are on-going, they are hardly coordinated and little by way of collaboration by the social actors.

Given the dichotomy between environmentalists and Labour Unions on what constitutes Just Transition, it also seeks to understand how Just Transition can be enabled by these actors working with other stakeholders in Nigeria. Within Just Transition, the study shows the construction of knowledge and how problems and remedies are construed and better appreciated from a combined expanding spectrum of protecting workers rights and environmentalism. Hence further research is required to provide greater understanding of this interesting aspect.

The research findings show that there are some cardinal elements relating to Just Transition as system change in the agriculture and

petroleum sectors. On the one hand, there are similarities. In both sectors, there is very low knowledge of Just Transition being an emerging terminology to explain system change. But Just Transition was largely embraced due to local interest and values.

### 5.1 Functional Utility Value Drives Just Transition

Just Transition was virtually new except for a few individuals who have faintly heard of the term. That said, there are few elements discernible from the respondents to show some level of agricultural transition. The changes in the weather patterns have also resulted in changes in the farming cycles since the rains are now delayed abnormally than normal cycles 20-30 years ago. Weather resistant crops and the prevalence of the use of organic fertilizers was very important as part of this narrative of agricultural transformation.

Similarly, in the petroleum sector, knowledge about Climate Change and energy transition was very low. Although there are a few solar lightings and energy saving stoves in use by some households and street lights for villages, the underlying reason for this was clearly missing. The research pitched oil as a resource for its economic opportunities with the devastation that made the need for a transition more visible to the respondents.

The common thread running through the study is the utility value of Just Transition. From both sectors, respondents demonstrated keen interest on transition based on its potential utility value to better their

lives, jobs and wages. The idea that green technologies and new skills acquisition will provide new opportunities in the sectors was high. Issues of Climate Change and environmental considerations such as Co2 abatement were present but only as secondary factors that nevertheless were important. From the foregoing, a strong capacity building on Climate Change, transition and system change in the agriculture and petroleum sectors are necessary for the various stakeholders to come to terms with what the concepts entail. This will also help to address the scepticism of a few that such transition as envisioned is too grandiose and will not likely happen but will remain as mere ideas.

## 5.2 Agro-Ecology As Agriculture Transition

There are differing aspects of what constitute Just Transition between the agriculture and petroleum sectors. Notably, in the agriculture sector, elements of agro-ecology were high in their integrated farming system as a traditional practice for sustainable farming. There are strong elements of a return to agro-ecology in terms of the use of organic fertilizers and the reduction of farm inputs in herbicides and pesticides. Farm workers and communities understood elements of integrated farming that promotes ecological balance from mixed cropping, agroforestry and organic farming practices (See Table 1).

The intensification of ecological farming systems is inevitable due to the changes in weather conditions and shifting planting seasons that also require small irrigation systems to improve water supply. Just

Transition for the farmers means a return to traditional farming practices. However, there is evidence of scaling up with technological inputs such as tractors and emerging local food processing factories that are taking advantage of a growing farm produce. This should be encouraged as about 60% of farm produce perished and wasted for lack of added value and processing systems.

### 5.3 Agenda Setting for Just Transition in the Petroleum Sector

In the petroleum sector, there is greater work to be done in terms of agenda setting for Just Transition. The labour union sets of principles developed at the international level to enabling Just Transition are very low in Nigeria in these two prime sectors (See Table 2). In particular, their various unions saw Just Transition as a wake-up call for new activism to expanding conventional labour rights to preparedness for Just Transition. While issues of new technology requiring new skills and capacity building training were relevant, the unions prioritized addressing issues of job losses and redundancies in any guise that should be adequately compensated. In their subsequent engagement with the oil companies, a review of severance allowances, pension schemes and other workers packages will now be infused with Just Transition preparedness.

Ultimately, both sectors embrace Just Transition as opportunities although they express misgivings on how and when it will happen. Given the uncertainties, the respondents did not hazard any guess on Just Transition timeframe and process.

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# **CONCLUSION AND RECOMMENDATIONS**

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## CHAPTER 6

### CONCLUSION AND RECOMMENDATIONS

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Climate Change as seen from the study is a global threat to our environment, natural resources as well as sources of livelihood. While there are reports that show the increasing threat to the world of work and communities, there is yet a conscious and systematic engagement of the process by the trade unions and communities largely because they do not sufficiently understand the intrinsic linkage between Climate Change and pending crises.

Nations like Nigeria that have contributed least to the climate crisis are in line to be one of the highest victims of Climate Change. The IPCC in its Special Report (2018) warned that nations have a very slim 12 years window to take actions to avoid catastrophic temperature increase above preindustrial levels. Many countries are already putting policies and measures in place to mitigate Climate Change effects, through adaptation. Nigeria must not be left out, government, trade unions and non-governmental organizations have specific roles to play. To promote principles to enable Just Transition the following recommendations to the various social actors will be useful.

#### 6.1. To Governments

- I. Nigeria's Climate Change action plan requires implementation strategies targeted at addressing the consequences of Climate Change.



- ii. Increase of meteorological stations by NIMET and the provision of timely and early warning signals to citizens of impending extreme weather events.  
Moreover, meteorological reports should be widely disseminated and written in an accessible language that is easily understood by local farmers and other stakeholders.
- iii. Defend coastlines and coastal communities in order to protect communities and ensure that small irrigation schemes and rain harvesting especially in the northern Nigeria is given priority.
- iv. The government should design elements of Just Transition and adopt for implementation a national Just Transition framework and set deadlines for such transition.
- v. Government and non-governmental organization should assist farmers in improving their resilience to Climate Change.
- vi. Government and all stakeholders should ensure inclusive processes that do not discriminate based on gender in Just Transition.
- vii. Continuous research training and sensitization from the government and all stakeholders is necessary to step down knowledge of Climate Change and Just Transition.

## 6.2. To Labour Unions

- I. Labour Unions in Nigeria should engage more on the concept of Climate Change and energy transition to build their capacity so that they are in a position to step down the knowledge and principles of Just Transition to their union members and workers especially in the petroleum sector.

- ii. To uphold the dignity of workers, they should expand the concept of workers' rights within the framework of Just Transition and social protection to reduce and minimize job losses and redundancies.
- iii. Should accept the inevitability of a changing world of work and collaborate with environmental groups, strengthen solidarity and partnership that collectively address Just Transition.

### 6.3 To Civil Society Organisations

- i. There is need for a national campaign on the realities of Climate Change and its resultant effect on people, the environment, and livelihoods.
- ii. Set up campaigns for the promotion of the elements of agro-ecology that use ecological processes based on traditional integrated farming systems to encourage organic farming that will improve yields and reduce greenhouse gases from the agriculture sector.
- iii. Should collaborate with Labour Unions to balance the demands for environmental protection and conservation with the rights of workers and their survival. Although this is improving, as this study shows, a lot more needs to be done.

### 6.4 To Communities and Workers

- I. Should understand that even at the best of situations, some job losses and redundancies are inevitable.

- ii. Need to develop and expand resilience and coping strategies to cushion the impacts of Climate Change in the sectors.
- iii. Need to embrace Just Transition and take advantage of energy transition from oil and gas to opportunities in renewable energy systems for cooking and lighting.

## APPENDIXES

Appendix I: Focus Group Participants and Interviewees

Appendix II: Organisations/ communities visited (interviews & fgds)

Ministry of Agriculture, Niger State

Ministry of Environment, Niger State

Lower Niger River Basin Development Authority (NARDA), Minna-  
Niger State

Songhai Integrated Farm, Minna

Sunti Sugar Plantation, Minna

Agricultural Employees Union of Nigeria, Niger state

Ministry of Agriculture, Benue state

Lower Benue River Basin Development Authority, Makurdi

Agricultural Employees Union of Nigeria, Benue State

Oracle Integrated Farm, Makurdi

Informal Small Scale Private Farmland, Makurdi

Ministry of Environment, Bayelsa

Ikarama Community (oil spillage site), Bayelsa

Otuasega Community (gas flaring site), Bayelsa

Petroleum and Natural Gas Senior Staff Association of Nigeria, Rivers  
State

Nigeria Labour Congress, Rivers State

Nigeria Labour Congress, Bayelsa State

Ebubu community, Rivers state

Appendix III: Questionnaires and Interview Questions

## ENDNOTES

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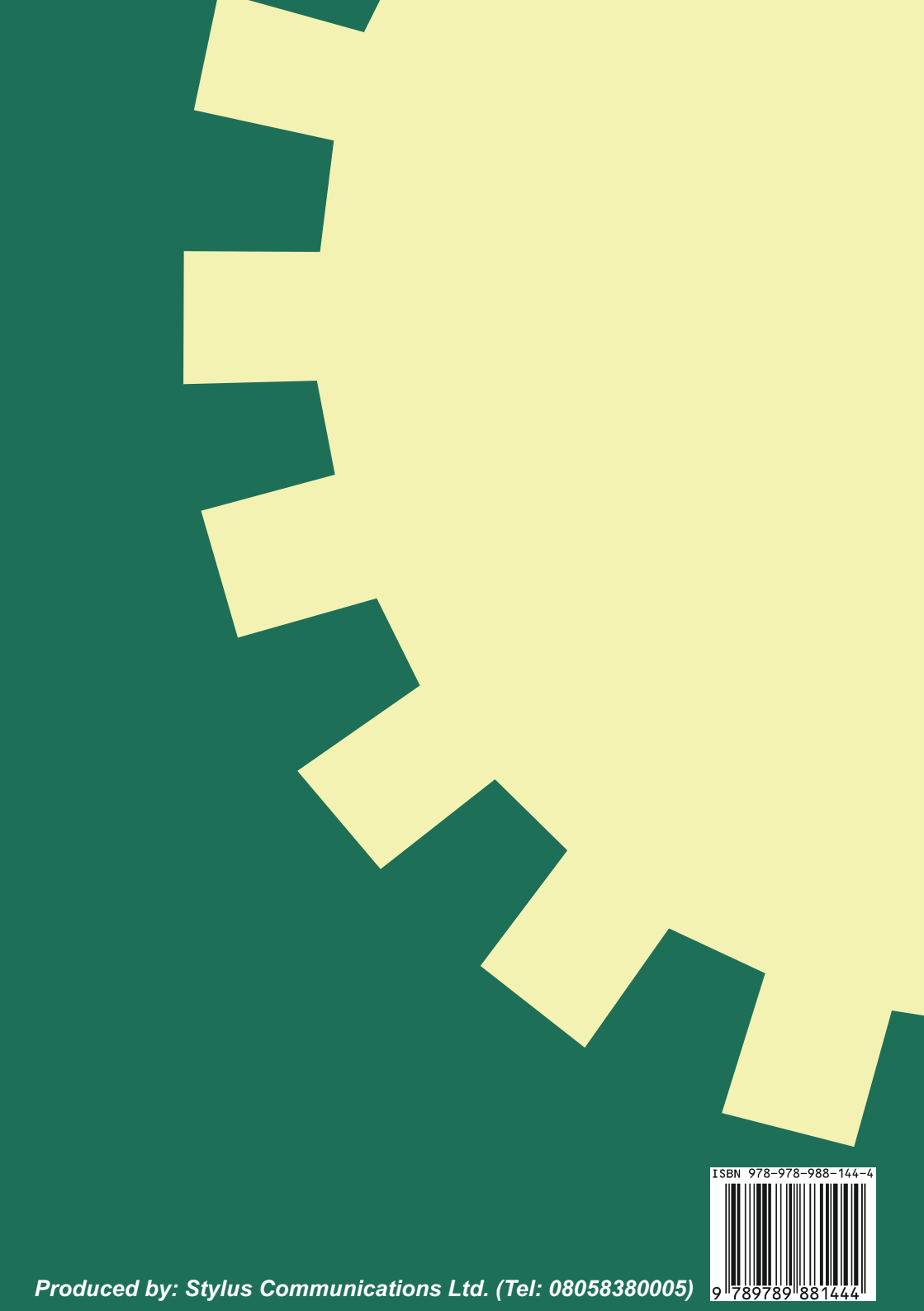
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