The Effects of Climate Change and Environmental Degradation on Security and National Development in Nigeria

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Abstract: Climate change and environmental degradation are among the most pressing challenges facing Nigeria and the world today. They have significant impacts on the security and development of the nation, affecting its socio-economic, political and ecological dimensions. This paper examines the causes, consequences and responses to these phenomena, with a focus on their implications for national security and development in Nigeria. It argues that climate change and environmental degradation pose serious threats to the stability, prosperity and well-being of the Nigerian people, as well as to the regional and global peace and order. It also suggests that effective adaptation and mitigation strategies are needed to address these challenges, requiring a holistic, multi-sectoral and multi-level approach that involves all stakeholders, including the government, civil society, private sector and international community. The paper concludes by highlighting some of the best practices and recommendations for enhancing Nigeria's resilience and capacity to cope with the effects of climate change and environmental degradation.

Keywords: Security, National development, Climate change, environmental degradation and Nigeria.

INTRODUCTION

Security and development are two interrelated concepts that affect the well-being and prosperity of any nation. Security is not only about the absence of violence, but also about the protection of human rights, the rule of law, and the provision of basic needs. Security is a fundamental condition for the survival and prosperity of any nation. It encompasses the protection of the people, the territory, the sovereignty, and the interests of a country from internal and external threats (Adelekan, *et al.,* 2015).

Development, on the other hand, is not only about economic growth, but also about social justice, environmental sustainability, and human dignity. National development refers to the process of improving the economic, social, political, and cultural well-being of a nation and its citizens. Security and national development are interrelated and mutually reinforcing. Without security, there can be no peace, stability, or progress. Without national development, there can be no legitimacy, resilience, or capacity to address security challenges (Adeniyi & Omojolaibi, 2015).

Security and national development are two sides of the same coin. Nigeria cannot achieve one without the other. By addressing its security challenges in a comprehensive manner, Nigeria can unleash its potential and realize its vision of becoming a prosperous, peaceful, and influential nation in the world. In Nigeria, security and development are both facing serious challenges that threaten the stability and progress of the country. Nigeria is faced with an unprecedented wave of different but overlapping security crises - from kidnapping to extremist insurgencies - almost every corner of the country has been hit by violence and crime. These crises have resulted in the deaths of thousands of people, the displacement of millions, the destruction of infrastructure, and the disruption of livelihoods.

Climate change and environmental degradation are two interrelated phenomena that pose serious threats to the security and national development of Nigeria. Climate change refers to the long-term changes in the Earth's climate system, such as rising temperatures, changing precipitation patterns, melting glaciers, and rising sea levels. Environmental degradation refers to the deterioration of the natural environment due to human activities, such as deforestation, soil erosion, pollution, and biodiversity loss.

The effects of climate change and environmental degradation on security and national development in Nigeria are manifold and complex. Some of the effects according to Akpan (2018) include:

- Increased frequency and intensity of droughts, floods, heat waves, and storms, which can disrupt agricultural production, food security, water availability, health, and infrastructure.
- Increased vulnerability to desertification, land degradation, and water scarcity, which can reduce arable land, increase poverty, and fuel conflicts over natural resources.
- Increased risk of vector-borne and water-borne diseases, such as malaria, cholera, and typhoid fever, which can affect human health and productivity.

- Increased migration and displacement of people due to environmental stressors, which can create social tensions, violence, and instability.
- Reduced economic growth and development potential due to the loss of natural capital, reduced productivity, increased costs of adaptation and mitigation, and decreased foreign investment.

Therefore, security and development are mutually reinforcing and interdependent goals that require a holistic and integrated approach. They are essential goals for Nigeria, a country that faces multiple and complex security issues that hamper its growth and development. According to the World Bank, Nigeria has one of the highest poverty rates in the world, with about 70% of its population living in poverty (World Bank, 2019). Nigeria also ranks low on human development indicators such as health, education, and gender equality. Nigeria's economy is dependent on oil exports, which makes it vulnerable to external shocks and environmental degradation. This study therefore seeks to examine the effects of climate change and environmental degradation on security and national development in Nigeria.

STATEMENT OF THE PROBLEM

Climate change and environmental degradation are two interrelated phenomena that pose serious threats to the security and national development of Nigeria. Climate change refers to the long-term changes in the Earth's climate system, such as rising temperatures, changing precipitation patterns, melting glaciers, sea level rise, and extreme weather events. Environmental degradation refers to the deterioration of the natural environment due to human activities, such as deforestation, land degradation, pollution, biodiversity loss, and overexploitation of natural resources.

These phenomena have negative impacts on various aspects of security and national development in Nigeria, such as food security, water security, energy security, health security, economic security, social security, and political security. Some of the specific problems caused by climate change and environmental degradation in Nigeria include reduced agricultural productivity and food insecurity due to droughts, floods, pests, diseases, soil erosion, and desertification (Adejuwon 2006; Nwajiuba 2011; Oluwafemi, *et al.*, 2019), reduced water availability and quality due to declining rainfall, increased evaporation,

saltwater intrusion, and pollution (Adeoye, *et al.*, 2013; Oyebande 2008; Umar, *et al.*, 2017), reduced energy supply and access due to reduced hydroelectric power generation, increased demand for cooling and irrigation, and damage to infrastructure (Oyedepo 2012; Oyewole, *et al.*, 2018; Umar, *et al.*, 2019), increased health risks and mortality due to heat stress, vector-borne diseases, water-borne diseases, respiratory diseases, malnutrition, and mental stress (Abdussalam, *et al.*, 2013; Ebi, *et al.*, 2018; Onyenechere, *et al.*, 2017), reduced economic growth and development due to reduced agricultural output, reduced industrial output, reduced trade and tourism, increased disaster losses and recovery costs, increased health costs, and increased migration and displacement (Adelekan, *et al.*, 2015; Nwoko, *et al.*, 2019; Okereke, *et al.*, 2019), increased social conflicts and violence due to competition over scarce resources, ethnic tensions, religious extremism, political instability, and human rights violations (Adesina 2018; Ide 2016; Okpara, *et al.*, 2015), reduced political stability and governance due to weak institutional capacity, poor policy implementation, corruption, lack of transparency and accountability, and lack of public participation and awareness (Adejumo-Ayibiowu 2014; Ezeonu, *et al.*, 2020; Ojeh, *et al.*, 2020).

These problems are complex and interrelated, requiring urgent and coordinated actions from various stakeholders at local, national, regional, and global levels. It is against this background that this study examines the effects of climate change and environmental degradation on security and national development in Nigeria

PURPOSE OF THE STUDY

The main purpose of this paper is to examine the effects of climate change and environmental degradation on security and national development in Nigeria.

Specifically, the study seeks to:
- examine the causes and consequences of climate change and environmental degradation in Nigeria and the implications of these phenomena for national security and development;
- analyze the main security threats and challenges facing Nigeria;
- assess the current policies and strategies adopted by the Nigerian government to address security and national development issues;

- investigate the effectiveness of these policies and strategies in enhancing security and national development in Nigeria;
- Recommend policy measures and strategies for enhancing environmental security and sustainable development in Nigeria.

RESEARCH QUESTIONS

The following research questions guided the study:

1. What are the causes and consequences of climate change and environmental degradation in Nigeria and the implications of these phenomena for national security and development?
2. What are the main security threats and challenges facing Nigeria?
3. What are the current policies and strategies adopted by the Nigerian government to address security and national development issues?
4. How effective are these policies and strategies in enhancing security and national development in Nigeria?
5. What are the policy measures and strategies for enhancing environmental security and sustainable development in Nigeria?

LITERATURE REVIEW-CONCEPT OF SECURITY AND DEVELOPMENT

Nigeria is a country with great potential for economic and social development, but it is also plagued by various forms of insecurity, such as terrorism, banditry, kidnapping, communal clashes, and secessionist agitations (Worldometer, 2020). These security challenges pose a serious threat to the stability, unity, and prosperity of the nation. Security cannot be discussed in isolation of insecurity (Adesina, 2018). As a matter of fact, security in one hand, can only be measure with insecurity on the other hand. For this purpose, the researcher intends to explore security from the point view of insecurity. The origin of insecurity in Nigeria can be traced back to the colonial era, when the British imposed an artificial and arbitrary boundary that merged different ethnic, religious, and cultural groups into one entity. This created a situation of mistrust, resentment, and competition among the various groups, especially between the predominantly Muslim north and the predominantly Christian south. The colonial administration also favored some regions over others in terms of political representation, economic opportunities, and social services, which further widened the gap and fueled grievances (Ebi, *et al.,* 2018).

After independence in 1960, Nigeria faced several political crises that resulted in military coups, civil war, and authoritarian regimes. These events undermined the democratic process, weakened the rule of law, and eroded the legitimacy of the state. The military rulers also failed to address the root causes of insecurity, such as poverty, inequality, corruption, unemployment, and ethnic marginalization. Instead, they resorted to repression, patronage, and divide-and-rule tactics to maintain their hold on power.

The return to civilian rule in 1999 did not bring much improvement to the security situation in Nigeria. The country witnessed a resurgence of violent conflicts along ethnic, religious, and regional lines, as well as the emergence of new threats such as the Boko Haram insurgency in the northeast, the Niger Delta militancy in the south-south, and the Indigenous People of Biafra (IPOB) agitation in the southeast. These groups have exploited the grievances and frustrations of their respective constituencies to challenge the authority and legitimacy of the state. They have also engaged in acts of terrorism, sabotage, kidnapping, extortion, and human rights violations that have caused massive loss of lives and property (Adesoji, 2010 & Akinola, 2015).

The insecurity in Nigeria has had a negative impact on national development in various ways. It has disrupted economic activities, reduced foreign investment, increased public spending on security and defense, diverted resources from social sectors such as education and health, and worsened poverty and inequality. It has also undermined social cohesion, national integration, democratic governance, and human rights. It has created a climate of fear, uncertainty, and hopelessness among the citizens.

To address the insecurity in Nigeria and foster national development, there is a need for a holistic and inclusive approach that involves all stakeholders at all levels. The government should adopt a comprehensive security strategy that combines military force with dialogue, negotiation, amnesty, rehabilitation, and reintegration of ex-combatants (Ezeonu & Mogboh-Egwuonwu, 2019). The government should also tackle the underlying causes of insecurity by promoting good governance, fighting corruption, ensuring equitable distribution of resources and opportunities, creating jobs for the youth, enhancing access to quality education and health

care services, and respecting human rights and the rule of law. The government should also foster a sense of national identity and patriotism among Nigerians by promoting dialogue, tolerance, and respect for diversity among different groups. The civil society, the media, the religious leaders, and the traditional rulers should also play their roles in promoting peace, security, and development in Nigeria.

What are the Causes and Consequences of Climate Change and Environmental Degradation in Nigeria and the Implications of These Phenomena for National Security and Development?

Climate change and environmental degradation are two of the most pressing challenges facing not only Nigeria today, but the entire world. According to the United Nations Development Programme (UNDP) (2021), these issues hinder the country's efforts to achieve sustainable development and improve the well-being of its people. In this paper, we will explore some of the causes and consequences of climate change and environmental degradation in Nigeria, as well as some of the actions taken to address them.

Nigeria is one of the ten most vulnerable countries to the impacts of climate change, due to its high exposure to natural hazards, low adaptive capacity and high dependence on natural resources. Some of the main drivers of climate change and environmental degradation in Nigeria according toNwoko*, et al.,* (2019) are:

Increasing greenhouse gas emissions: Nigeria is the largest oil producer in Africa and the seventh largest in the world, accounting for about 2.7% of global oil production. The burning of fossil fuels for energy, transportation and industrial activities contributes to the emission of greenhouse gases, such as carbon dioxide, methane and nitrous oxide that trap heat in the atmosphere and cause global warming.

Deforestation and land use change: Nigeria has lost about 96% of its forest cover since 1990, mainly due to agricultural expansion, logging, urbanization and infrastructure development. Deforestation and land use change not only reduce the carbon storage capacity of forests, but also increase soil erosion, land degradation and biodiversity loss.

Waste management: Nigeria generates about 32 million tonnes of solid waste per year, of which only 20-30% is collected and properly disposed.

The rest is either dumped in open spaces, burned or buried, resulting in air pollution, water contamination and greenhouse gas emissions.

Population growth and urbanization: Nigeria has the largest population in Africa and the seventh largest in the world, with about 211 million people as of 2020. The population is projected to grow to 401 million by 2050, making Nigeria the third most populous country in the world. The rapid population growth and urbanization put pressure on the natural resources and infrastructure, leading to increased demand for energy, water, food and land.

The effects of climate change and environmental degradation are already being felt in Nigeria, affecting various sectors and aspects of life. Some of the most significant consequences are:

Changes in temperature and rainfall patterns: Nigeria has experienced an increase in average temperature of about 1.1°C since 1960, with more frequent heat waves and droughts. The rainfall patterns have also become more variable and unpredictable, with more intense and untimely rains causing flash floods, landslides and gully erosion.

Rise in sea level and coastal erosion: The sea level along the Nigerian coast has risen by about 3.2 mm per year since 1993, threatening the low-lying areas with inundation, saltwater intrusion and coastal erosion. About 35% of Nigeria's population lives in coastal areas, where most of the economic activities, such as oil production, fishing, tourism and trade, are concentrated.

Loss of biodiversity and ecosystem services: Nigeria is home to about 4,715 plant species, 22 primate species, 274 mammal species, 940 bird species and 550 fish species, many of which are endemic or endangered. However, due to habitat loss, overexploitation, pollution and climate change, Nigeria has lost about 50% of its wildlife in the last 50 years. This affects not only the intrinsic value of biodiversity, but also the ecosystem services that support human well-being, such as food provision, water regulation, soil fertility, pollination and cultural benefits.

Impacts on human health: Climate change and environmental degradation can have direct and indirect impacts on human health in Nigeria. For example, higher temperatures can increase the risk of heat stress, dehydration and vector-borne diseases such as malaria and dengue fever. Poor air

quality can cause respiratory problems such as asthma and bronchitis. Water pollution can lead to diarrhoeal diseases such as cholera and typhoid fever. Food insecurity can result in malnutrition and stunting among children.

Impacts on socio-economic development: Climate change and environmental degradation can undermine the socio-economic development of Nigeria by affecting the productivity and profitability of key sectors such as agriculture, energy, water, industry and tourism. They can also increase the vulnerability and poverty of the population, especially the rural and marginalized groups, who depend on natural resources for their livelihoods and have limited access to alternative opportunities. Moreover, they can exacerbate the existing conflicts and insecurity in the country, by creating competition and tension over scarce resources, displacing people and disrupting social cohesion.

Nigeria has taken several steps to address the challenges of climate change and environmental degradation, both at the national and sub-national levels. Some of the notable actions are:

Developing and implementing policies and plans: Nigeria has developed and implemented various policies and plans to integrate environmental and climate change considerations into its development agenda. For example, Nigeria has ratified the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and the Paris Agreement, and submitted its Nationally Determined Contribution (NDC) in 2015, outlining its commitment to reduce its greenhouse gas emissions by 20% unconditionally and 45% conditionally by 2030 compared to the 2010 baseline. Nigeria has also adopted the National Policy on Climate Change (NPCC) in 2012, the National Adaptation Strategy and Plan of Action on Climate Change for Nigeria (NASPA-CCN) in 2011, the National Climate Change Action Plan (NCCAP) in 2013, and the National Biodiversity Strategy and Action Plan (NBSAP) in 2016, among others (Oyewole, *et al.,* 2018).

Establishing and strengthening institutions and capacities: Nigeria has established and strengthened various institutions and capacities to coordinate and implement its environmental and climate change policies and plans. For example, Nigeria has created the Federal Ministry of Environment (FMEnv) in 1999, the Department of

Climate Change (DCC) in 2009, the National Council on Environment (NCE) in 2010, the National Environmental Standards and Regulations Enforcement Agency (NESREA) in 2007, and the National Oil Spill Detection and Response Agency (NOSDRA) in 2006, among others. Nigeria has also enhanced the technical and institutional capacities of its stakeholders through training, awareness raising, knowledge management and partnership building.

Implementing projects and programmes: Nigeria has implemented various projects and programmes to address the specific issues and needs related to climate change and environmental degradation. For example, Nigeria has implemented the Nigeria Erosion and Watershed Management Project (NEWMAP) from 2012 to 2022, with support from the World Bank, to restore degraded lands, prevent soil erosion, enhance watershed management and improve livelihoods in 23 states. Nigeria has also implemented the Great Green Wall Initiative since 2013, with support from the African Union Commission, to combat desertification, land degradation and drought in 11 northern states. Moreover, Nigeria has issued two Sovereign Green Bonds in 2017 and 2018, raising about $74 million to finance climate-resilient projects in renewable energy, afforestation, transportation and agriculture (Onyenechere, *et al.,* 2017).

Climate change and environmental degradation are serious threats to Nigeria's environment, economy and society. They are caused by various factors such as greenhouse gas emissions, deforestation, waste management, population growth and urbanization (Okereke, *et al.,* .2019) They have significant consequences such as changes in temperature and rainfall patterns, rise in sea level and coastal erosion, loss of biodiversity and ecosystem services, impacts on human health and socio-economic development. However, Nigeria has taken several actions to address these challenges, such as developing and implementing policies and plans, establishing and strengthening institutions and capacities, implementing projects and programmes. These actions need to be sustained and scaled up to achieve Nigeria's vision of a low-carbon, climate-resilient and sustainable future.

What are the Main Security Threats and Challenges Facing Nigeria?
Nigeria is a country that faces multiple security threats and challenges, ranging from terrorism and

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insurgency to communal violence and kidnapping. Some of the main factors that contribute to these threats and challenges are:

The activities of Boko Haram, an Islamist militant group that has been waging a violent campaign against the Nigerian government and civilians since 2009. Boko Haram has killed thousands of people, displaced millions, and targeted schools, churches, mosques, and other public places with bombings and shootings. Boko Haram also pledged allegiance to the Islamic State (IS) in 2015, increasing its regional and global connections and ambitions. (Adesoji, 2010, Akinola, 2015& Ezeonu, *et al.,* 2020).

The resurgence of the Niger Delta militants, who have been fighting for a greater share of the oil wealth and environmental justice in the oil-rich region since the early 2000s. The militants have attacked oil pipelines, facilities, and personnel, causing significant disruptions to the oil production and revenue of Nigeria. The militants have also engaged in kidnapping and extortion of oil workers and local residents. (Ibeanu, 2016 & Ifde, 2016)

The clashes between farmers and herders, who have been competing for land, water, and grazing resources in different parts of the country. The conflicts have been exacerbated by climate change, population growth, ethnic and religious divisions, and the proliferation of small arms and light weapons. The clashes have resulted in hundreds of deaths, injuries, and displacements every year. (Ojeh, *et al.,* 2020)

The secessionist agitation of the Indigenous People of Biafra (IPOB), a group that seeks to revive the defunct Republic of Biafra that existed briefly in the late 1960s during the Nigerian Civil War. IPOB has been staging protests, rallies, and civil disobedience campaigns to demand a referendum on Biafra's independence from Nigeria. IPOB has also been accused of violence and sabotage by the Nigerian authorities, who have declared it a terrorist organization and arrested its leader, Nnamdi Kanu. (Okpara, *et al.,* 2015)

These security threats and challenges pose serious risks to Nigeria's stability, development, and regional role. They also require comprehensive and coordinated responses from the Nigerian government, civil society, and international partners.

What are the Current Policies and Strategies Adopted by the Nigerian Government to Address Security and National Development Issues?

The Nigerian government has adopted various policies and strategies to address the security and national development challenges facing the country. Some of these include:

The National Security Strategy (NSS), which provides a comprehensive framework for the protection of the nation's sovereignty, territorial integrity, and national interests. The NSS outlines the roles and responsibilities of different security agencies, as well as the coordination and collaboration mechanisms among them. The NSS also identifies the key threats and risks to national security, such as terrorism, insurgency, cybercrime, kidnapping, banditry, piracy, and transnational organized crime. The NSS emphasizes the need for a holistic and multi-dimensional approach to security, which involves not only the use of force, but also the promotion of good governance, human rights, social justice, economic development, and regional cooperation.

The Economic Recovery and Growth Plan (ERGP), which is a medium-term plan for 2017-2020 that aims to restore economic growth, diversify the economy, create jobs, and improve social inclusion. The ERGP focuses on five strategic areas: stabilizing the macroeconomic environment, achieving agriculture and food security, ensuring energy sufficiency, improving transportation infrastructure, and driving industrialization. The ERGP also addresses some of the root causes of insecurity, such as poverty, unemployment, inequality, and environmental degradation. The ERGP seeks to leverage the private sector as the engine of growth and innovation, while enhancing the role of the public sector as an enabler and regulator (FRN, 2019).

The National Action Plan for Preventing and Countering Violent Extremism (NAPPCVE), which is a comprehensive framework for addressing the drivers and manifestations of violent extremism in Nigeria. The NAPPCVE adopts a whole-of-society approach that involves the participation of government agencies, civil society organizations, religious leaders, traditional rulers, media practitioners, academia, youth groups, women groups, and other stakeholders. The NAPPCVE has four strategic objectives: strengthening institutions and coordination; engaging communities and building resilience;

communicating positive narratives and countering hate speech; and addressing the conditions conducive to violent extremism. The NAPPCVE also outlines specific actions and indicators for each objective.

How Effective are These Policies and Strategies in Enhancing Security and National Development in Nigeria?

This is a question that requires a comprehensive and critical analysis of the various policies and strategies that have been adopted by the Nigerian government and other stakeholders to address the security challenges and promote national development in the country. Some of the policies and strategies include:

The National Security Strategy (NSS) of 2019, which provides a framework for coordinating and harmonizing the efforts of all security agencies and other relevant actors to protect the sovereignty, territorial integrity, and national interests of Nigeria (FRN, 2019).

The Economic Recovery and Growth Plan (ERGP) of 2017-2020, which aims to restore economic growth, diversify the economy, create jobs, and improve social inclusion and human capital development (FRN, 2017).

The National Action Plan for Preventing and Countering Violent Extremism (NAPPCVE) of 2017, which outlines the measures to prevent and counter the radicalization and recruitment of youths into violent extremist groups, such as Boko Haram and Islamic State West Africa Province (ISWAP) (FRN, 2017).

The Presidential Amnesty Programme (PAP) of 2009, which offers rehabilitation, reintegration, and empowerment opportunities to former militants in the Niger Delta region, who surrendered their arms and renounced violence (PAP, 2009).

The National Livestock Transformation Plan (NLTP) of 2019, which seeks to address the conflicts between farmers and herders over land and water resources, by promoting ranching and other modern livestock management practices (FMARD, 2019).

The effectiveness of these policies and strategies can be assessed based on their impact on the security situation and the development indicators in Nigeria. Some of the criteria for evaluation include:

- The level of reduction in the frequency and intensity of violent attacks, kidnappings, banditry, communal clashes, and other forms of insecurity across the country.
- The level of improvement in the economic performance, such as GDP growth rate, inflation rate, unemployment rate, poverty rate, and human development index.
- The level of enhancement in the social cohesion, political stability, rule of law, human rights, and democratic governance in Nigeria.

According to various sources, such as the Global Terrorism Index (GTI), the World Bank, the United Nations Development Programme (UNDP), and the Transparency International (TI), the effectiveness of these policies and strategies has been mixed and uneven. While some progress has been made in some areas, such as degrading the capacity of Boko Haram and ISWAP (Institute of Economics and Peace, 2020), restoring macroeconomic stability, increasing agricultural production, and implementing some reforms in the public sector, there are still many challenges and gaps that need to be addressed. These include:

- The persistence of insecurity in different parts of the country, especially in the North-East, North-West, North-Central, and South-South regions.
- The low level of diversification and industrialization of the economy, which makes it vulnerable to external shocks and fluctuations in oil prices.
- The high level of unemployment, poverty, inequality, and social exclusion among the population, especially among women, youths, and minorities.
- The weak institutional capacity, corruption, mismanagement, and lack of accountability in the public sector.
- The low level of trust, dialogue, cooperation, and coordination among the various security agencies and other stakeholders involved in implementing these policies and strategies.

Therefore, it can be submitted that these policies and strategies have not been very effective in enhancing security and national development in Nigeria. There is a need for more concerted and holistic efforts to address the root causes and drivers of insecurity and underdevelopment in Nigeria.

What are the Policy Measures and Strategies for Enhancing Environmental Security and Sustainable Development in Nigeria?

Environmental security and sustainable development are interrelated concepts that aim to ensure the well-being of present and future generations. Environmental security refers to the protection of natural resources, ecosystems and human health from threats such as pollution, climate change, biodiversity loss and natural disasters. Sustainable development refers to the economic, social and environmental progress that meets the needs of the present without compromising the ability of future generations to meet their own needs. Nigeria, as a developing country with a large population and abundant natural resources, faces many challenges and opportunities in achieving environmental security and sustainable development. Some of the policy measures and strategies that could enhance these goals according to Oluwafemi*, et al.,* (2019) are:

- Implementing and enforcing environmental laws and regulations that address issues such as waste management, air quality, water quality, land use, deforestation, desertification and wildlife conservation.
- Promoting renewable energy sources such as solar, wind, hydro and biomass to reduce greenhouse gas emissions and dependence on fossil fuels.
- Enhancing public awareness and education on environmental issues and sustainable practices through media campaigns, school curricula, community outreach and stakeholder engagement.
- Strengthening institutional capacity and coordination among different levels of government, civil society, private sector and international partners to foster collaboration, accountability and transparency in environmental governance.
- Investing in research and innovation to develop and adopt green technologies, practices and solutions that improve environmental performance and efficiency.
- Supporting the participation and empowerment of local communities, especially women and youth, in environmental decision-making and management.
- Integrating environmental considerations into national development plans, policies and budgets to ensure that economic growth is compatible with environmental protection.

These are some of the possible policy measures and strategies for enhancing environmental security and sustainable development in Nigeria. However, they require political will, financial resources, technical expertise and social acceptance to be effectively implemented and sustained. Therefore, it is important to foster a culture of environmental responsibility and stewardship among all stakeholders and sectors of society.

SUMMARY

Climate change and environmental degradation are two interrelated phenomena that pose serious threats to the security and national development of Nigeria. Climate change refers to the long-term changes in the Earth's climate system, such as rising temperatures, changing precipitation patterns, melting glaciers, and rising sea levels. Environmental degradation refers to the deterioration of the natural environment due to human activities, such as deforestation, soil erosion, pollution, and biodiversity loss.

The impacts of climate change and environmental degradation on Nigeria are manifold and multifaceted. They include:
- Reduced agricultural productivity and food insecurity, due to droughts, floods, pests, diseases, and land degradation.
- Increased water scarcity and waterborne diseases, due to reduced rainfall, increased evaporation, and contamination of water sources.
- Increased vulnerability to natural disasters, such as floods, landslides, storms, and heat waves.
- Loss of coastal resources and livelihoods, due to sea level rise, coastal erosion, saltwater intrusion, and storm surges.
- Loss of biodiversity and ecosystem services, due to habitat destruction, fragmentation, and invasion by alien species.
- Increased conflicts and violence, due to competition over scarce resources, displacement of populations, and social unrest.
- Reduced economic growth and development, due to reduced income, increased poverty, and increased expenditure on adaptation and mitigation measures.

These effects have implications for the security and national development of Nigeria at various levels: individual, community, national, regional, and global. They undermine the human rights, dignity, and well-being of Nigerians. They erode

the social cohesion, stability, and resilience of Nigerian communities. They challenge the sovereignty, territorial integrity, and governance capacity of Nigeria. They affect the regional cooperation and integration of Nigeria with its neighbors. They contribute to the global environmental crisis and its associated risks. Therefore, it is imperative for Nigeria to take urgent and effective actions to address the challenges of climate change and environmental degradation. Nigeria can enhance its security and national development in the face of climate change and environmental degradation and also contribute to the global efforts to combat these phenomena and achieve the Sustainable Development Goals (SDGs).

CONCLUSION

The effects of climate change and environmental degradation on security and national development in Nigeria are profound and multifaceted. Climate change exacerbates existing vulnerabilities and conflicts, such as resource scarcity, land disputes, migration, and insurgency. Environmental degradation undermines the livelihoods and resilience of millions of Nigerians, especially in rural areas. This paper explores these challenges, which pose serious threats to the stability, prosperity, and sovereignty of Nigeria.

Nigeria needs to adopt a holistic and integrated approach that combines mitigation, adaptation, and peacebuilding strategies. Mitigation efforts should aim to reduce greenhouse gas emissions and enhance carbon sinks, such as forests and wetlands. Adaptation efforts should focus on building the capacity and coping mechanisms of communities and institutions to deal with the impacts of climate change and environmental degradation. Peacebuilding efforts should promote dialogue, cooperation, and social cohesion among stakeholders at all levels, from local to regional.

RECOMMENDATIONS

The following recommendations were made based on the arguments and the objectives of the study:

1. Strengthen the institutional and legal framework for environmental governance and climate change adaptation and mitigation in Nigeria, including the implementation of the National Climate Change Policy and Response Strategy (NCCPRS) and the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act.
2. Enhance the capacity of relevant stakeholders such as government agencies, civil society organizations, private sector, media, and local communities to understand, monitor, and respond to the impacts of climate change and environmental degradation on security and national development.
3. Promote sustainable management and conservation of natural resources such as land, water, forests, and biodiversity, through participatory approaches, incentives, and enforcement mechanisms.
4. Invest in climate-resilient infrastructure and technologies such as renewable energy, irrigation systems, early warning systems, and disaster risk reduction measures.
5. Support the development of alternative livelihoods and income-generating opportunities for people affected by climate change and environmental degradation, such as agroforestry, ecotourism, green jobs, and social protection schemes.

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