PRIVATE FORESTRY ESTABLISHMENTS IN NIGERIA: A REVIEW

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Abstract

This paper reviews the Nigerian private forestry development which has much potential to advance eco-friendliness, economic expansion, and sustainable development. This is an emerging concept in Nigeria and is yet to be fully established as in other countries. However, demand for wood products is a continuous growth in Nigeria which has led to a growing interest in private forestry due to its potential to support sustainable development. The forestry sector in Nigeria is mainly dominated by government-owned plantations, accounting for over 90% of the total forest area in the country. However, this has not met the demand for wood products, thus leading to a significant gap between supply and demand. This opens opportunities for private investors and organizations to invest in forestry in Nigeria. Of major challenge facing private forestry in Nigeria is the lack of access to land. Land ownership is government or local communities owned, making it challenging for private investors to obtain the necessary permits and approvals to establish plantations. The lack of good roads and processing facilities has contributed to value-added raw materials. Despite these challenges, there have been some notable successes in private forestry in Nigeria. There has been an increase in awareness of the potential of private forestry in supporting sustainable development and reducing poverty. Realizing this potential, however, necessitates a concerted effort that solves the difficulties the forestry industry faces and makes the most of its prospects for the benefit of current and future generations.

Key Words: Private forestry, Sustainable, Development, Wood products, Challenges

Introduction

Nigeria's forest cover is estimated to be 9.6 million hectares or 10.8% of the total land mass (FAO, 2020). These forests

provide various ecological, economic, and social benefits, including timber and nontimber forest products, biodiversity conservation, carbon sequestration, watershed protection, climate regulation, and cultural heritage. Unfortunately, the nation's forest resources have been susceptible to deterioration, deforestation, and depletion due to different human including activities, agricultural expansion, logging, mining, infrastructure development, and natural calamities, including wildfires and climate change. Private forestry development can play a critical role in addressing the challenges facing Nigeria's forest resources and maximizing their potential for sustainable development Ogunwale et al. (2020). private Some benefits of forestry development in Nigeria include economic benefits such as creating employment opportunities, generating income for local communities, reducing dependence on imported forest products, and contributing to the country's Gross Domestic Product (GDP) (National Bureau of Statistics, 2021). Additionally, private forestry development can contribute to conserving biodiversity and ecosystems and mitigating climate change (World Bank, 2021). It serves as a carbon sink, which helps to reduce greenhouse gas emissions and combat global warming. Private forestry development promotes community development, social inclusion, and cultural heritage preservation (FAO, 2015). However this sector faces several challenges, including inadequate policy and institutional frameworks, limited access to finance, inadequate technical skills and knowledge, lack of market linkages, and inadequate infrastructure (Ayodele, 2020). Government, business, civil society, and local communities must work together to promote sustainable forest management practices, boost market access, improve value addition,

and foster innovation and technology transfer to meet these problems.

The role of private forestry development in Nigeria is important in planting. maintaining, and ethical exploitation for economic gain. Both government and private forestry sectors accounting for 10.8% of the nation's total land area have been depleted through deforestation and other human activities as well as natural disasters. To address the issues affecting Nigeria's forest resources maximize their potential and for sustainable development, private forestry development can play a significant role in boosting export revenue and lessening reliance on imported forest products; opportunities, employment creating generating income for local communities, and contributing to the country's Gross Domestic Product (GDP) (Ajayiet al., 2018). Private forestry development also has important environmental benefits which include carbon sinks that further reduce greenhouse gas emissions and combat global warming. Forests can also protect watersheds, regulate water cycles, and prevent soil erosion, enhancing the resilience of ecosystems and communities to climate change and natural disasters. It contributes to biodiversity conservation, social benefits, and ecosystems (Akindele et al., 2020). The Forest also provides traditional medicine, food, fuelwood, and essential services other to local communities, especially in rural areas. The participation of local communities in forest management enhances decisionmaking, reduces conflicts, and promotes social cohesion Adetoro et al. (2019). Private forestry development in Nigeria may have advantages, but it also faces several difficulties. These difficulties include deficient institutional and policy

frameworks, restricted financial access, a lack of technical expertise and knowledge, a lack of market connections, and deficient infrastructure. Addressing these challenges requires concerted efforts by the government, private sector, civil society, and local communities to promote sustainable forest management practices, enhance value addition, increase market access, and promote innovation and technology transfer FAO. (2018).

Importance of Private Forestry Establishment in Nigeria

Private forestry is vital to Nigeria's economic, social, and environmental sustainability (FAO, 2020). In Nigeria, private forestry refers to the growing, managing, and harvesting of trees on privately owned land. It is crucial for several reasons which include iob creation. timber production, and environmental conservation. Job Creation: Job creation is essential to economic growth and development in any country. In Nigeria, where unemployment is a significant issue, private forestry has the potential to create jobs and improve the livelihoods of many people. Private forestry manages forested land owned by individuals, private companies, or nongovernmental organizations (NGOs) for social benefits. economic or The importance of private forestry in Nigeria is multifaceted, including ecological, social benefits. economic. and Ecologically, private forestry can help combat climate change, conserve and protect watersheds, biodiversity, while socially, it can help reduce poverty and promote community development. Economically, private forestry can provide a source of income and create job opportunities in various areas, including plantation establishment, maintenance,

management, logging, transportation, and processing of forest products; all of these require labour to drive the economic phases. With the significant level of unemployment in Nigeria today (FAO, 2020), the establishment of private forestry can help reduce poverty, promote rural development, and improve the country's economy. The labor requires meeting such activities as weed control, pruning, thinning, and pest management employment opportunities that will improve the host communities where private forestry is established. In addition, private forestry creates jobs in the logging sector, which involves the felling and extracting of trees for processing. Skilled and unskilled labour is required for the sawmilling and processing of timber into finished products, including furniture, paper, and other forest products.

Private forestry can also help reduce the pressure on natural forests, often overexploited for timber and non-timber forest products. However, the potential of private forestry in Nigeria has not been fully exploited. The lack of policy support and incentives, inadequate funding, and a weak regulatory framework are some of the challenges facing the private forestry sector in Nigeria. The government must provide policy support and incentives to encourage private investment in the forestry sector. This could include tax breaks, access to credit facilities, and other incentives to promote sustainable forest management.

Timber Production: Timber production is an essential component of Nigeria's forestry sector, and private forestry plays a crucial role in meeting the demand for timber and other forest products. Private forestry is becoming increasingly important in Nigeria, as it offers sustainable forest management and timber production opportunities. However, the country's forestry sector faces significant challenges, including deforestation, illegal logging, and inadequate infrastructure. One of the key benefits of private forestry is that it helps to reduce pressure on natural forests, which are rapidly being depleted due to illegal logging and deforestation. Private forest owners can meet the demand for timber without relying on natural forests. This helps to protect natural ecosystems, which are essential for maintaining biodiversity and regulating the earth's climate.

Income Generation: Private forestry provides economic benefits, including timber. non-timber forest products (NTFPs), and ecosystem services that can be harnessed for income generation for individuals, communities, and the country as a whole (Ogunwusi et al., 2017). Timber is a valuable forest resource in Nigeria and a major economic contributor. Various timber species. such as Mahogany, Obeche, and Teak, are in high demand for furniture, construction, and other industries. Thus privately owned forests can generate income through the sales of timber (Adekunle, 2020). Nontimber forest products (NTFPs) are another critical resource that can be used for income generation. NTFPs, such as fruits, nuts, spices, and medicinal plants, high demand in local have and international markets and can provide a significant source of income for forest communities and especially private forestry (Onyekwelu et al., 2018). Carbon sinks provided by the private forest can be and used for monetized income generation. For instance, forest carbon credits can be sold in international markets to generate income for owners and

managFers (Oluwole et al., 2017). A successful agroforestry practice is achieved with private forestry than government-driven one, with such benefits which include soil conservation, biodiversity conservation, and food security. It can also generate income for farmers by selling agroforestry products, such as fruits, nuts, and timber (Olawuyi et al., 2019).

Rural Economic Development: Rural economic development is an important factor in the economic growth of any nation, and Nigeria is no exception. According to a report by the World Bank, over 60% of Nigerians live in rural areas, making rural economic development critical to reducing poverty and promoting sustainable economic growth (World Bank, 2021). Private forestry is one of the ways that rural economic development be promoted in Nigeria. can Its establishment contributes significantly to rural economic development in Nigeria by creating jobs, generating income, and increasing economic activities (Nigeria Forestry Service, 2021). Furthermore, it can stimulate the demand for goods and transportation, services. such as equipment, and supplies, in areas where it is established. The establishment of forestry further drives private the establishment of forest-based industries, such as sawmills and pulp and paper mills. Mitigating Climate Change: Private forestry has the potential to play a significant role in mitigating climate change, given the country's rich forest resources (World Bank, 2021). Trees dioxide absorb carbon during photosynthesis and store it in their biomass, thus reducing the amount of carbon dioxide in the atmosphere. Thus private forestry contributes to a reduction

of greenhouse gas emissions, which is one of the primary causes of climate change. Deforestation and forest degradation result in the loss of carbon stored in forests, private forestry can help to reduce deforestation and forest degradation, thus preserving the carbon stored in forests.

Environmental Benefits: Nigeria in years, the country recent as has experienced rapid deforestation and environmental degradation. The importance of private forestry lies in its to provide a range potential of environmental benefits which include:

Biodiversity Conservation: by providing habitats for a range of plant and animal species, creating wildlife corridors, and protecting important habitats serving as an alternative to it.

Soil Conservation: stabilizing soil structures and reducing the impact of rainfall on the soil surface, maintaining forest cover on private lands, and reducing soil erosion and sedimentation in water bodies.

Water Conservation: private forests contribute to water conservation, as they help to regulate water flow and improve water quality. Evapo-transpiration of private forestry compliment that which is provided by the natural forest covers, thus further protecting wetlands in the proxy.

Climate Resilience: private forestry can help to build climate resilience by providing a buffer against the impacts of climate change, such as extreme weather events and changes in temperature and precipitation patterns. It regulates microclimates and reduces the risk of soil erosion and landslides.

Challenges Facing Private Forestry Development in Nigeria

Private forestry development in Nigeria faces several challenges that have

hindered the sector's growth. Some of the key challenges include:

Lack of Investment: Forestry is a crucial sector in Nigeria, contributing significantly to the country's economy and providing employment for many people. The private forestry sector in Nigeria faces a significant challenge in the form of a lack of investment, which has hindered the sector's development and negatively impacted its contribution to the country's economy. The absence of a supportive policy framework is one of the main reasons for Nigeria's lack of investment in private forestry (Achalu, 2020). Nigeria does not have a well-defined policy encourages private framework that investment in forestry, which makes it difficult for private investors to assess the potential return on investment. Banks and other financial institutions are not willing to lend to projects in the sector without a clear policy framework and because of the long-term investment yield of the sector (National Forestry Service, 2021). The high cost of doing business in Nigeria is another reason for the country's lack of investment in private forestry. Nigeria is known for its challenging business environment, with high costs of inputs, infrastructure deficits, and regulatory barriers. These factors make it difficult for private investors to establish and maintain forestry operations that require significant and capital investment long-term planning, and there is a low level of awareness in terms of profit accruing to private forestry (Achalu, 2020). This, in turn, affects the profitability of the operations as transportation costs increase thereby limiting the market access for products. forestry Private forestry development in Nigeria faces the issue of funding and financing (Adegboyega and

Ajao, 2019; Olaoye et al., 2020). Lack of access to credit and finance further makes it challenging for private investors to engage in sustainable forestry practices and promote private forestry development (Adekunle et al., 2020). Although there are various sources of funding for private forestry businesses, such as government grants and loans, international donor support, and private sector investment, accessing these funds is often difficult due to bureaucratic red tape and lack of awareness of available opportunities (Adewumi et al., 2020). Many private investors lack the necessary knowledge and skills to engage in sustainable forestry practices, and there is also a shortage of trained professionals in the forestry sector, making it difficult to attract and retain skilled workers (World Bank, 2016). In addition, the lack of a well-developed forestry financing system in Nigeria has also hindered the growth of private forestry businesses. A limited number of financial institutions provide forestry financing, and the existing ones have not been tailored to meet the specific needs of the forestry sector (Adegboyega and Ajao, 2019). This has led to a lack of financing options for private forestry businesses, often resulting in a funding gap that hampers the growth and sustainability of their operations. The high cost of inputs required for forestry operations, such as seedlings, fertilizers, and equipment, also poses a significant challenge for private forestry businesses. Without access to financing, affordable many private forestry businesses cannot invest in the necessary inputs for their operations, leading to reduced productivity and lower profitability (Olaoye et al., 2020).

Inadequate Policies and Regulations: Private forestry development in Nigeria faces several challenges, including inadequate policies and regulations, deforestation, unsustainable logging practices, inadequate forest and management policies. An example is the Land tenure laws, both at the federal and state levels, govern the ownership and use of land in Nigeria. Amending these laws to provide clear and secure land tenure for private forestry projects would encourage investment and long-term planning by private entities. The forest resources in the country are depleting at an alarming rate due to these challenges, and there is a high demand for forest products such as timber and fuelwood, mainly due to Nigeria's large population (National Forestrv Service, 2021).

One of the major challenges facing private forestry development in Nigeria is the lack of clear and effective policies and regulations. Nigeria's forest policies and regulations are fragmented and often contradictory, which leads to confusion and uncertainty for private forestry investors. Additionally, the regulatory frameworks are poorly enforced, leading to widespread illegal logging and other unsustainable practices. Moreover, the government does not provide adequate support for private forestry investors (World Bank, 2016).

Limited Market Access: Market access is critical for any business, including forestry, as it enables businesses to sell their products to consumers and generate revenue (World Bank, 2020). However, limited market access creates significant barriers to entry for small and mediumsized forest owners in private forestry, hindering their effective participation in the forestry sector (FAO, 2020). In Nigeria, there are several reasons for (National Forestry Service, 2021).

Firstly, Nigeria's forestry sector is dominated by large forest concessions owned and managed by the government or large multinational companies. These large-scale operations have the advantage of established supply chains and distribution networks, enabling them to reach domestic and international markets with their products (Mwaura, 2020).

Secondly, the lack of infrastructure such as roads, railways, and ports, limits the transportation of forest products from remote areas to urban centers where demand is high. This lack of infrastructure increases transportation costs, making it difficult for small and medium-sized forest owners to compete with larger operations (Ogunjobi *et al.*, 2021).

Thirdly, the cost of establishing a processing unit is capital intensive and as such limits the capacity of private forest owners to process their products. Thus they are forced to sell as raw material instead of finished or semi-finished products to larger companies with resources that add value to it (Fapohunda *et al.*, 2020).

Fourthly, lack of access to finance to scale up their operation from a subsistence basis is another significant challenge limiting their ability to invest in processing facilities, transportation, and critical aspects other of forestry development (Adeniyi et al., 2021). To overcome the challenge of limited market access, there is a need for increased investment in infrastructure and processing facilities, especially in rural areas where most private forest owners operate (FAO, 2020).

Another approach is encouraging partnerships between small and large

forest owners to share resources and leverage each other's strengths. Such partnerships can help small forest owners access established supply chains and distribution networks while allowing larger companies to source raw materials from small-scale forest owners (World Bank, 2020).

Lack of Access to Land: Lack of access to land, inadequate infrastructure, and a shortage of skilled personnel, hinder private forestry development in Nigeria. Nigeria with over 200 million people has created a growing demand for forest products, including timber, fuelwood, and non-timber forest products (World Bank, 2020).

Communal land ownership is prevalent in many parts of Nigeria, which makes it difficult for private investors to access land for forestry activities. The land is held communally and is controlled by traditional rulers or community leaders who allocate land based on cultural norms and customs, which may not be conducive to private forestry development (Abalu, 2017). The allocation process may not be transparent, making it difficult for potential investors to acquire land for forestry activities. The lack of legal frameworks for land registration and tenure makes it difficult for private investors to secure long-term leases or purchase land for forestry activities. The absence of clear and enforceable land tenure laws has discouraged many investors from investing in the forestry sector (Aboyeji, 2019).

Farmers who rely on the land for agriculture may resist efforts by private investors to acquire land for forestry activities, leading to conflicts that have discouraged private investors from investing in the sector (Ogundipe, 2019). In conclusion, the lack of access to land is a crucial factor hindering private forestry development in Nigeria. Addressing this challenge will require implementing clear and enforceable land tenure laws, improving access to credit, and finding ways to resolve conflicts between farmers and private investors over land use.

Infrastructure: The lack of proper infrastructure hinders the growth of the private forestry sector. especially inadequate transportation networks. The absence of good road networks, bridges, and other transportation infrastructure makes it difficult for private forestry companies to transport their products to the market. This has further increased the cost of production, limit the profit margin and discourage private investors from investing in the sector (Jibowo and Adefisan, 2021).

Another infrastructure challenge is the lack of electricity supply in rural areas, where most private forestry activities occur. The absence of a reliable power supply hinders the development of sawmills and other processing facilities essential for adding value to forest products. Inadequate electricity supply also limits modern machinery and equipment use, making it difficult for private investors to operate at maximum capacity (Ogunleye *et al.*, 2020).

Environmental Policy and Regulatory Law: Several policy and regulatory barriers hinder private forestry growth in Nigeria. One of the significant policy challenges facing private forestry development in Nigeria is the lack of a clear regulatory framework for forest management. The forest sector is governed by multiple laws and regulations, which often overlap or contradict each other, leading to confusion

and a lack of clarity, such as the National Forestry Law accented to by the Nigeria Government 2020 which in vear emphasizes sustainable forestry practices, biodiversity protection, and community participation in forest management at the federal level while the State forest law, in contrast. prioritizes economic development over environmental conservation, potentially allowing more extensive logging and land conversion at the state level.

This has made it difficult for private investors to navigate the regulatory landscape, leading to a lack of investment in the sector (Adewumi et al., 2021). In addition to this is the inadequate institutional capacity for forest management. The government agencies responsible for forestry management are often understaffed and under-resourced to carry out their mandate effectively. This has resulted in poor enforcement of regulations and a lack of control over forest resources (Udom, 2021). To address this therefore, there is a need for a comprehensive policy and regulatory framework that provides clarity and consistency for private investors in the forestry sector. The government should invest in building the capacity of institutions responsible for forestry management and enforcing regulations. This would help to promote sustainable forest management practices, improve the availability of forest products, and provide economic opportunities for rural communities (Afolavan et al., 2021).

Conclusion and Recommendations

Various factors, including inadequate legal and regulatory frameworks, lack of access to finance and credit, limited infrastructure, and low levels of awareness and education among forest owners, hinder private forestry development in Nigeria. It is crucial to address these factors to fully realize the potential of the private forestry sector in Nigeria, as it can provide employment opportunities, support economic growth, and contribute to sustainable development.

To promote private forestry development in Nigeria, policymakers should consider implementing policies legal and regulatory that provide frameworks that support the sector, facilitate access to finance and credit, and promote infrastructure development such as roads and electricity in forested areas. Investors and other stakeholders should work towards building the capacity of and communities. forest owners developing sustainable forest management practices, and promoting the value of forest resources beyond their commercial value, such as their ecological and cultural importance. Community development can also help address the challenges private forestry faces in Nigeria. For example, by working with financial institutions, communities can develop innovative financing models that cater to the needs of private forestry. This can include providing low-interest loans, facilities. establishing credit and insurance developing schemes. In addition, community development can raise awareness about the benefits of sustainable forest management practices. This can help reduce the incidence of illegal logging, a major threat to private forestry in Nigeria. By organizing training programs and awareness campaigns. communities can educate farmers about adopting sustainable practices that protect the environment while maximizing economic returns.

Furthermore, collaboration among stakeholders, including government agencies, private sector entities, civil society organizations, and local communities, can help ensure that Nigeria's private forestry development is inclusive, sustainable, and beneficial to all stakeholders involved. The government can increase awareness and education about the potential benefits of private forestry and provide incentives for private investment in the sector, such as tax breaks and subsidies

References

- Abalu, G.O. (2017). Land tenure systems in Nigeria: A review of the literature. *International Journal of Social Sciences and Humanities Reviews*, 7(1): 1-14.
- Aboyeji, O. (2019). Challenges of private sector forestry development in Nigeria. Journal of Forestry Research and Management, 16(1): 23-36.
- Adebayo, O.S., Adedeji, O.H. and Adebayo, A.O. (2020).An Overview of Private Forestry Development in Nigeria: Challenges and Prospects. Journal of Forest and Environmental Science, 36(4): 318-326. doi: 10.7747/JFES.2020.36.4.318
- Adedeji, O.A., Adetoro, O.A. and Adedoyin, S.F. (2020). Financing forest-based enterprises in Nigeria: Challenges and prospects. *Journal* of Agribusiness and Rural Development, 55(3): 303-315.
- Adegboyega, O. and Ajao, A. M. (2019). Financing small-scale private forestry projects in Nigeria: Prospects and challenges. *Journal of*

Environment, 11(1): 1-12.

- Adekunle, A.A., Olufunke, E.O. and Olufemi, J.F. (2020). Financing Private Forestry Development in Nigeria: The Nexus between Interest Rates, Bank Credit and Forest Resources. *The Journal of Social Sciences Research*, 6(4): 1304-1314.
- Adekunle, V.A. (2020). Private forest management and sustainable livelihoods in Nigeria. *Forests*, *Trees and Livelihoods*, 29(3-4): 216-226.
- Adeniyi, O.R., Ayodele, J.T., and Agunbiade, E.O. (2021). Financial accessibility and sustainability of forest-based small and medium enterprises (SMEs) in Nigeria. *Journal of Research in Forestry*, *Wildlife, and Environment*, 13(1): 82-90.
- Adetoro, F.A., Ayeni, A.O. and Ajibola, M.O. (2019). Private forestry development and social benefits in Nigeria. *Journal of Agriculture and Ecology Research International*, 18(2): 1-11.
- Adewale, B.A. and Oni, O.A. (2020). Analysis of challenges affecting the development of private forestry in Nigeria. *Journal of Forestry Research and Management*, 17(1): 1-10.
- Adewumi, F.O., Adediji, A.T., Oyinlola, M.A., and Adisa, R.S. (2021). Private forestry investment in Nigeria: An examination of the regulatory environment. *Forest Policy and Economics*, 134: 102511.
- Adewumi, T.O., Oyebo, O. and Gbadegesin, A. (2020). Financing

of banks and other financial institutions. In T.O. Adewumi (Ed.), *Forest and forestry financing in Nigeria* (pp. 1-14). Springer.

- Afolayan, A.T., Adefisan, E.A., Olawoye, J.E. and Adeyemo, T.A. (2021). Private sector participation in forestry development in Nigeria: A review of policies and prospects. *Journal of Agricultural Extension*, 25(2): 95-108.
- Aiyeloja, A.A. (2015). Private forestry in Nigeria: Issues, challenges, and prospects. In L.G. Amos-Tautua and R.W.A. Akinyemi (Eds.), Forest Policy, Economics, and Governance in Nigeria (pp. 135-152). Springer International Publishing.
- Aiyeloja, A.A. (2015). Private forestry in Nigeria: Issues, challenges, and prospects. In L.G. Amos-Tautua and R.W.A. Akinyemi (Eds.), Forest Policy, Economics, and Governance in Nigeria (pp. 135-152). Springer International Publishing.
- Ajayi, O.C., Ogunjobi, K.O. and Oduwaye, L.A. (2018). Prospects and challenges of private forestry in Nigeria. *Journal of Forest and Environmental Science*, 34(2), 89-96.
- Akindele, S.O., Adegbite, A.A., and Adeofun, C.O. (2020). Private forestry development and the environment: A review of the literature. *Environmental Science and Pollution Research*, 27(23): 28823-28834.
- Ayodele, O.I. (2020). Financing sustainable forestry development in Nigeria: Opportunities and challenges. Forests, *Trees and Livelihoods*, 29(2): 83-95.

- Ezebilo, E.E. (2013). The challenges of private forestry development in Nigeria: A review. Journal of Environment and Earth Science, 3(9): 80-87.
- FAO (2018). Private Forestry in Nigeria: Opportunities and Challenges. Food and Agriculture Organization of the United Nations.
- FAO. (2020). Country report: Nigeria. Forest and Landscape Restoration Mechanism
- FAO. (2020). Private forestry in Nigeria.
- Fapohunda, O.R., Adegboyega, O. A. and Ajayi, A.E. (2020). The challenge of smallholder forestry in Nigeria: Prospects and strategies. *Forests*, *Trees and Livelihoods*, 29(1): 13-24.
- Fashola, B. (2016). Private Sector and Forestry in Nigeria. Proceedings of the 3rd Forestry Association of Nigeria Conference, 83-89.
- Federal Ministry of Environment, Nigeria. (2015). National Forestry Policy.
- Food and Agriculture Organization (FAO). (2015). State of the World's Forests 2014: Enhancing the Socioeconomic Benefits from Forests. Rome: FAO.
- Jibowo, A.A. and Adefisan, E.A. (2021). Infrastructure provision and the development of the Nigerian forestry industry. *Journal of Environmental Management and Sustainable Development*, 10(2): 36-47.
- Mwaura, P. (2020). Forest certification in Nigeria: A case study of forest plantation management under government control. *Journal of Sustainable Forestry*, 39(5): 437-454.

- National Bureau of Statistics. (2021). Nigerian Gross Domestic Product Report Q1 2021.
- National Forestry Service. (2021). Private forestry.
- Obi, O.E. (2017). Forestry in Nigeria: A Historical and Contemporary Overview. *International Forestry Review*, 19(S1): 22-30. doi:10.1505/146554817821972933
- Ogundipe, A.A. (2019). Private sector forestry investment in Nigeria: Opportunities and challenges. *International Journal of Agricultural Economics and Rural Development*, 2(1): 1-12.
- Ogunjobi, J.O., Oshodi, O.S., and Ajala, S.O. (2021). Determinants of participation in the forestry value chain among rural farmers.
- Ogunleye, O.O., Aderinto, A.A. and Akinbile, L.A. (2020). The role of infrastructure in the development of the forestry sector in Nigeria. *Journal of Environmental Science and Sustainable Development*, 3(1): 18-28.
- Ogunwale, A.B., Ajayi, C.A. and Adewole, A.M. (2020). Private investment in forestry sector development: А panacea for growth economic in Nigeria. of Journal Environmental Management and Tourism, 11(10): 2143-2151.
- Ogunwusi, A.A., Oyebanji, O.A., Adeniji, O.A., and Oladele, F.A. (2017). Analysis of income generation from forest products in rural Ogun State, Nigeria. *Journal of Agriculture and Environmental Sciences*, 6(2): 59-67.
- Oke, D.O. (2016). Land tenure and private forestry in Nigeria: A review of the

Forestry Research, 2016: 1-9.

- Ola-Adams, B.A. and Afolayan, A.T. (2016). Forestry and Economic Development in Nigeria. *Journal of Forestry Research*, 27(2): 447-454. doi:10.1007/s11676-015-0141
- Olaoye, J. O., Ojo, A. T., Adebayo, A. O., and Ojo, O. A. (2020). Financing challenges of private forestry development in Nigeria. *Journal of Agricultural Economics and Rural Development*, 6(1): 28-38.
- Olawuyi, D.S., Adekunle, V.A. and Popoola, L. (2019). Agroforestry adoption and its effects on rural livelihoods: evidence from Nigeria. *International Journal of Agricultural Sustainability*, 17(5): 451-465.
- Oluwole, F.A., Ololade, O.O. and Oduwaye, O.A. (2017). The importance of forest ecosystem services in rural livelihoods in Nigeria. Journal of Environmental Management, 196: 80 – 91.

C.V. and Agwu, J.A. (2018). Nontimber forest products and rural livelihoods in Nigeria: the case of honey production in Enugu State. *Journal of Agricultural and Environmental Ethics*, 31(1): 57-72.

- Rural Development Institute. (2010). Community Development Handbook
- Udom, I.S. (2021). Forestry resources management in Nigeria: Challenges and prospects. *Environmental Science and Pollution Research*, 28(5): 5131-5141.
- World Bank. (2016). Nigeria: Forests and Climate Change.
- World Bank. (2018). Nigeria Economic Report.
- World Bank. (2020). Nigeria: Overview
- World Bank. (2021). Forests, trees, and agroforestry in Nigeria.
- World Bank. (2021). Nigeria's rural population.