

Willingness of Non-Plantation Owner Forest Stakeholders to Invest in Forest Plantation Development in Southwestern Nigeria

Oyinlola Abiodun Fasoro* and Opeyemi Isaac Ajewole Department of Social and Environmental Forestry, Faculty of Renewable Natural Resources, Ibadan, Nigeria <u>*oyinlola4christ@gmail.com; oa.fasoro@ui.edu.ng</u> +2348063520878

Abstract

The rapid increase in demand for forest products has contributed to the loss of natural forests in Nigeria. As a result, private investment in forest plantations is critical for increasing wood supply and promoting sustainable forest development. This study, therefore, investigates the willingness of non-plantation owner forest stakeholders (NPOFS) to invest in forest plantation development (FPD). A total of 750 NPOFS were selected using multistage random sampling. Three states were purposively selected: Oyo, Ogun, and Ekiti, based on the prevalence of private forest plantation owners in the states. Descriptive statistics and logistic regression analysis were employed to analyse the data. The mean age of NPOFS was 43 years, 53.3% were men and 91.3% had formal education. Twenty-eight percent of the respondents indicated that lack of capital and land insecurity were reasons for not investing in FPD while 11.9% of respondents iterated that were they not interested in FPD. Respondents stated that the factors that can arouse and direct their interest toward FPD include: the prospect of guaranteed returns after retirement (46.7%), global environmental issues (11.9%), as an alternative source of income (27.7%) and protection of their land from plunderers (3.6%). Respondents (47.8%) suggested that providing targeted incentives could encourage private investment in FPD. Logistic regression showed that as age increases by one unit, willingness to invest in FPD decreases by 81.5 percent; however, this was statistically significant. The study found that non-plantation owner forest stakeholders were willing to invest in FPD; thus, government and environmental conservation organizations should spearhead projects and programs that provide incentives to encourage private investment in forest plantation.

Keywords: Plantation development, private investment, forest stakeholders, sustainability

Introduction

Nigeria like most African countries has experienced a remarkable degradation and depletion of its natural forests over the past years. The increased need for wood and non-wood forest products, pressure for converting forest lands to agriculture, destruction of indigenous forests by shifting agriculture and indiscriminate logging, and the difficulty in managing natural forests, have all led to a consciousness that investment in forest plantation is one of the approaches to avoid shortage of wood in the nearest future (Barua et al., 2014). Forest plantations with fast-growing tree species contribute the economic, substantially to social and environmental development of countries (Kanowski, 1997). World Bank (2001) stated that forest plantation development is an important activity in forestry development that has the capacity of increasing wood supply and stemming the pressure in the natural forests. The Summary Report of the 3rd

International Congress on Planted Forests (2013) also pointed out that investments in forest plantations have occurred mainly in few countries including Africa, however, Africa has a relatively small area of forest plantations compared to the potential due to land availability. The study further stressed that most of Africa's wood is still produced from natural forests, which are mostly owned and managed by the government. Nigeria, in particular, has relatively low forest cover and most afforestation programmes were created to secure a constant supply of roundwood to industries and also produce fuelwood and firewood) while (charcoal some forest were established to combat plantations desertification. However, according to FAO (2001) and Fasoro (2019), the forestry sector in Nigeria is largely dependent on public funding, and public funding for forest projects and programs in the country has been insufficient and untimely at both

the Federal and State government levels, demonstrating that the national government lacks the commitment and financial means to ensure sustainable forest practices. In this regard, private investment in forest plantation development can be a profitable investment for private investors as well as a major source of financing for long-term forest development. Thus, the involvement of forest stakeholders cannot be overemphasized. Brinkerhoff and Crosby (2002) and Tindan et al. (2014) stated that forest stakeholders are those who are likely to be affected by a policy or project and have the power to support or hinder its acceptance at the decisionmaking level; thus, the roles and positions of these stakeholders are defined based on their distinct expertise. Some forest stakeholders are directly involved in exploitation, processing, and marketing, while others are charged with official responsibilities such as monitoring exploitation and enforcing regulations in sustainable forest management. As a result, forest stakeholders' investments in forest plantation development can provide numerous benefits to the country. For example, one important social reason that is frequently given to justify forest plantation development is the creation of employment opportunities, particularly in rural areas. The environmental reason for forest plantation development is the production of non-market benefits, such as watershed protection; improved visual appearance of the landscape; carbon sequestration; the provision of outdoor recreation opportunities; and land rehabilitation or reclamation. This study, therefore, assessed the willingness of selected non-plantation forest stakeholders to invest in forest plantation development to provide information that can further strengthen effective sustainable forest development in the country.

Methodology

The study was conducted in southwestern Nigeria which consists of Lagos, Ogun, Oyo, Osun, Ondo and Ekiti States. Ogun, Oyo and Ekiti States were purposively selected for this study, based on a reconnaissance survey of all the states in the southwest, which revealed that Ogun, Oyo and Ekiti States have a substantial number of private forest plantation owners. Ogun State has a total land area of 16,980.55km2. The projected population density was 4,412,299 in 2011 (NBS, 2012). It has a total annual rainfall of over 1500mm and average temperature ranges between 21.80C to 33.20C throughout the year. The climate is tropical and characterized by wet and dry seasons. Oyo State covers about an area of 28,454km². The State is located in latitude between 6°55' and 8°45'N and between longitude 2°50' and 3°56'E in southwestern Nigeria. NBS (2012) projected the population of the State in 2011 was 6,596,392 in 2011. Average daily temperature ranges between 25°C and 35°C, virtually throughout the year while the annual rainfall ranges from 1000 mm to 1500 mm with well-drained and rich ferruginous tropical soils which favour the production of crops. Ekiti State has an area of 7, 500km² of which only 297.2km² is constituted forest representing 4% of the total land area. The State is situated between longitude 4°51 and 5°451E and latitudes 7°151 and 8°51N. The mean annual temperature ranges between 22.5°C to 28°C while the mean annual temperature ranges between 1,500mm to 2,000mm. The projected population of the State in 2011 was 2,794,575 (NBS, 2012).

The sampling of the non-plantation owner forest stakeholders

Ovo, Ogun and Ekiti states were purposively selected based on the prevalence of private forest plantation owners, thus, forest stakeholders who do not have plantations were interviewed to elicit their reasons for not investing in forest plantation development. The selected non-plantation owner forest stakeholders comprise forestry professionals in the Ministries, Departments and Agencies (MDA), Lecturers and Researchers in Forestry Departments in Tertiary Institutions and Research Institutes and individuals such as timber contractors, plank sellers, charcoal sellers, fuelwood sellers, nontimber forest products seller, furniture makers and craft makers. These forest stakeholders were selected because some are directly involved in the exploitation, processing and marketing of forest timber resources, some with research extension, while others are saddled with the official responsibilities of monitoring exploitation and enforcement of regulation in sustainable forest management.



Figure 1: The study area

Data collection

A multi-stage sampling technique was adopted for the study. Multistage random sampling was used to select a total of 750 non-plantation owner forest stakeholders. Three states; Oyo, Ogun and Ekiti were purposively selected based on the prevalence of private forest plantation owners in the states. Five local government areas (LGAs) were purposively selected from each state. In the LGAs, five cities where forest stakeholders were conspicuous were subsequently purposively selected. Thereafter, fifty respondents were then randomly selected from each city, making a total of 250 randomly selected respondents from each State. Furthermore, in each city and based on the population size, five (5) each (lecturers and researchers, MDAs, Non-timber forest products sellers (NTFPs) and furniture makers were randomly selected) and ten (10) each (fuelwood sellers, timber contractors and sawnwood sellers) were also randomly selected. Data analysis The statistical methods used include descriptive

statistics and logistic regression analysis. Logistic regression analysis was carried out to determine the influence of some socio-economic variables on non-plantation owner forest stakeholders. **Results**

Demographic characteristics of non-plantation owner forest stakeholders

The demographic characteristics of the respondents such as age, gender and educational status are presented in Table 1. The ages of respondents ranged from 20 to above 70 years with a mean age of 43 years. In Oyo (45.6%), Ogun (37.6%) and Ekiti (40.8%) States, most of the respondents were in the 40-49 years category. Table 1 shows that 52.4%, 60.4% and 47.2% were male while 47.6%, 39.6% and 52.8% of the respondents were women in Oyo, Ogun, and Ekiti States respectively. It was observed also that a large percentage of the respondents in Oyo, Ogun and Ekiti State respectively, 49.2%, 44.4% and 50.0% had secondary school education, followed by those that had tertiary education (31.6%, 32.2% and 19.9%) and 18.6%, 28.1% and 19.9% had primary school education while only 6.4%, 12.4% and 7.6% had no formal education in Oyo, Ogun and Ekiti States respectively. In summary, 34.2% of the respondents were below 40years while 64.1% of the respondents were above 40years; 53.3% of the respondents were male while 46.7 were female; 91.2% of the respondents had formal education while 8.8 had no formal education in the study area.

Demographic ch	aracteristi	cs	States						Total		
			Oyo		Ogun		Ekiti				
			Counts	%	Counts	%	Counts	%	Counts	%	
Age	≥29		16	6.4	17	6.8	20	8.0	53	7.1	
	30-39		65	26.0	70	28.0	68	27.2	203	27.1	
	40-49			45.6	94	37.6	102	40.8	310	41.3	
	>50		51	20.4	60	24.0	60	24.0	171	22.8	
	No res	ponse	4	1.6	9	3.6	0	0	13	1.7	
	Total		250	100	250	100	250	100	750	100	
Sex	Male		131	52.4	151	60.4	118	47.2	400	53.3	
	Female	:	119	47.6	99	39.6	132	52.8	350	46.7	
	Total		250	100	250	100	250	100	750	100	
Educational status	No educat	formal ion	16	6.4	31	12.4	19	7.6	66	8.8	
	Primar	у	59	23.6	41	16.4	49	19.6	149	19.9	
	Secondary		123	49.2	111	44.4	125	50.0	359	47.9	
	Tertiar	у	52	20.8	67	26.8	57	22.8	176	23.5	
	Total		250	100	250	100	250	100	750	100	

 Table 1
 Socioeconomic Characteristics of Non-plantation Owner Forest Stakeholders

Non-plantation owner forest stakeholders' reasons for non-investment in forest plantation development

Table 2 revealed that 12%, 9.6% and 9.6% of the respondents in Ogun, Oyo and Ekiti State respectively claimed lack of capital was the main reason for not investing in forest plantation development. Respondents, 7.2%, 4.4% and 0.4% stated that the major reason for not having forest plantations was due to land insecurity and unavailability in Ogun, Oyo and Ekiti State respectively. The long gestation period of trees was identified by respondents (3.6%, 7.6% and 3.2%) as the sole reason for non-investment in forest plantation development in Ogun, Oyo and Ekiti State respectively. In Oyo State, 3.6% of the respondents claimed age limitation prevented them from investing in forest plantation development. Also, in Ogun, Oyo and Ekiti State respectively, 5.6%, 11.6% and 18.4% of the respondents stated that they are not interested in forest plantation investment because it's not their priority.

Furthermore, some respondents identified multiple reasons for not investing in forest plantation development. Lack of capital, land insecurity and unavailability were cited as reasons for not investing in forest plantation development by 25.2%, 26.4% and 32.4% of respondents in Ogun, Oyo and Ekiti State respectively. Respondents in Ogun, Oyo, and Ekiti States identified lack of capital and long gestation period for trees as the main reasons for non-investment (7.6%, 13.6% and 24.8% respectively). In addition, some respondents in Oyo (14.0%), Ogun (9.3%) and Ekiti (5.2%) States, reported that lack of capital, land insecurity and unavailability, government policy and long gestation period of trees were the reasons for not investing in forest plantation development. In summary, 10.4%, 4.0%. 4.8% and 1.2% of respondents identified lack of capital, land insecurity and unavailability, the long gestation period of trees and age limitation as to the sole reason for non-investment in forest plantation development in the states respectively. A total of 20.4% of the respondents identified one reason for non-investment in forest plantation development while 49.1% of the respondents identified two reasons for not having forest plantations in the states. Similarly, 9.1% of the respondents gave three reasons while 9.5% mentioned four reasons while 11.9% of the respondents stated that they are not interested in forest plantation development.

Reasons		States						
	Ogun		Оуо		Ekiti		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
Lack of capital	30	12.0	24	9.6	24	9.6	78	10.4
Land insecurity and	18	7.2	11	4.4	1	0.4	30	4.0
unavailability								
Long gestation period	9	3.6	19	7.6	8	3.2	36	4.8
Age limitation	0	0	9	3.6	0	0	9	1.2
Lack of capital, land	63	25.2	66	26.4	81	32.4	210	28.0
insecurity and								
unavailability								
Lack of capital, land	24	9.6	10	4.0	0	0	34	4.5
insecurity and								
unavailability,								
government policy								
Lack of capital, land	35	14.0	23	9.3	13	5.2	71	9.5
insecurity, government								
policy and long gestation								
period								
Lack of capital, land	11	4.4	11	4.4	6	2.4	28	3.7
security, energy and time								
consuming								
Not interested	14	5.6	29	11.6	46	18.4	89	11.9
Lack of capital and long	19	7.6	34	13.6	62	24.8	115	15.3
gestation period								
Government policy and	2	0.8	1	0.4	0	0	3	0.4
long gestation period								
Land insecurity and long	16	6.4	11	4.4	8	3.2	35	4.7
gestation period								
Lack of capital and	3	0.4	1	0.1	1	0.1	5	0.7
government policy								
Land insecurity,	6	2.4	1	0.1	0	0	7	0.9
government policy and								
long gestation								
Total	250		250		250		750	100

Table 2:Frequency Distribution of Why Non-plantation Owner Forest Stakeholders do not Invest
in Forest Plantation

Motivating factors for non-plantation owner forest stakeholders to invest in forest plantation development

Non-plantation owner forest stakeholders stated the underlying forces that can arouse and direct their interest toward forest plantation development. Table 3 shows that in Ogun state, 42.8% and 37.6% of the respondents respectively stated that the prospect of forest plantation as an alternative source of income and guaranteed investment after retirement can motivate them to invest in forest plantation development. In Oyo and Ekiti state, the trend is similar, as respondents in Oyo state (43.6% and 23.2%) and Ekiti state (58.8% and 17.2%) indicated that the fact that forest plantation development can be an alternative source of income and guarantee returns after of retirement were the factors that can motivate them to invest in forest plantation development.

Motivation			State					
	Ogun		Oyo		Ekiti		Total	
	Counts	%	Counts	%	Counts	%	Counts	%
Guaranteed investment	94	37.6	109	43.6	147	58.8	350	46.7
after retirement								
Global environmental	30	12.0	32	12.8	27	10.8	89	11.9
issues								
Alternative source of	107	42.8	58	23.2	43	17.2	208	27.7
income								
Protecting land from	5	2.0	10	4.0	12	4.8	27	3.6
grabbers								
Not interested	14	5.6	41	16.4	21	8.4	76	10.1
Total	250		250		250		750	100

Table 3:	Frequency	Distribution	of M	Iotivation	for	Non-plantation	Owner	Forest	Stakeholders	Investment	in
	Fores	st Plantation									



Other motivating factors identified by respondents in the study area were global environmental issues and the protection of land from land grabbers. In summary, from Figure 2, 46.7% of the respondents claimed the notion that forest plantation can guarantee returns after retirement may arouse and direct their interest toward forest plantation development. The respondents revealed that since trees have a long gestation period, investing in forest plantations may serve as returns they can fall back on after retirement. Respondents (27.7%) stated that forest plantations serving as an alternative source of income may stimulate their interest. From an oral interview, the respondents revealed that their understanding of multiple land-use systems which increase economic returns can motivate them to

invest in forest plantation development. That is, as they establish forest plantations, they can also integrate animal husbandry, fisheries and crops, thus, generating alternative income.

Furthermore, 11.9% and 3.6% of the respondents claimed the current global environmental issues such as global warming, pollution, ozone depletion and destruction, deforestation and loss of biodiversity etc. and protection of their land from land grabbers respectively may gear their interest towards forest plantation development. However, 10.1% of the respondents stated that they are not interested, thus, nothing can motivate them to invest in forest plantation development.

Non-plantation owner forest stakeholders' suggestions on ways to encourage private investment in forest plantation development by occupation

Non-plantation owner forest stakeholders suggested ways to encourage private investment in forest plantation development. Table 4 shows that 41.9%, 41.9% and 16.2% of lecturers and researchers claimed the provision of incentives such as soft loans, grants and seedlings and seeds; extension services; and standard marketing systems respectively will stimulate private investment in forest plantation development. Results from forest officials in MDAs is similar to suggestions made by lecturers and researchers as 41.9%, 32.4% and 14.9% suggested that the provision of incentives, extension services and standard marketing system respectively will encourage private investment in forest plantation development. Fuelwood sellers, 59.3% and 23.3% stated that the provision of incentives and basic amenities respectively will motivate the private's interest in forest plantation development. Timber contractors, 30.7%, 24.0% and 18.0% indicated that the provision of incentives, a standard market system for timber and non-timber products and extension services respectively will facilitate investment in forest plantation development.

Furthermore, plank sellers (43.6%, 20.8% and 18.1%) reported that incentives, extension services and basic amenities respectively will encourage private investment in forest plantation development. Eighty percent and 12% of non-timber forest product sellers respectively stated that the provision of incentives and basic amenities will convince people to invest in forest plantation development. Also, 46.6%, 38.4% and 12.3% of the furniture makers claimed providing incentives, basic amenities and extension services will mobilize people to invest in forest plantation development.

In summary, 47.8% of the respondents indicated that the provision of incentives will encourage private investment in forest plantation development. The Table also shows that 17.7%, 14.8%, 10.6% and 9.1% respectively suggested that extension services, basic amenities, a standard marketing system and a conducive environment will serve as an encouragement to private investors, thus, persuading them to invest in forest plantation development.

Disposition of non-plantation owner forest stakeholders' to forest plantation investment if their suggestions are implemented

Table 5 shows that 84.7% of the respondents were willing to invest in forest plantation development provided targeted incentives are guaranteed while 15.3% of respondents stated that they have no interest in investing in forest plantation development even if all the aforementioned suggestions are provided.

Non-plantation owner forest stakeholders' willingness to invest in forest plantation

Logistic regression analysis was carried out to determine the influence of some socio-economic variables on the willingness of non-forest plantation owners' to invest in forest plantation development. The independent variables include states, gender, age and educational background. There were three states (Ogun, Oyo and Ekiti), however, two dummies were used (Oyo and Ekiti States) while Ogun State represented the autonomous value. With regards to the gender variable, the male was used for autonomous value. Educational status was grouped into four (no formal education, primary, secondary and tertiary education) but three (primary, secondary and tertiary education) were used in the model with the variable no formal education standing as the autonomous variable. Table 6 shows that the probability of females investing in forest plantation development is 4.035 times higher than males. As the age of respondents' increases, the willingness to invest in forest plantation development decreases. That is, as age increases by one unit, the willingness to invest in forest plantation development decreases by 81.5%.

Table 4:	Frequency Distribution of I	Respondents' Suggestions	s of Wavs to Encourage	e Investment in Forest Plan	tation Development by	Occupation
		60	1 6			

	Occupation															
Suggestions	Lecturers	and	MDAs		Fuelwood	d	Timber		Plank sel	lers	NTFPs se	ellers	Furniture	;	Total	
	Researche	ers			sellers		contracto	ors					makers			
	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%	Counts	%
Basic amenities	1	1.4	2	2.7	35	23.3	8	5.3	27	18.1	9	12.0	28	38.4	110	14.8
(electricity, good																
road)																
Incentives (soft	31	41.9	31	41.9	89	59.3	46	30.7	65	43.6	60	80.0	34	46.6	356	47.8
loans, seedlings)																
Extension	23	31.1	24	32.4	15	10.0	27	18.0	31	20.8	3	4.0	9	12.3	132	17.7
services(education																
through seminars,																
programme)																
Standard marketing	12	16.2	11	14.9	4	2.7	36	24.0	14	9.4	1	1.3	1	1.4	76	10.6
system (price,																
market)																
Conducive	7	9.5	6	8.1	7	4.7	33	22.0	12	8.1	2	2.7	1	1.4	68	9.1
environment(policy,																
law and																
administration)																
No response	1		1		0		0		1		0		2		5	
Total	75		75		150		150		150		75		75		750	100

Developi	liciti		
		Willingness	
	Counts	%	
Willing	635	84.7	
Not willing	115	15.3	
Total	750	100	

 Table 5:
 Frequency Distribution of Willingness of Respondents to Invest in Forest Plantation

 Development
 Development

Table 6:	Willingness	of	Non-plantation	Forest	Stakeholders'	Investment	in	Forest	Plantation
Development i	n Southweste	rn,	Nigeria						

L		,				
Variables	В	S.E	Wald	Df	Sig.	Exp(B)
Оуо	-0.672	0.292	5.296	1	0.021	0.511
Ekiti	0.118	0.245	0.230	1	0.632	1.125
Female	1.395	0.248	31.586	1	0.000	4.035
Primary	1.877	0.488	14.825	1	0.000	6.537
Secondary	1.473	0.423	12.153	1	0.000	4.362
Tertiary	1.082	0.400	7.298	1	0.007	2.949
Age	-0.001	0.012	0.003	1	0.954	0.185
Constant	-4.871	0.783	38.664	1	0.000	0.008

*Significant at p<0.05, B= Regression coefficient, S.E = Standard error, Wald= Test statistic, df= Degree of freedom, Exp(B) = Exponential of B coefficient

Discussion

The study revealed that most of the respondents were in the active, dynamic, hale and hearty period of their lives. The findings are similar to Adekunle et al. (2011) report which stated that the average age of respondents involved in forest development in southwestern Nigeria was 43 years, and they were in their active period of life. Women are actively involved in the collection, processing and sales of forest resources, therefore, their roles in sustainable forest development cannot be overemphasized. Most (91.2%) of the respondents had formal education, thus, their ability to read and write will facilitate their understanding of the need for sustainable forest development and the use of improved technology and practices. Inconsistent with this study, Wossink and Wenum, (2003) reported that educated people are more likely to accept new methods of management, try new ideas and be more willing to join the sustainable development of the forest. Fortney et al. (2011) also affirmed that in recent studies, forest stakeholders with a higher level of education and income are more likely to participate in forest development.

Lack of capital was identified by the respondents as one of the major reasons for not investing in forest plantation development because the cost of establishing forest plantation is huge and optimal silviculture requires that interventions be timely and effectively carried out. Thus, adequate capital for forest plantation development is vital. Respondents also stated that land insecurity and unavailability in the country made them shy away from forest plantation investment. Unclear land tenure, land insecurity, overlapping rights and the possibility of contested or revoked licenses are obstacles to attracting investment in forest plantations. Furthermore. non-plantation owner forest stakeholders reported that numerous government policies directed at forest plantation owners without any incentive schemes like tax exemptions and direct or indirect subsidies make forest plantation investment seem like a burden. Singh (2002) argued that private investment in forestry activities is determined by policies at the central and state levels, thus, stable policies will attract many investors to forest plantation development. Respondents also revealed that they are not interested in forest plantation investment because the investment doesn't generate instant revenue, hence, such is not their priority.

According to the study, respondents revealed that their understanding of multiple land-use systems which increases economic returns can motivate them to invest in forest plantation development. That is, as they establish forest plantations, they can also integrate animal husbandry, fisheries and crops, thus, generating alternative income. Respondents stated that if the national government provides basic amenities such as electricity, standard health facilities, school and road, citizens will be relieved of some basic responsibilities, thus, money used to offset the bills of these basic facilities can be directed towards forest plantation investment. Incentive such as subsidies, grants, loans, free seeds and seedlings were suggested as means that produces encouragement to establish forest plantation. Respondents claimed the long time horizon between incurring the costs of establishment and yields which are only expected at the end of the rotation period depending on the objective of the forest plantation scares investors from forest plantation investment. Also, different capital demanding objectives required to produce quality wood, such as seedlings production, machinery, procurement of fertilizers, herbicides and other silvicultural practices etc., along with the production chain act as a barrier to private investment. Therefore, targeted incentives should be provided to encourage private investment in forest plantation development.

Some respondents claimed low and unstable market prices act as an impediment to forest plantation development. Arnold (2001) confirmed that the willingness of investors to plant and manage trees to sell wood is influenced by the availability of functional markets, thus, the existence of an assured market is one of the most critical factors in promoting forest plantation development. Some respondents argued that ensuring wood prices is one of the direct strategies for creating a stable market for tree production in the country.

In addition, respondents revealed that creating a conducive environment can inspire people to invest in forest plantation development. It is important that a country is politically stable and must also communicate this to the rest of the world to attract private investment. Transparent policies can offer greater security to the investor, thereby reducing investment risk. Ruitenbeek and Cartier (1998) and Fasoro (2019) affirmed that government policy for harvesting and transporting forest produce from private land; the absence of clear land and tree tenure arrangements, which has been a disincentive to the commercial tree growing; the poor quality, occasionally unaffordable and unavailable seed and seedlings for plantation development; market disincentive for investment and reinvestment of profits; and other sector conflicting policies investment in forest discourage plantation development. Policies affecting private investment in forest plantation development include exportimport policies, tax laws, land tenure etc. Corroborating this study, Kallio (2013) affirmed that distinct, dependable and fixed laws and regulations and providing incentives, land security, conducive investment climate and adequate infrastructure and technology will attract investment to forest plantation development.

The gender of non-plantation forest stakeholders was significantly influenced by the willingness to invest in forest plantation development. There is also a significant relationship between age and willingness to invest in forest plantation development.

Conclusion

This study has brought into focus the readiness of forest stakeholders to invest in forest plantation development and suggested ways to encourage investment in forest plantation development. Respondents claimed provision of basic amenities (electricity, good road), incentives (soft loans, seedlings), extension services (education through seminars, programme), a standard marketing system (price, market) and a conducive environment (policy, law and administration) will encourage investment in forest plantation development. Therefore, government and environmental conservation organizations should spearhead projects and programs that provide incentives to encourage private investment in forest plantations.

Reference

Adekunle, V. A. J., Okunlola J.O. and Oke D.O. 2011. Management of Forest Ecosystem for Food Security and Rural Livelihood in Southwest Nigeria. Final Project Report for 2011 START Grants for Global Change Research in Africa.

- Agboola, Michael Kolawole 1997. Associated Brass and Ivory Objects of Osun in Ikere Ekiti. "M.A. Thesis, Institute of African Studies, University of Ibadan, Nigeria.
- Arnold, J. M. (2001). Devolution of Control of Common Pool Resources to Local Communities: experiences in forestry. Access to Land, Rural Poverty, and Public Action pp 163-165.
- Barua S.K., Lehtonen P. and Pahkasalo T. 2014. Plantation Vision: Potentials, Challenges and Policy Options for Global Industrial Forest Plantation Development. International Forestry Review Vol.16 No. 2, 2014 pp 117.
- Brinkerhoff, D. and Crosby, B, "Citizen Participation in the Policy Process" Chapter 3 in Managing Policy Reform: Concepts and Tools for Decision-Makers in Developing and Transitioning Countries. Kumarian Press, Connecticut, USA, pp 51-56, 2002.
- Evans, J., and Turnbull, J. W. (2004). Plantation Forestry in the Tropics: The Role, Silviculture, and Use of Planted Forests for Industrial, Social, Environmental, and Agroforestry Purposes No. 3. ed. Oxford University Press.
- FAO 2001. The Impact of Forest Policies and Legislation on Forest Plantations. Report Based on the Work of C. J. K. Perley. Forest Plantation Thematic Papers, Working Paper 9. Forest Resources Development Service, Forest Resources Division. FAO, Rome (unpublished)
- Fasoro Oyinlola A. 2019. Investment Analysis of Medium Scale Private Forest Plantation Development in Oyo State, Nigeria. Asian Journal of Research in Agricultural and Forestry. Vol. 3(3) 1-9.
- Fortney, Jennifer, Kathryn G. Arano, and Michael Jacobson. 2011. An Evaluation of West Virginia's Managed Timberland Tax Incentive Program. Forest Policy and Economics Vol. 13 No.1: pp 69-78.
- Kallio Helena Maarit 2013. Factors Influencing Farmers' Tree Planting and Management Activity in Four Case Studies in Indonesia. University of Helsinki Viikki Tropical Resources Institute. Vitri Tropical Forestry Reports- Doctoral Dissertation

- Kanowski P. J. 1997. Afforestation and Forest Plantation for the 21st Century. Paper XI World Forestry Congress, Antalya, Turkey, 13-22 October 1997.
 16 p Philippines and South Africa. Rural Development Forestry Network, Network Paper
- National Bureau of Statistics 2012. Social Statistics in Nigeria. Part III: Health, Employment, Public Safety, Population and Vital Registration
- Ruitenbeek, J. & Cartier, C. 1998: Rational Exploitations: Economic Criteria and Indicators for Sustainable Management of Tropical Forests. Center for International Forestry Research Occasional Paper No. 17. Also available at http://www.cifor.cgiar.org/publications/occpaper. htm
- Sanwo, S. K., Olubanjo, O. O., Aihonsu, J. O. Y., Akinleye, S. O. and Gboteku, F. A. O. 2006. Economic Viability of Teak (*Tectona Gradis* L. F) Planting Venture in Ogun State, Nigeria
- Singh Daman 2002. Policies Affecting Private Sector Participation in Sustainable Forest Management. India Country Sub-Study: A collaboration between Ecotech Services (India) Pvt. Ltd. and International Institute for Environment and Development.
- Summary Report of the 3rd International Congress on Forest plantations, 2013. Forest Plantations are a Vital Resource for Future Green Economies. Based on three scientific workshops held in Bordeaux (France), Dublin (Ireland) and Porto (Portugal), and one plenary meeting held in Estoril (Portugal) from May 15th to 21st.
- Tindan Peter Dok, Boafo James, and Obodai Jacob 2014. Stakeholders' Perception of Forest and its Implications for Sustainable Forest Management in Ghana. *International Journal of Innovation and Applied Studies*. ISSN 2028-9324 Vol. 9 No. 3 Nov. 2014, pp. 1021-1031. <u>http://www.ijias.issrjournals.org/</u>
- World Bank 1986. The World Bank Annual Report 1986 (English). Washington, D.C.: World Bank
- Wossink, G. Ada A., Jaap H. Van Wenum 2003. Biodiversity Conservation by Farmers: Analysis of Actual and Contingent Participation. *European Review of Agricultural Economics* 30 (4): 461-485