

Youth Participation In The Management Of Forest Resources In Omo Forest Reserve, Ogun State, Nigeria

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Abstract

This study explored youth involvement in forest management of Omo Forest Reserve, Ogun State, Nigeria. The study used multistage sampling to select 120 respondents between 18 and 35 years from five enclave communities in Area J4 of the forest reserve using a structured interview schedule. The analysis of data included frequency counts, percentages and means with ranking being used for analysis as well as hypotheses testing using Chi-square, Pearson Product Moment Correlation and Student's t-test at a five per cent level of significance. They are mostly males (65.0%), single or educated to secondary school levels (75.0%); their mean age is 28.4 ± 4.9 years; they were more likely than not to be non-indigenes resident in the enclaves. The forest resources most commonly identified were timber species (95.0%), bushmeat (81.7%), banana and plantain (75.8%), snails (73.3%) and medicinal plants (70.0%). The highest level of participation was in the reporting of illegal activities (mean = 1.62), while the lowest was membership of forest management committees (mean = 0.41), with 57.5 per cent of respondents reporting a low level of participation. The most common top strategy for these managers was the decision-making style (mean=3.22), and it posed them their greatest challenge: exclusion from decisions making (mean = 3.38). The results showed that participation in planning is significantly associated with educational attainment, primary occupation of respondents as well as indigene status membership of a community association were found to be significantly related to years of residence, monthly income, age and awareness on forest resources management strategies difference between challenges faced versus strategies used by managers. The study concluded that youth participation in the Omo Forest Reserve was more focused on labour-supplying tasks than on decision-making, and recommended that youth representation be constituted on forest management committees, that targeted training be provided, and that credit access be tied to forest-based enterprise

***Keywords:* Youth participation, forest resource management, Omo Forest Reserve, forest enclave communities, Ogun State, Nigeria.**

INTRODUCTION

Forests have long been recognised as a natural community in every part of the world, and in sub-

Saharan Africa they have served as the domain of livelihood for large rural populations. In Nigeria,

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forests supply raw materials to primary and secondary industries while generating employment for a sizeable number of people, and a widespread belief that the forest is a free gift of nature to be exploited without restriction has contributed to the destruction of the forest environment. The trend is measurable. The FAO reports that global forest area was approximately 4.06 billion hectares in 2020 (down from about 4.24 billion hectares in 1990) and fell from 25.75 percent of land area to 23.75 per cent in Nigeria between the years 2010 and 2020. Most countries have maintained administration at a state level, but effective administration has been challenging across many developing nations such as Nigeria where forest reserves are managed by this system.

The Omo Forest Reserve is the largest forest reserve in Ogun State and one of the few large blocks of high forest remaining in Nigeria, having been designated a Strict Nature Reserve (8 sq km), under order dated 1 June 1949. It was ceded to the government as an agreement between District Officer at Ijebu Ode and Awujale of Ijebu Ode on behalf of the Ijebu Native Administration in 1918, formally constituted a reserve by Order (1925 amended 1952), and recognized under United Nations Educational, Scientific and Cultural Organization Biosphere Reserve designation since 1977. However, even with this status heavy logging has continued along with conversion to monoculture plantations of *Gmelina arborea* and encroachment from settlement expansion within the enclaves which repeated displacement was observed by Tijani and Aluko (2014) who found that

89.9 per cent identified change in government policy as a cause for forest remaining in Nigeria.

The management of a reserve of this kind cannot rest on state forestry services alone, since those services have been widely reported as understaffed and poorly equipped. Participatory forest management has accordingly been advanced as an alternative, and the evidence on its performance is mixed but instructive. Mbeche et al. (2021), examining forest user participation around Mount Elgon in Kenya, found participation to be conditioned by household assets, proximity and the perceived benefits of membership rather than by exhortation. Hajjar et al. (2021), analysing 643 cases of community forest management across 51 countries, reported that formalisation frequently reduced local access and resource rights even where environmental and income outcomes improved, and that outcomes positive across environment, income and rights together were rare. Newton et al. (2016), studying forest commons, found that local rule-making authority was associated with better joint carbon, biodiversity and livelihood outcomes. Participation, on this evidence, produces results where it confers authority and fails where it confers only obligation.

Within this literature the position of young people has received comparatively little attention. Sithole et al. (2024), reviewing youth engagement in global conservation governance, observed that although youth involvement in environmental activism has become highly visible, comparable youth leadership has remained largely absent from conservation decision-making, and that youth are more often

mobilised as participants in programmes designed by others than included in their design. The Nigerian evidence points the same way. For example, Oluwajuwon et al. (2023) found that while 55% of secondary school students in eight schools in Akure have participated in tree planting and 88% experienced related curriculum content, only 20 per cent would consider forestry as a field of study or career; exposed but not committed.

Hypotheses of the study

Four null hypotheses were tested at the five per cent level of significance. The first held that there was no significant relationship between selected socio-economic characteristics of the respondents and their participation in the management of forest resources. The second held that there was no significant relationship between the forest resources available in the reserve and youth participation in their management. The third held that there was no significant relationship between the management strategies employed and youth participation in the management of forest resources. The fourth held that there was no significant difference between the challenges faced by youths and the strategies employed in managing forest resources in the study area.

METHODOLOGY

Study area

The study was conducted in Omo Forest Reserve located in Ijebu East and Ijebu North Local Government Areas of Ogun State, southwestern Nigeria, at approximately 6° 51' N and 4° 22' E, 135 km north-east of Lagos and about 20 km inland from the Atlantic coast at its southernmost extent, covering 1,305.5 km² and administratively divided into four areas, Areas J1 to J3 (519.3 km²), Area J4 (565.8 km²), Area J6 (220.4 km²) and enclaves (65 km²). The eastern boundary is the Omo River and its tributaries, which drain the reserve, and the reserve is contiguous with the Shasha and Oluwa Forest Reserves to the east.

The relief is hilly and largely well drained, with elevation up to approximately 300 m on some rocky outcrops, mean annual rainfall between approximately 1,600 mm and 2,000 mm, with two annual peaks in June and September, temperatures between approximately 21.4 °C and 32.2 °C, and minimum relative humidity of approximately 76 per cent. The vegetation is mixed moist semi-evergreen rainforest, mostly mature secondary due to past selective exploitation, with isolated pockets of primary forest remaining along watercourses and in areas not suitable for log

This study therefore examined youth participation in the management of forest resources in Omo Forest Reserve, Ogun State. Its specific objectives were to describe the socio-economic characteristics of youths in the study area; identify the forest resources available in the reserve; determine the strategies employed in managing those resources; and identify the challenges encountered in their management.

extraction; a large portion has been converted to monoculture plantations of *Gmelina arborea* planted to supply a pulp mill at Iwopin

The enclaves support a settled population engaged in farming, logging, sawmilling, hunting, fishing and the collection of non-timber forest products. Certain rights were granted to local people at reservation, including rights to hunt, fish, tap rubber and collect snails, tortoises, fruits and other minor forest products, and these rights continue to shape the relationship between the enclave communities and the forestry authorities. Area J4, the largest of the administrative areas, carries the heaviest human population and the most intensive logging activity, and contains the Strict Nature Reserve within its boundaries.

Population and sampling procedure

The population of the study comprised youths aged between 18 and 35 years resident in the enclave communities of Omo Forest Reserve. A multistage sampling procedure was employed, following the approach adopted by Tijani and Aluko (2014) in the same reserve.

At the first stage, Omo Forest Reserve was purposively selected from among the nine government forest reserves of Ogun State on account of its size, its status as a Biosphere Reserve, and the concentration of enclave settlements within it. At the second stage, Area J4 was purposively selected from the four administrative areas of the reserve because it is the largest by area, carries the highest resident population, sustains the most intensive logging activity, and contains the Strict Nature Reserve, so that the tension between extraction and conservation is most acute there.

At the third stage, five enclave communities within Area J4, namely Osoko, Aberu, Eseke, Abakuduru and korede, were selected on the basis of the concentration of resident youths and their involvement in forest-based activities. At the fourth stage, a list of resident youths aged 18 to 35 years was compiled in each community with the assistance of community leaders and youth association secretaries, and respondents were selected from these lists by simple random sampling in proportion to the size of each community. Twenty-eight respondents were drawn from Osoko, twenty-six from Aberu, twenty-two each from Eseke and Abakuduru, and twenty-two from korede, giving a total sample of 120 respondents.

Data collection

Primary and secondary sources of data were used. Primary data were obtained through a pre-tested structured interview schedule administered face to face by trained enumerators in Yoruba or English as appropriate, given that a proportion of respondents had limited formal education. The instrument was organised in five sections covering socio-economic characteristics, forest resources available in the reserve, level of participation in management activities,

strategies employed in managing forest resources, and challenges encountered. Secondary data were obtained from journals, institutional records, forestry publications and reports of the Ogun State Ministry of Forestry.

Measurement of variables

Socio-economic characteristics were measured at nominal, ordinal and ratio levels as appropriate. Forest resources available in the reserve were measured by asking respondents to indicate which of a listed set of resources were present and utilised, with multiple responses permitted, and responses were expressed as frequencies, percentages and ranks.

The dependent variable, level of youth participation in forest resource management, was measured across eight management activities on a three-point scale on which regular participation scored two, occasional participation scored one and no participation scored zero. A participation score was computed for each respondent by summing across the eight activities, and respondents scoring at or above the grand mean were categorised as having high participation while those below it were categorised as having low participation. Management strategies and challenges were each measured on a four-point Likert-type scale ranging from strongly agree, scored four, to strongly disagree, scored one, and the resulting means were used to rank the items.

Method of data analysis

Data were analysed using both descriptive and inferential statistics. Frequency counts, percentages, means, standard deviations and ranking were used to address the four specific objectives. Inferential statistics were used to test the hypotheses. Chi-square was used to test the relationship between categorical socio-economic characteristics and level of participation, Pearson Product Moment Correlation was used to test the relationships between continuous socio-economic variables, forest resources, management strategies and level of participation, and Student's t-test was used to test the difference between the challenges faced and the strategies employed. All hypotheses were tested at the five per cent level of significance

RESULTS AND DISCUSSION

Socio-economic characteristics of the respondents

Table 1 shows the socio-economic profile of the 120 respondents, of whom 65.0 per cent were male (reflecting the physical demands of the forest-based activities predominant in the enclaves, especially logging, sawmilling and haulage) and 35.0 per cent female (although nonetheless significant, with their participation concentrated, according to the responses, in the collection and trading of non-timber forest products rather than in timber-related work). Educational attainment was moderate (51.7 per cent secondary education and 23.3 per cent tertiary, giving 75.0 per cent educated to at least secondary level and a mean of 9.8 ± 3.6 years of formal schooling).

This compares favourably with the 89.8 per cent educated to at most secondary level reported by Tijani and Aluko (2014) for the general adult population of the same reserve, and indicates a better-schooled younger cohort. The finding matters because education emerged as significantly related to participation in the analysis reported below.

Farming was the primary occupation of 36.7 per cent of respondents, followed by logging and sawmilling at 21.7 per cent, trading at 17.5 per cent and non-timber forest product collection at 12.5 per cent. That more than a fifth of the sampled youths depended directly on logging is central to the interpretation of this study, since it places a substantial share of the young population in an occupational position where the activities generating their income are those that reserve management seeks to restrain. The occupations reported were farming (36.7 per cent), logging and sawmilling (21.7 per cent), trading (17.5 per cent), and non-timber forest product collection (12.5 per cent). The key finding of this study is that over one-fifth of the sampled youths were dependent directly on logging, which puts a significant portion of the young population in an occupational category whose activities generate the income but which management seeks to restrict

Table 1. Socio-economic characteristics of respondents (n = 120)

Variable	Category	Frequency	Percentage (%)	Mean $\pm$ SD
Sex	Male	78	65.0	—
	Female	42	35.0	
Age (years)	18–23	24	20.0	28.4 $\pm$ 4.9
	24–29	46	38.3	
	30–35	50	41.7	
Marital status	Single	62	51.7	—
	Married	54	45.0	
	Separated/widowed	4	3.3	
Educational attainment	No formal education	9	7.5	9.8 $\pm$ 3.6 years
	Primary education	21	17.5	
	Secondary education	62	51.7	
	Tertiary education	28	23.3	

Variable	Category	Frequency	Percentage (%)	Mean $\pm$ SD
Primary occupation	Farming	44	36.7	—
	Logging and sawmilling	26	21.7	
	Trading	21	17.5	
	NTFP collection	15	12.5	
	Artisanship	9	7.5	
	Salaried and others	5	4.2	
Monthly income (₦)	< 30,000	33	27.5	52,750 $\pm$ 27,410
	30,000–59,999	41	34.2	
	60,000–89,999	29	24.2	
	$\geq$ 90,000	17	14.2	
Household size	1–4	44	36.7	5.6 $\pm$ 2.3
	5–8	58	48.3	
	> 8	18	15.0	
Years of residence	$\leq$ 5	22	18.3	12.6 $\pm$ 6.8
	6–10	31	25.8	
	11–15	34	28.3	
	> 15	33	27.5	
Indigene status	Indigene	51	42.5	—
	Non-indigene	69	57.5	
Association membership	Yes	46	38.3	—
	No	74	61.7	

Source: Field survey, 2026

Forest resources available in the reserve

Results of interviews on forest resources are shown in Table 2: first-ranking reported items were timber species (95.0 percent), bushmeat/wildlife (81.7 percent), banana/plantains (75.8 percent), snails (73.3 percent) and medicinal plants (70.0 percent). The top-ranked tree species, which correlate with commercial trees in the composition of this forest type as documented for the reserve, were *Milicia excelsa*, *Triplochiton scleroxylon*, *Terminalia superba*, *Khaya* spp., etc.

Third ranked was banana/plantain, perhaps more interesting because these are not a forest product. They are cultivated crops, and their identification by three-quarters of respondents as a resource of the reserve indicates that the distinction between reserved forest and farmland had largely dissolved in local understanding. The finding is consistent with the occupational profile in Table 1, in which farming was the primary occupation of 36.7 per cent of respondents, and with the wider record of the enclaves, where plantain is commonly interplanted under thinned canopy in the early years of a farm and persists as the canopy is progressively removed. A young person who has grown up cultivating plantain inside a gazetted reserve has no experiential basis for treating the reserve boundary as meaningful, and any management strategy premised on that boundary begins at a disadvantage.

The remainder of the distribution is more conventional. Snails, medicinal plants, bush mango, kolanut and honey are precisely the minor forest products over which the enclave communities retain a recognised claim under the rights granted at reservation, and their prominence indicates that the claim remains active in local understanding almost a century after it was granted. Resources whose extraction is more visible and more readily contested were reported by fewer respondents, with sand and gravel at 23.3 per cent and fish at 30.0 per cent occupying the lowest positions.

Obayelu et al. (2017), examining market participation in non-timber forest products in this same reserve, found that the ambiguity surrounding the status of such products shaped which of them entered trade and which remained within the household, and Derebe et al. (2023) similarly report that the composition of reported use reflects the regulatory environment as much as the underlying resource base. The ranking recorded here follows that logic: resources least likely to be challenged were reported most often, and the appearance of a farm crop in third position marks the point at which the regulatory boundary has ceased to shape behaviour altogether.

Table 2. Forest resources identified by respondents in Omo Forest Reserve (n = 120)

Forest resource	Frequency	Percentage (%)	Rank
Timber species	114	95.0	1st
Bushmeat and wildlife	98	81.7	2nd

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Forest resource	Frequency	Percentage (%)	Rank
Banana and plantain	91	75.8	3rd
Snails	88	73.3	4th
Medicinal plants	84	70.0	5th
Fuelwood	82	68.3	6th
Bush mango and wild fruits	74	61.7	7th
Kolanut	66	55.0	8th
Rattan and cane	61	50.8	9th
Bamboo	57	47.5	10th
Honey	44	36.7	11th
Sponge	39	32.5	12th
Fish	36	30.0	13th
Sand and gravel	28	23.3	14th

Source: Field survey, 2026.

Level of youth participation in forest resource management

The level of participation across eight management activities is presented in Table 3. Participation was highest in the reporting of illegal activities, with a mean of 1.62, followed by fire tracing and fire prevention at 1.38 and boundary clearing and maintenance at 1.21. It was lowest in membership of forest management committees at 0.41, ecotourism guiding at 0.52 and non-timber forest product domestication at 0.76. The grand mean was 0.97, and on this basis 57.5 per cent of respondents were categorised as having low participation and 42.5 per cent as having high participation.

The internal ordering of these results is the central finding of this study, and the sharpest contrast within it lies between two closely related items. Reporting illegal activities recorded the highest mean of all eight activities at 1.62, while patrol and surveillance support, which addresses the same problem through the same faculty of observation, recorded only 0.94 and ranked fourth. The difference between them is not one of willingness but of institutional standing. Reporting is individual, informal, costless and requires no recognition from the forestry service: a young person who sees a chainsaw crew at work can pass word to a ranger without being anything in particular. Patrol requires enrolment, scheduling and some formal relationship with the service. The gap between the two figures therefore measured a willingness to act that the management system had not converted into a role.

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Read across its full range, the table describes a gradient. Participation was highest in activities that were informal, individual and unremunerated, namely reporting, fire tracing and boundary clearing. It fell in activities requiring institutional incorporation, namely patrol support at 0.94, attendance at forest meetings at 0.88 and committee membership at 0.41. It fell furthest in activities requiring independent enterprise and a claim on future returns, namely non-timber forest product domestication at 0.76 and ecotourism guiding at 0.52. Youths in the enclaves were therefore extensively engaged wherever engagement cost the management system nothing and conferred nothing, and largely absent wherever it would have required either. Membership of a forest management committee, the single activity that would confer a voice in decisions, recorded the lowest mean of all.

This distribution corresponds closely to what Sithole et al. (2024) describe for youth engagement in conservation governance more widely, namely that young people are more often mobilised into programmes designed by others than admitted into their design. It also bears on the participation literature. Newton et al. (2016) associate local rule-making authority with better joint outcomes across carbon, biodiversity and livelihoods, and Hajjar et al. (2021) find that formalisation which withholds rights while imposing obligations rarely produces positive outcomes across environment, income and rights together. Participation of the kind recorded here, which supplies labour without conferring authority, sits on the weaker side of that distinction.

Table 3. Level of youth participation in forest resource management activities (n = 120)

Management activity	Regular (%)	Occasional (%)	Mean score	Rank
Reporting illegal activities	42 (35.0)	70 (58.3)	1.62	1st
Fire tracing and fire prevention	29 (24.2)	68 (56.7)	1.38	2nd
Boundary clearing and maintenance	22 (18.3)	61 (50.8)	1.21	3rd
Patrol and surveillance support	13 (10.8)	48 (40.0)	0.94	4th
Attendance at forest meetings	11 (9.2)	44 (36.7)	0.88	5th
NTFP domestication	9 (7.5)	37 (30.8)	0.76	6th
Ecotourism guiding	5 (4.2)	25 (20.8)	0.52	7th
Forest management committee membership	3 (2.5)	20 (16.7)	0.41	8th

Source: Field survey, 2026.

Strategies employed in managing forest resources

The strategies employed in managing forest resources, as ranked by respondents, are presented in Table 4. The top five strategies were regular patrol and surveillance (3.22), community sensitization and awareness (3.11), establishment of woodlots and plantations (2.98), enforcement of harvesting permits (2.84) ecotourism development (2.06) collaboration with non-governmental organizations, which had a grand mean score 2.68

The first two rankings are worth reading together. Patrol and sensitisation are both instruments applied to the community rather than exercised by it: one enforces, the other informs, and neither transfers any decision to the enclave population. Youth inclusion in forest committees, the one listed strategy that would do so, ranked fifth at 2.71. Alternative livelihood schemes ranked seventh at 2.55, which is a low placing given that more than a fifth of respondents depended on logging for their primary income and would require an alternative if extraction were curtailed.

Mbeche et al. (2021) found around Mount Elgon that participation in forest management was conditioned by the perceived benefits of membership rather than by awareness of its purpose. The rankings recorded here suggest a management regime weighted towards enforcement and information and away from benefit, which is consistent with the low participation in committee membership, meeting attendance and enterprise activities reported in Table 3.

Table 4. Strategies employed in managing forest resources in the study area (n = 120)

Management strategy	Mean score	Rank
Regular patrol and surveillance	3.22	1st
Community sensitisation and awareness	3.11	2nd
Establishment of woodlots and plantations	2.98	3rd
Enforcement of harvesting permits and licences	2.84	4th
Inclusion of youths in forest committees	2.71	5th
Fire prevention and fire tracing	2.63	6th
Alternative livelihood support schemes	2.55	7th
Boundary demarcation and maintenance	2.42	8th
Collaboration with non-governmental organisations	2.28	9th
Ecotourism development	2.06	10th

Source: Field survey, 2026. Scale: strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1. Grand mean = 2.68.

Challenges encountered in the management of forest resources

The challenges reported by respondents are presented in Table 5. Exclusion from decision-making ranked first with a mean of 3.38, followed by lack of access to credit and start-up capital at 3.31, inadequate training on forest management at 3.22 and insecure land and resource tenure at 3.14. The grand mean across the ten challenges was 2.98, appreciably higher than the grand mean of 2.68 recorded for strategies.

That exclusion from decision-making ranked above every material constraint, including credit, training and equipment, is the most striking result in this study. Young people in the enclaves did not identify their principal difficulty as an absence of resources but as an absence of standing. The finding corroborates from the respondents' own account what Table 3 established from their behaviour, and the two together make a coherent case: participation was low in the activities conferring authority because access to those activities was withheld, and the respondents were aware of it. It also explains the gap between reporting and patrol noted earlier, since reporting requires no standing and patrol does.

The second and fourth-ranked challenges reinforce the point in economic terms. Lack of credit and insecure tenure are the conditions under which long-horizon investment in a resource becomes irrational, and they bear directly on the low participation in non-timber forest product domestication and ecotourism guiding recorded in Table 3. A young person without secure claim on land or trees, and without capital, has no basis on which to invest in either. Tijani and Aluko (2014) documented the tenure insecurity of this population directly, finding that 97.2 per cent of respondents in the reserve had experienced displacement and that change in government policy was regarded as its principal cause by 89.9 per cent.

Table 5. Challenges encountered by youths in the management of forest resources (n = 120)

Challenge	Mean score	Rank
Exclusion from decision-making	3.38	1st
Lack of access to credit and start-up capital	3.31	2nd
Inadequate training on forest management	3.22	3rd
Insecure land and resource tenure	3.14	4th
Poor remuneration and lack of incentives	3.05	5th
Political interference in forest administration	2.92	6th

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Challenge	Mean score	Rank
Conflict with loggers and timber contractors	2.87	7th
Inadequate working equipment	2.74	8th
Poor road and transport infrastructure	2.69	9th
Threat of intimidation and violence	2.51	10th

Source: Field survey, 2026. Scale: strongly agree = 4, agree = 3, disagree = 2, strongly disagree = 1. Grand mean = 2.98.

Test of hypotheses

The results of the Chi-square analysis of the relationship between categorical socio-economic characteristics and level of participation are presented in Table 6. Educational attainment ($\chi^2 = 16.482$, $df = 3$, $p = 0.001$), primary occupation ($\chi^2 = 21.354$, $df = 5$, $p = 0.001$), indigene status ($\chi^2 = 11.208$, $df = 1$, $p = 0.001$), association membership ($\chi^2 = 14.736$, $df = 1$, $p = 0.000$) and marital status ($\chi^2 = 9.876$, $df = 2$, $p = 0.007$) were all significantly related to level of participation, while sex ($\chi^2 = 3.214$, $df = 1$, $p = 0.073$) was not. The first null hypothesis was therefore rejected.

Two of these results carry particular weight. Indigene status was significant, and since 57.5 per cent of respondents were non-indigenes, this indicates that the majority of the young population occupied the weaker position with respect to participation. Association membership was also significant, which is consistent with the finding of Mbeche et al. (2021) that organisational affiliation conditions participation in forest management, and suggests a practical route to widening participation that does not require legislative change. That sex was not significant is worth recording, since it indicates that whatever excluded young people from management operated on them irrespective of gender.

Table 6. Chi-square analysis of socio-economic characteristics and level of participation

Variable	χ^2 value	df	p-value	Decision
Sex	3.214	1	0.073	Not significant
Marital status	9.876	2	0.007	Significant
Educational attainment	16.482	3	0.001	Significant
Primary occupation	21.354	5	0.001	Significant
Indigene status	11.208	1	0.001	Significant
Association membership	14.736	1	0.000	Significant

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Source: Field survey, 2026. Significance assessed at $p < 0.05$.

Table 7 shows these results; years lived there ($r = .341$, $p = .000$), monthly income ($r = .276$, $p = 0.002$) and age ($r = .214$, $p = .019$); but household size ($r = .132$, $p = .151$). The residence coefficient is positive indicating that longer-term residents participated more and its significance combined with the indigene status explains a stratified participation regime based on length of local attachment.

The relationship between forest resources available and level of participation was positive and significant ($r = 0.428$, $p = 0.000$), leading to rejection of the second null hypothesis. Respondents who identified a wider range of forest resources participated more actively in management, which indicates that knowledge of the resource base and engagement in managing it moved together. The relationship between management strategies and level of participation was also positive and significant, and was the strongest recorded in the study ($r = 0.512$, $p = 0.000$), leading to rejection of the third null hypothesis. Where respondents rated the strategies in operation more highly, they participated more, which is consistent with the proposition that participation responds to the perceived quality and relevance of the management regime rather than to exhortation alone.

The t-test comparing challenges faced with strategies employed returned a significant difference ($t = 3.842$, $df = 119$, $p = 0.000$), leading to rejection of the fourth null hypothesis. The mean challenge score of 2.98 exceeded the mean strategy score of 2.68 by 0.30, indicating that the difficulties confronting youths in the management of forest resources were rated more severe than the strategies deployed to address them were rated effective. This is the quantitative expression of the qualitative picture assembled across Tables 3 to 5, and it identifies a management deficit rather than a participation deficit: the constraints exceeded the response.

Table 7. Correlation and t-test results

Variable	r / t value	p-value	Decision
Age	$r = 0.214$	0.019	Significant
Household size	$r = 0.132$	0.151	Not significant
Monthly income	$r = 0.276$	0.002	Significant
Years of residence	$r = 0.341$	0.000	Significant
Forest resources available	$r = 0.428$	0.000	Significant
Management strategies employed	$r = 0.512$	0.000	Significant
Challenges versus strategies	$t = 3.842$	0.000	Significant

Source: Field survey, 2026. Correlations are Pearson Product Moment Correlation coefficients; the final row reports a paired-sample t-test with $df = 119$. Significance assessed at $p < 0.05$.

CONCLUSION AND RECOMMENDATIONS

This study examined youth participation in the management of forest resources in Omo Forest Reserve, Ogun State. The respondents were predominantly male, largely of secondary education or above, concentrated towards the upper end of the youth age range, and drawn more from non-indigenous settler households than from indigenous ones. Timber species, bushmeat, banana and plantain, snails and medicinal plants were the resources most widely identified. The appearance of a cultivated crop in third position indicated that the distinction between reserved forest and farmland had largely dissolved in local understanding, while the prominence of snails, medicinal plants and wild fruits indicated that the customary rights granted at reservation remained active alongside it.

Participation was low overall, with 57.5 per cent of respondents falling below the grand mean, and its internal distribution was more informative than its level. It was highest in the reporting of illegal activities, fire tracing and boundary clearing, all of which are informal, individual and unremunerated, and lowest in committee membership, ecotourism guiding and non-timber forest product domestication, all of which require either institutional standing or a secure claim on future returns. The contrast between reporting, which ranked first, and patrol support, which ranked fourth despite addressing the same problem, measured a willingness to act that the management system had not converted into a role.

The respondents identified this themselves. Exclusion from decision-making ranked above every material constraint, including credit, training and equipment, and the mean challenge score exceeded the mean strategy score by a statistically significant margin, indicating that the difficulties confronting youths were rated more severe than the strategies deployed against them were rated effective. Educational attainment, primary occupation, indigene status, association membership, marital status, age, monthly income and years of residence were all significantly related to participation, as were awareness of forest resources and assessment of management strategies. The strongest single relationship recorded was between the strategies employed and the level of participation, which indicates that participation responded to the perceived quality of the management regime rather than to exhortation.

Six recommendations followed. The Ogun State Ministry of Forestry should constitute formal youth representation on the forest management committees governing the reserve, with defined seats and voting rights, and should establish a structured reporting and community surveillance arrangement that incorporates youths as recognised participants rather than informal informants, since exclusion from decision-making was the highest-ranked constraint and committee membership the lowest-ranked participation activity, and since the reporting of illegal activities was already the activity youths undertook most readily. Training in fire management, boundary maintenance and non-timber forest product domestication should be delivered through the enclave communities, given that inadequate training ranked

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third among challenges and that the first two are areas in which youths were already active while the third is one in which capacity was plainly lacking. Credit facilities tied to forest-based enterprise should be extended to youths in the enclaves, since lack of capital ranked second among challenges and constrained the enterprise activities in which participation was lowest.

Alternative livelihood schemes should be expanded and treated as a condition of effective conservation rather than as welfare provision, since more than a fifth of the sampled youths depended on logging for their primary income and no restraint on extraction can succeed while that dependence persists. Existing youth and community associations should be used as the entry point for extension delivery, since association membership was significantly related to participation and offers a route to wider engagement that requires no change in law. Finally, the resource rights granted to the enclave communities at reservation should be clarified and formally documented, since insecure tenure ranked fourth among challenges and undermines the long-horizon investment on which nursery enterprise and species domestication depend.

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