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# Attitude and Involvement of Local Communities in Nature Conservation around Idanre Forest Reserve, Ondo State, Nigeria

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**ABSTRACT**: This objective of this study was to assess the attitude and involvement of the local communities on nature conservation around Idanre Forest Reserve, Ondo State, Nigeria using structured questionnaire. The study revealed the socio-demographic characteristics of community members of Idanre Forest Reserve. Data obtained shows that majority of the community members were aware of Idanre forest reserve and the attitudes and involvement of the local community towards conservation at Idanre forest reserve was negative. Factors that determined local people's attitudes include assess to benefits obtained from the park. The impact of these benefits on attitudes was shown by the willingness of the people to assist the park management in promoting wildlife conservation. It was concluded that the factors responsible for the negative attitudes and involvement of local members towards nature conservation of Idanre Forest Reserve were majorly the lack of substantial benefits from the reserve and also the unfriendly nature of management. A bottom-top approach is hereby recommended, through regular involvement of local community leaders in major aspect of decision making.

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Protected areas all over the world are very significant areas that facilitate in preventing loss of biodiversity and promote conservation of fauna and flora resources which have centered upon the establishment as well as expansion of protected areas (IPBES, 2019). Protected areas, including forest reserves have continued to increase in numbers and size over the years which has caused great popularity in the protected areas but this expansion has not been able to curb the reduction in number of biodiversity inherent in these protected areas due to the fact that these protected areas do not have effective management system in place (Leverington *et al*., 2010). Also, there has been low involvement of the local community in the management of protected areas and this has created huge challenge in the management of these areas (Zhou and Grumbine, 2011). Attitude of people stems from their belief system, experience and relationship with certain phenomenon which could be negative or positive (Nilsson *et al.*, 2020). This has shown that attitude is a strong pointer of behavioural choice in human beings about certain things (Vaske and Manfredo, 2012). Some studied have identified that merits generated from protected areas is a strong influence for the involvement of local communities in conservation efforts in protected areas (Tumusiime *et al*., 2018). Some of these benefits could involve the empowerment of women in the community (Arowosafe *et al*., 2020) which would ensure continuous support of people benefiting from these protected areas towards conservation efforts. It is important to garner the support of local people in the

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management of protected areas because local communities play a huge role in the conservation activities of these protected areas (Zhu *et al*., 2014). While generating support of local people for wildlife conservation, it is pertinent to also understand their attitude and how they perceive these protected areas so that such knowledge can be utilized in the effective management of protected areas (Holladay and Ormsby 2011). According to past events, it has been noted that conservation strategy in protected areas has focused on the prevention of human activities which are considered not suitable with conservation in protected areas (Oldekop *et al*., 2016). Local people had possessed these lands long ago for their use before the lands were gazetted as protected areas and these local people were restricted from further usage of the land (Lele *et al*., 2010). These restrictions and inadequacy of alternative livelihood for these local people who had once depended on resources from these lands have instigated people to start using illegal means in order to utilize the biodiversity resources present in the protected areas (West *et al.*, 2006). It is therefore important to find out the attitude and involvement of these local people on nature conservation in order to find out if they support conservation or not and how policies can be made to ensure positive attitude from them towards conservation.

## MATERIALS AND METHODS

This study was conducted in Idanre forest reserve (Figure 1), located in the south western part of Nigeria. Idanre forest reserve is located in Idanre Local Government Area of Ondo State, Nigeria. The target population were the local communities living around 10km away from the Forest. Multi-staged sampling was employed for use in this study. The first stage involved purposive selection of communities situated at ten kilometers to the forest reserve which include Alepa, Ayebamibo, Ayebamibo Okolo, Idi Araba and Jimgbe communities. The second stage involved purposive selection (Abidakun and Tunde-Ajayi, 2021) of community residents who are knowledgeable about forest reserves. One hundred copies of questionnaire were filled and returned for analysis. The questionnaire solicited information on the Socio-Demographic characteristics of respondents, level of respondents' awareness of the forest, the respondents' attitudes and perceptions towards conservation of Idanre Forest reserve, the factors that evoke positive/negative attitudes and respondents willingness to support conservation efforts. Data obtained from the study areas were analyzed using Statistical Package for Social Sciences (SPSS, 21). Data obtained from the study was presented descriptively and inferentially. Descriptive statistics involved the use of tables, charts, means and standard deviation while inferential statistics involved the use of one way ANOVA.

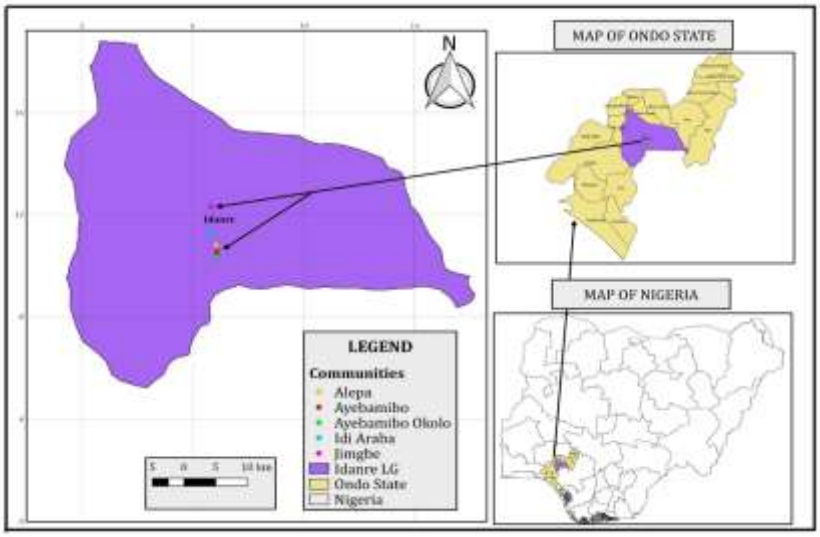


**Fig 1:** Map of Idanre showing the study areas
Source: Amoo & Anyanwu (2023)

## RESULTS AND DISCUSSION

*Socio-demographic characteristics of community members:* Table 1 reveals the socio-demographic characteristics of community members of Idanre Forest Reserve. Majority of the members were males (62%) while 38% were females as supported by Alhassan (2010) in his findings in Ghana indicating that most forest dwellers are males. Also, majority of the community members were in the age range of 20-29 years (47%). This indicates that the community members were mostly in their youthful and energetic age range as supported by Mboma (2021). The

community residents were mostly crop farmers (65%) and are in line with findings by Jallah *et al.* (2017) which revealed the same.

**Table 1:** Socio-demographic characteristics of community members

| Variables | Frequency (N=100) | Percentage (%) |
|---|---|---|
| **Gender** | | |
| Male | 62 | 62.0 |
| Female | 38 | 38.0 |
| **Age** | | |
| Below 19 years | 15 | 15.0 |
| 20-39 years | 47 | 47.0 |
| 40-59 years | 30 | 30.0 |
| Above 50 years | 8 | 8.0 |
| **Occupation** | | |
| Crop farmer | 65 | 65.0 |
| Fisherman | 2 | 2.0 |
| Unemployed | 9 | 9.0 |
| Others | 24 | 24.0 |
| **Marital status** | | |
| Single | 29 | 29.0 |
| Married | 59 | 59.0 |
| Divorced | 4 | 4.0 |
| Widowed | 8 | 8.0 |
| **Education level** | | |
| None | 26 | 26.0 |
| Primary | 27 | 27.0 |
| Secondary | 41 | 41.0 |
| College and above | 6 | 6.0 |
| **Household size** | | |
| 1-5 | 49 | 49.0 |
| 6-10 | 47 | 47.0 |
| 11-15 | 4 | 4.0 |
| **Origin** | | |
| Indigene | 47 | 47.0 |
| Non-indigene | 53 | 53.0 |
| **Years of residency** | | |
| 1-5 years | 21 | 21.0 |
| 6-10 years | 39 | 39.0 |
| 11-15 years | 17 | 17.0 |
| 16-20 years | 17 | 17.0 |
| Above 20 years | 6 | 6.0 |
| **Frequency of visit** | | |
| Everyday | 29 | 29.0 |
| Once a week | 29 | 29.0 |
| Once a month | 21 | 21.0 |
| Once a year | 7 | 7.0 |
| Never | 14 | 14.0 |

They were mostly married (59%) with household size of one to five individuals as household size. Their marital status is in line with findings by Ocida (2017) who recorded majority of the community residents to be married. The education level of the community members revealed that majority had secondary education (41%) and this is a low form of education which is line with study by Zande and Mzuza (2022) on community residents around forest reserve. Furthermore, highest percentage of the community members were non-indigenes (53%) living in the community for 6-10 years (39%) and had visited the Idanre Forest reserve daily or once a week (29%) indicating they would be familiar with the reserve resources and they visit the forest reserve regularly which could be due to its proximity to their houses.

*Awareness of Forest Reserve:* Figure 2 reveals that majority of the community members were aware of Idanre forest reserve (97%) while 3% were not aware. Figure 3 reveals that majority of the community members had been aware of the forest reserve for 6-10 years (37%), 20% had been aware for 1-5 years, 20% had also been aware for 11-15 years, 6% had been aware for 16-20 years and 17% had been aware for above 20 years. Figure 4 reveals that majority of the community members were aware of regulations governing the forest reserve (75%) while 25% were not. Figure 5 reveals that majority of the community members believed that logging is a prohibited activity in the reserve (48%), 18% chose bush burning, 9% chose entry into the park while 25% had no idea. These activities are capable of destroying the forests as supported by Mboma (2021) that forests' destruction is occurring at rapid rates via the occurrence of fires in bushes as well as logging of woods indiscriminately. Figure 6 reveals that majority of the community member do not know reasons for regulations within the reserve (61%), 24% believed the regulations are meant to avoid destruction while 15% believed the regulations are to ensure continuity.

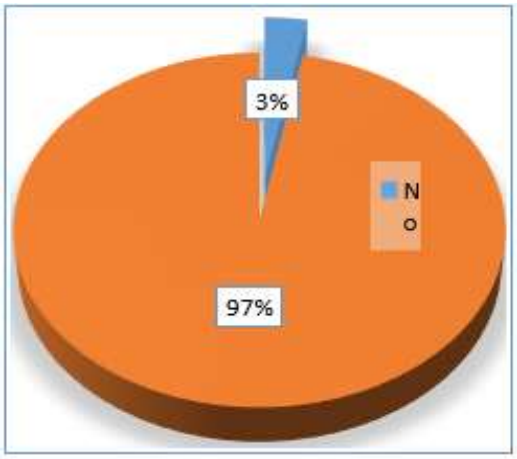


**Fig 2:** Awareness of forest reserve

This indicates that the reserve management is not doing enough to educate these community members about reasons for regulations and this could endanger conservation efforts. Therefore, there is need for awareness as well as proper sensitization of community residents on reasons for regulations as part of conservation efforts in the reserve as supported by Roe *et al.*, (2015) that alternative livelihoods and awareness by the local communities through training and applying community-based conservation approaches can reduce threats to the natural resources.

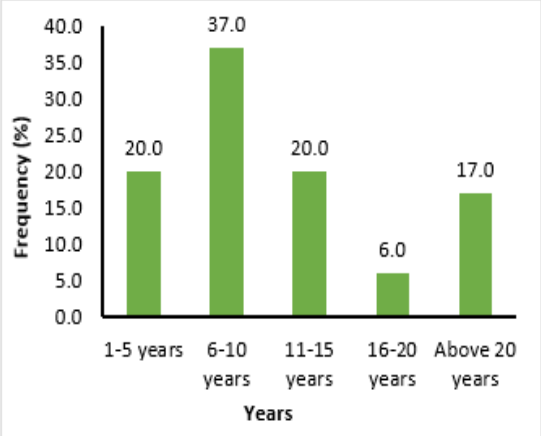


**Fig 3:** Length of awareness of forest reserve

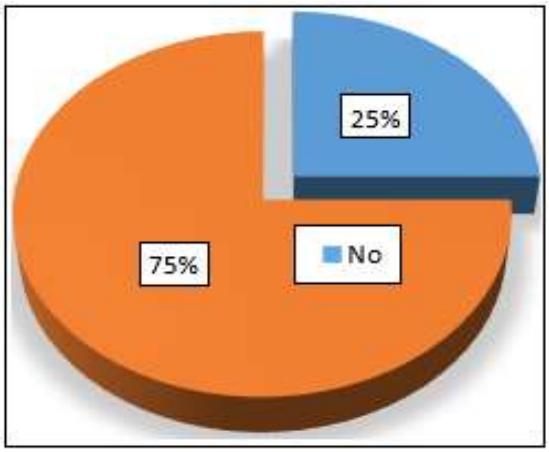


**Fig 4:** Regulations at forest reserve

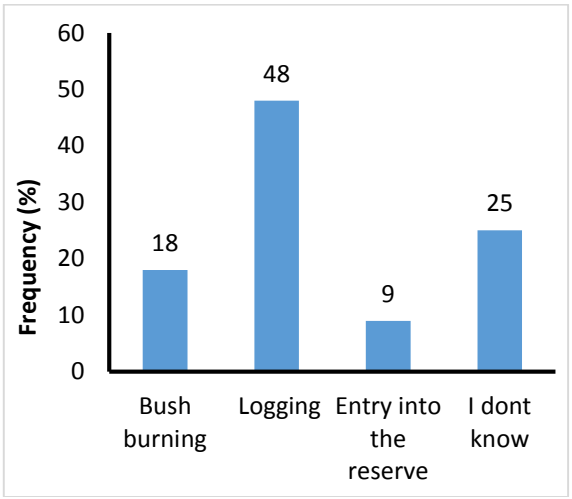


**Fig 5**: Activities prohibited in the reserve

Figure 7 reveals that majority of the community members opined that timber is the product obtained from the forest reserve (70%), 16% chose game meat while 14% chose other products. Figure 8 reveals that majority of the community members revealed that elephant is the indigenous species found in the reserve (42%), 21% chose mahogany, 17% chose antelope while 20% have no idea.

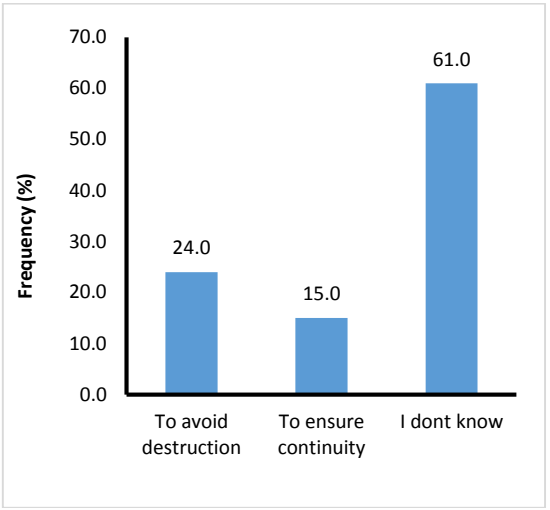


**Fig 6:** Reasons for regulations

Figure 9 reveals that majority of the community members still encounter the indigenous species in the forest reserve till date (80%), while 20% have no idea. This further indicates the dire need for conservation measures in this reserve due to the important products and advantages it has for humanity as supported by Ernawati *et al.* (2021) that forest products resulting from both plants and animals help in sustaining the earth in many ways like food, fodder, fiber traditional medicine, agricultural amenities, domestic materials, construction materials, and many more. Figure 10 reveals that majority of the community members agreed that they are involved in the management of the forest reserve (79%) while 21% disagreed. Involvement of community members in management of resources ensures their support for continuous existence of those particular resources as supported by Kyeremeh, (2015) that the active roles of the communities in planning and development of forest management policies involves taking initiatives and participation in protecting the forest from outsiders' actions, and also in decision making regarding the use of forest resources.

*Attitudes and Perceptions towards Conservation of Idanre Forest Reserve (IFR):* Table 2 reveals that majority of the community members support the designation of the Idanre Forest Reserve (65%) while 35% do not support it. However, majority of the members claimed they do not benefit from the reserve (72%) while 28% claimed the benefit. They also claimed there is no adequacy of benefits from the reserve (96%) while 4% claimed there is adequacy. Also, majority of the members claimed management

often seek community audience on issues relating to the forest reserve (71%) and the community members believe they should be involved in planning and conservation of the reserve (99%).

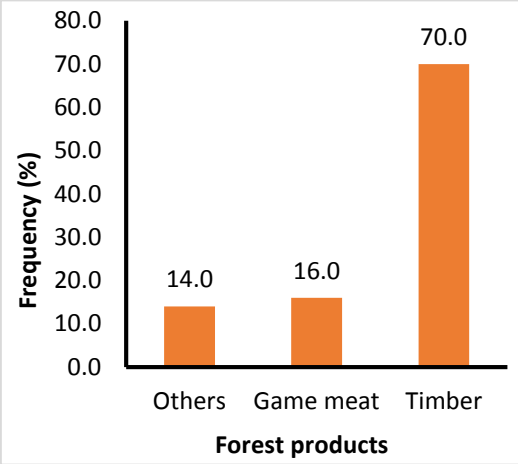


**Fig 7:** Products from the forest reserve

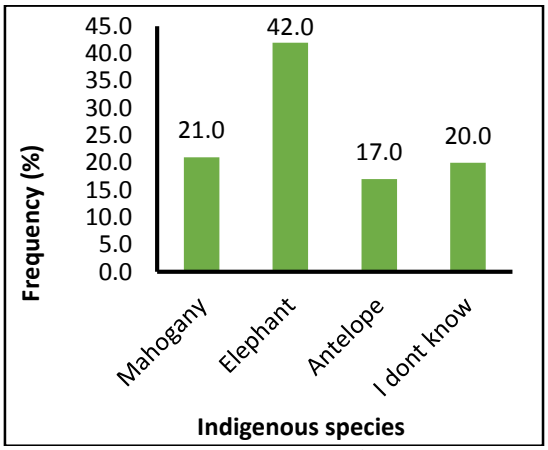


**Fig 8:** Indigenous species in the forest reserve

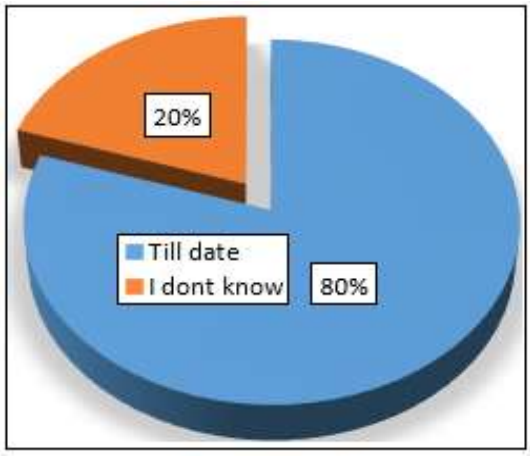


**Fig 9:** Frequency of encountering indigenous species

**Furthermore, the community members suggested** that more employment is a way of improving benefit from the reserve (99%). Their assertions are valid for sustainability of the forest as supported by Bhandari, (2010) who found that forest has been a source of income and employment for rural community especially through intercropping of cash crop, cultivation of non-timber forest products and medicinal plants

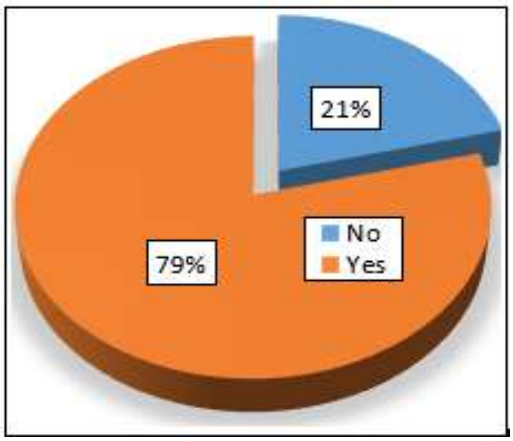


**Fig 10:** Involvement of Community in the Management of the Reserve

**Table 2**: Attitude and perception towards conservation of IFR

| Variables | Frequency (N=100) | Percentage (%) |
|---|---|---|
| **Support for designation of IFR** | | |
| No | 35 | 35.0 |
| Yes | 65 | 65.0 |
| **Benefit from IFR** | | |
| No | 72 | 72.0 |
| Yes | 28 | 28.0 |
| **Adequacy of Benefits from IFR** | | |
| No | 96 | 96.0 |
| Yes | 4 | 4.0 |
| **Management seeking community audience** | | |
| Very often | 15 | 15.0 |
| Often | 71 | 71.0 |
| Not often | 7 | 7.0 |
| I dont know | 7 | 7.0 |
| **Community members should be involved in planning and conservation** | | |
| No | 1 | 1.0 |
| Yes | 99 | 99.0 |
| **Ways of improving benefit** | | |
| More employment | 88 | 88.0 |
| Stakeholders to increase revenue sharing | 6 | 6.0 |
| Others | 6 | 6.0 |

*Factors Affecting Attitude Towards Idanre Forest Reserve***:** Figure 11 reveals that majority of the community member have negative attitude towards the Conservation of Idanre Forest Reserve (93%) while only 7% have a positive attitude towards it. Table 3 reveals that majority of the community member claimed that a major factor affecting their attitude towards conservation of the reserve is unemployment (45%), 33% claimed it is unfriendly nature of the

management of the reserve, 15% claimed its poor sensitization and 7% claimed its time and nature of their work. This is dangerous for the sustainability of the forest reserve as community members might start reducing their support for the reserve which could make conservation efforts challenging. This is supported by Jallah *et al.*, (2017) that if the communities do not receive any benefits, they are mostly likely to withdraw from participating in forest management.

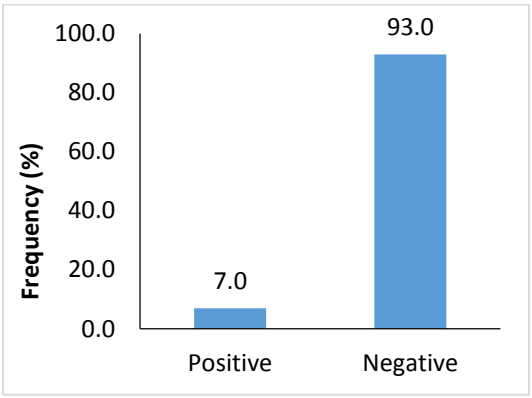


**Fig 11:** Attitude towards conservation of Idanre Forest Reserve

**Table 3:** Factors affecting attitude towards conservation of Idanre Forest Reserve

| Factors | Frequency (N=100) | Percentage (%) |
|---|---|---|
| Unemployment | 45 | 45.0 |
| Time and nature of work | 7 | 7.0 |
| Poor sensitization | 15 | 15.0 |
| Unfriendly nature of park management | 33 | 33.0 |

Table 4 reveals that majority of the community members suggested that more incentives should be provided or creation of alternative livelihood for them (44%) as solutions to their poor attitude towards conservation of the reserve. 20% claimed the forest management should be friendly, 15% claimed free access to the forest while 10% claimed improved sensitization as a solution to poor attitude towards the forest reserve. This is in line with study by Apipoonyanon *et al.*, (2020) which revealed that community members will participate in forest management only if they are sure of the economic benefits that they can obtain from the forest through their participation. They also claimed the forest management should be friendly and improved sensitization should be done so as to encourage positive attitude towards the forest reserve. This is supported by Anggraini and Gunawan (2021) who revealed that community awareness through sensitization of community residents on benefit of participation on forest management motivated a lot of people to start getting involved in the management of their forests.

**Table 4:** Suggested solutions to poor attitude

| Solutions | Frequency (N=100) | Percentage (%) |
|---|---|---|
| Free access to the forest | 15 | 15.0 |
| Friendly nature of forest management | 20 | 20.0 |
| More incentives/creation of alternative livelihood | 44 | 44.0 |
| Improved sensitization | 10 | 10.0 |
| Nothing | 11 | 11.0 |

*Difference in Involvement and Attitude towards Conservation of Idanre Forest Reserve:* Table 5 reveals that there is a significant difference in the communities' involvement in the management of Idanre Forest Reserve (P=0.039) while there is no significant difference in the attitude of the communities towards the conservation of Idanre Forest Reserve.

**Table 5:** Difference in involvement and attitude of community members towards Idanre Forest Reserve

| Variables | f value | Sig. value | Decision |
|---|---|---|---|
| Involvement | 2.638 | 0.039 | Significant |
| Attitude | 2.233 | 0.071 | Not significant |

*P<0.05*

*Conclusion:* This study concludes that communities' attitude to Idanre Forest Reserve was generally negative. The community members claimed they are involved in the management of the reserve but the major factor responsible for their negative attitude was lack of benefit from the reserve. It is therefore pertinent for forest reserves to actively involve local communities in the beneficial management of protected areas so as to gain their support and positive attitude towards conservation.

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