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ORIGINAL ARTICLE

ASSESSMENT OF SUPPORT ZONE PROGRAMME IN SELECTED COMMUNITIES OF OKOMU NATIONAL PARK, NIGERIA

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Abstract

Programmes for support zone communities have been found to be an essential tactic for improving socioeconomic lives while encouraging biodiversity conservation. This paper investigated the support zone communities programs targeted at local livelihoods of six communities dwellers around Okomu National Park Nigeria, how the programme affect their livelihoods. Questionnaires, Focus Group Discussions (FGDs), and interviews were the methods used for data collection. A total of 350 households were purposively sampled out of which four (4) Key Informant Interviewee (KII) were identified for the study. They are those based on with in-depth understanding of the programmes in the support zone communities, these include representatives of non-governmental organizations (NGOs) active in the support zone villages, park official, and community leader. Data analysis for the study include both qualitative and quantitative approaches. Qantitative data were subjected to descriptive analyses using SPSS version 23 software, the information gathered from the interviews and focus group discussions were subjected to a thematic analysis utilizing (NVivo14) software and the results were presented descriptively (Word Cloud, and Explore Diagram). Results revealed that 60.9% admitted that the support zone communities programme positively affected their livelihood through improved wellbeing drawn from benefits derived from the programmes. Majority 86% of the households were positive about the programmes as a result of impact of the programmes on their livelihood, 39.1% admitted the programmes were not targeted at their livelihoods, based on their own perception of the programmes as they were not well carried along with execution of the programmes.

Key words: Communities, Support Zone Programmes, National Park, Livelihoods, Assessment.

Introduction

Conservation of biodiversity and support for local livelihoods are two interdependent concepts that require a balanced approach to promote sustainable development. Over the years, several strategies have been implemented to address the challenges posed by support zone communities on the Nigeria's National Parks' biodiversity and local livelihoods. One of these strategies is the support zone communities programmes, which aim to enhance the socio-economic conditions of the local communities while promoting biodiversity conservation. According to Tabish (2003), it is imperative that socioeconomic needs of communities within support zones be taken care of in order to promote sustainable development. Programmes for support zone communities have been found to be an essential tactic for improving the socioeconomic circumstances of these communities while encouraging the conservation of biodiversity

and sustainable development. Despite rich biodiversity, most of the forest under conservation are under threat due to human activities, such as logging, farming, hunting, mining and Non-Timber Forest Products.

The Support Zone Communities Programs (SZCPs) were established to mitigate these threats, simultaneously promoting local livelihoods and biodiversity conservation. The SZCPs provide alternative sources of income for the local communities while educating them on the importance of conservation. A rising number of people are interested in assessing how these programs affect local lives and biodiversity conservation. Research has demonstrated that community-based conservation initiatives can both preserve biodiversity and enhance local livelihoods (Parsekian *et al*., 2015).

Research is still needed to fully understand the effects of support zone communities initiatives on local livelihoods and biodiversity conservation, even in spite of the notable progress made in supporting sustainable development in these communities. This study, therefore investigates how support zone communities' initiatives in Okomu National Park affect local livelihoods.

Materials and Methods

Study Area

The study was carried out in Okomu National Park Edo State, located in the southern part of Nigeria, about 60 kilometers northwest of Benin City. It covers an area of 202 Km^2 and located at latitude 6^0 10^1 N and longitude 5^0 3^1E (Fig. 1). It is primarily designated for the habitat preservation and conservation of the Nigerian White-throated monkey *Cercopithecus erythrogaster pococki*, it was the smallest of all the National Parks in Nigeria prior to creation of ten new National Parks and established by Decree Number 46 of 1999 (National Parks Decree).

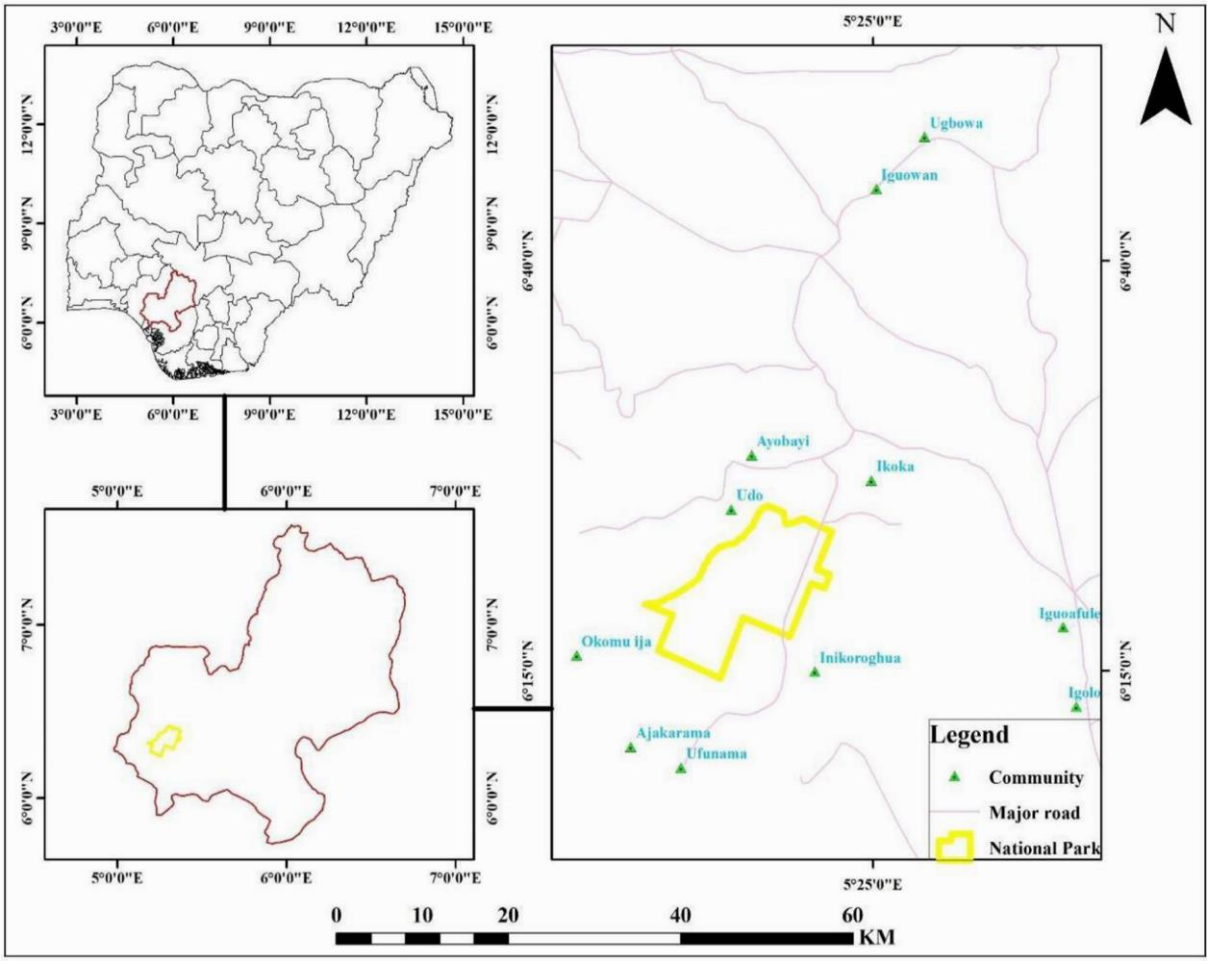

Fig.1: Map of Okomu National Park showing Support Zone Communities

The Park is home to various wildlife species, including endangered ones like the forest Elephant *Loxondota africana cyclotis*, Chimpanzee *Pan troglodytes*, and White-throated guenon *Cercopithecus erythrogaster pococki*. The park is surrounded by 45 villages and settlements which provide support to the park's conservation efforts through community-based programmes. The support zone communities include Udo, Ero, Imona, and others, with a total population of over 20,000 people (Okomu National Park, 2021).

Data Collection

Stratified sampling technique was employed to select Six (6) such as (Hassan, Ugolo, Ikoka, Iguafole, Udo, and Maroghinoba AT & P communities) out of the twelve (12) adjacent communities (Hassan, Igbonoba, Ajakurama, Inikiroghua, Ofunama, Ugolo, Ikoka, Iguoafole, Iguowan, Udo, Maroghinoba AT & P, and Okomu communities) surrounding the park. Survey Monkey sample calculator with 95% confidence level and ±5 Margin of Error was used to extrapolate the results of the entire population as used by (SCERA 2022). A total of 350 household sample size were utilized. Residents of the communities with in-depth understanding of the programmes run in the support zone communities were purposively selected as key informants, and therefore interviewed. The key informants include representatives of non-governmental organizations (NGOs) active in the support zone villages, park official, and community leader. Field surveys, questionnaires, focus group discussions (FGDs), and interviews were the methods of data collection. Survey Monkey formula;

$$\frac{\frac{z^2 \times p(1-p)}{e^2}}{1+\left(\frac{z^2 \times p(1-p)}{e^2 N}\right)}$$

e = margin of error (asa decimal) z = confidence level (asa z-score)
p = percentage value (a s a decimal)

Statistical Analysis

Data collected from the study were analyzed using the Statistical Package for Social Sciences (SPSS version 23) software. This software was used to perform descriptive (frequency count, percentage, mean, standard deviation). The information gathered from the interview was subjected to a thematic analysis utilizing (NVivo14) software and the results were presented descriptively (Explore Diagram and Word Cloud).

Results and Discussion

Socio-Demographic Characteristics

Finding from this study as presented in Table 1 shows that there were more male 57.4% respondents than female, this is in tandem with report from Wuleka, *et al.*,(2013) in Mole National , Damongo, Ghana, that 68% of the local residents were males, also, Asmamaw and Verma (2013) also in their report, 85% of the respondents in Bale Mountains National Park in Ethiopia were males.

The study shows that 28.0% of the respondents falls within the age group of 36-45 years of age, this is in agreement with the findings of Adeleke, and Nzama, (2013) in Hhuhuwe-Umfolozi Park, South Africa that 75.9%of the residents falls within the age group of 18-44 years old. Furthermore, 63.4% of the respondents were married, this agrees with the findings of Oghenetejiri, *et al.*, (2016) that 58.98% of residents around Okomu National Parks were married, this is inconsistent with the report of Adeleke and Nzama, (2013) in Hhuhuwe- Umfolozi Park, South Africa that 66% of the local dwellers as single.

Table 1: Socio-demographic Characteristics of Community Residents (N=350)

Variables	Frequency	Percentage %
Gender		
Male	201	57.4
Female	149	42.6
Age (Years)		
18-25	51	14.6
26-35	94	26.9
36-45	98	28.0
46-55	66	18.9
56-65	28	8.0
66 and above	13	3.7
Marital Status		
Single	107	30.6
Married	222	63.4
Divorced	13	3.7
Widowed	8	2.3
Religion		
Islam	19	5.4
Christianity	294	84.0
Traditional	31	8.9
Others	6	1.7
Nationality		
Nigerian	348	99.4
Foreigner	2	0.6
Level of Education		
Primary	83	23.7
Secondary	170	48.6
Tertiary	68	19.4
Non formal education	21	6.0
Others	8	2.3
Occupation		
Hunting	11	3.1
Trading	109	31.1
Farming	120	34.3
Fishing	17	4.9
Civil servant	55	15.7
Others	38	10.9

Source: Field survey, 2024

The study also reveals that 84.0% practiced Christianity religion being the majority, this is inconsistent with findings of Ogunjinmi, *et al.,* (2012) that reported 70% of local residents around Nigeria National Parks as Muslims. The results show that 48.6% of the respondents had secondary education which agrees with Oghenetejiri *et al.,* (2015) reports that 44.4% of the host communities in Okomu National Park educational level was secondary school certificate. Greater percentage (34.3%) of the respondents were farmers, which is in tandem with Ogunjinmi, (2014) that majority of residents around Nigerian National Parks were farmers, also, Wuleka, *et al.,* (2013) observed that 48% of residents around Mole National Park were farmers. Furthermore, 3.1% had hunting as their occupation, and this is an indication that hunting is not lucrative as residents around Okomu National Park have awareness of conservation of biodiversity.

Socio–economic Characteristics

The Socio-economic characteristic of the Support Zone Communities residents (table 2) revealed that 50.3% earn between ₦20,001 - ₦100,000 as the highest monthly income, this was followed by < ₦20,000 with 20.6% while only 1.4% earn above ₦ 400,000 per month. The mean and standard deviation for monthly income is 2.29 and 1.11 respectively. The report by Ogunjinmi *et al*. (2012) indicates that a higher

proportion of the respondents have an average income, which contradicts the findings that indicate 86.2 percent of the local residents living around Nigerian national parks had poor incomes.

Table 2: Socio–economic Characteristics of Community Residents

Variables	Frequency	Percentage %	Mean	Std. Deviation
Monthly income			2.29	1.11
<20,000	72	20.6		
20,001 - 100,000	176	50.3		
100,001 - 200,000	59	16.9		
200,001 - 300,000	18	5.1		
300,001 - 400,000	20	5.7		
>400,000	5	1.4		
Length of stay in the community			2.54	1.20
<5years	95	27.1		
5 - 10years	84	24.0		
11 - 20years	59	16.9		
>20years	112	32.0		
Household Size			1.46	0.70
1-5	220	62.9		
6-10	111	31.7		
11-15	8	2.3		
16 – 20	11	3.1		
No of people in household that are earning income			1.10	0.37
1 – 5	323	92.3		
6 – 10	22	6.3		
11 – 15	3	0.9		
16 – 20	2	0.6		
Perceived household wellbeing in the past 5years			2.23	0.56
Bad	24	6.9		
Average	221	63.1		
Good	105	30.0		
Has there been SZCP targeted at local livelihoods			1.40	0.49
Yes	211	60.3		
No	139	39.7		

Source: Field survey, 2024

The length of stay of respondent shows 27.1% have lived in the Support Zone Community for less than five years (<5 years), 24.0% have stayed between 5-10 years, 32.0% have stayed more than 20 years and 16.9% being the lowest have lived in the Support Zone Community, between 11-20 years. The mean and standard deviation of resident length of stay is 2.54 and 1.20 respectively. More than half of the respondents (62.9%) (1-5 people) lived in a household. In line with the findings of Oghenetejiri *et al*. (2015), groups of three to five family members were discovered in Okomu National Park, which is consistent with the findings of Oghenetejiri *et al.* (2015), followed by 31.7% (6-10 people), with 2.3% (11-15 people) being the lowest. The mean and standard deviation for number of persons that live in the

household is 1.46 and 0.70 respectively. Majority of the respondents (92.3%) (1-5) people living in the household earn income, this was followed by 6.3% (6-10) and the least being 0.6% (16-20), the mean and standard deviation are 1.10 and 0.37 respectively. The population's well-being has a mean of 2.23 and a standard deviation of 0.56, with 63.1% being average, 30.0% being good, and 6.9% being poor. Evidence that the park's support zone community programmes are having a positive impact. The mean and standard deviation for the support zone communities programmes aimed at people's livelihoods are 1.40 and 0.49, respectively. About 60.3% of respondents acknowledged that the programmes were aimed at their livelihoods, while 39.7% did not.

Support Zone Community Programs I dentified

An overview of the community support zone initiatives found in the study area is shown in Figure 2. The park hosted a number of programmes, including training in agroforestry, recruiting for the African Nature Investor Foundation (ANI), aquaculture, beekeeping, the Green Bond initiative, the Grievance Redress Committee, and the Okomu Stakeholder Platform.

Support Zone Programs Targeted at Local Livelihoods

Programs for local livelihoods in support zone villages are shown in Figure 3. The majority of respondents (60.9%) acknowledged that the programs in the support zone communities were aimed at their local means of subsistence, whilst 39.1% said that this was not the case.

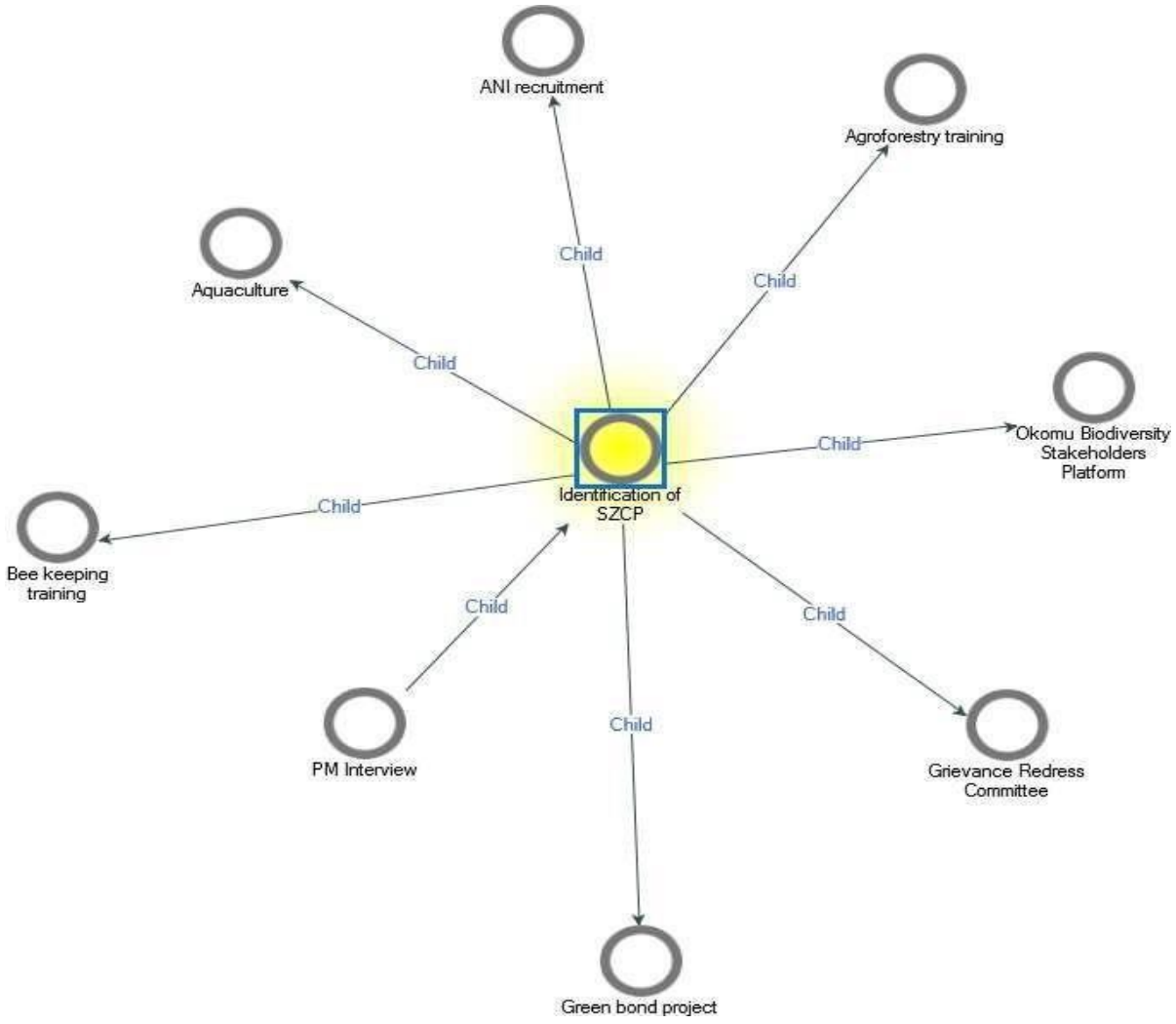

Figure 2: Support Zone Communities Programs (Explore diagram)

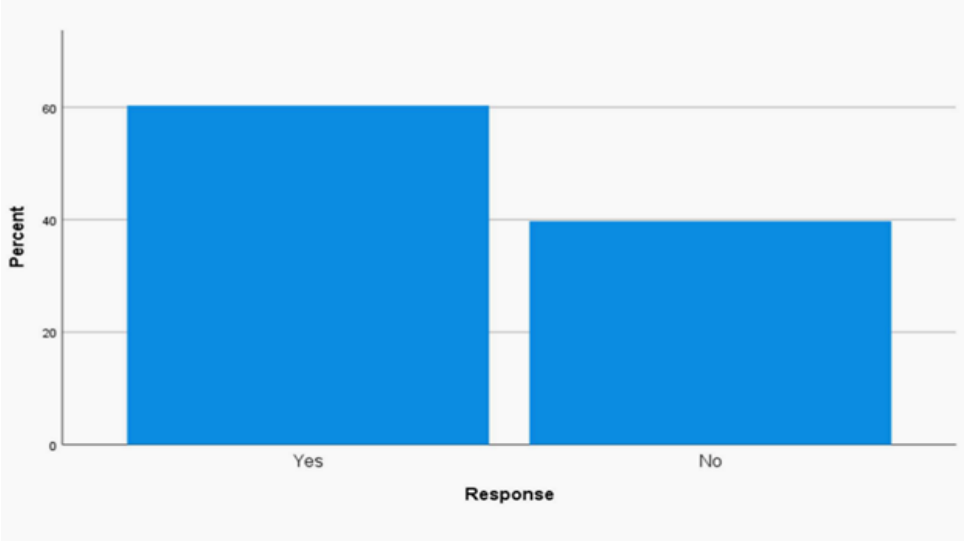

Figure 3: SZPs Targeted at Local Livelihoods

The following community support zone programmes were identified based on the in-depth interview conducted, as shown in table 3: training on agroforestry (mean of 3.29), green bond project (mean of 3.16), recruitment for the Africa Nature Investor Foundation (ANI) (mean of 3.40), training equipment and fingerlings supply (mean of 3.13), and training on beekeeping and honey production (mean of 3.23).

Table 3: Impacts of the Support Zone Programs on Communities

Programs Std. Deviation	**HNI**	**NI**	**N**	**I**	**HI**	**Mean**	
Okomu Biodiversity Stakeholders Platform	10.6	7.4	58.3	19.4	4.3	2.99	0.93
Training on Agroforestry	1.03	5.4	10.0	50.0	18.9	15.7	3.29
ANI Recruitment of Community Rangers	5.1	9.4	44.3	22.3	18.6	3.40	1.05
Training on Bee Keeping and honey production	5.1	13.4	49.7	16.9	14.9	3.23	1.03
Grievance Redress Committee	5.4	13.7	61.7	15.7	3.4	2.98	0.81
Green Bond Project Arable Crops Planted	4.9	11.4	56.0	18.0	9.7	3.16	0.92
Training equipment and fingerlings supply	7.4	15.7	44.6	20.9	11.4	3.13	1.05

HNI: Highly Not Impactful, NI: Not Impactful, N: Neutral, I: Impactful, HI: Highly Impactful

Decision rule: Any mean = or above 3.00 should be accepted
Source, Field Survey: 2024

These programmes were accepted and had an impact on the communities. This corroborate the findings of Kamala and Devanand (2021) that the value addition of beekeeping products gives women and others who are essentially untrained in beekeeping the chance to benefit from their traditional talents. As a result of the diversification of revenue sources and the efficient use of the resources at hand, there are now more job opportunities and better livelihood activities that are transforming the rural environment.

The Nigeria Conservation Foundation (NCF) is currently sponsoring the Green Bond Project, a program that was implemented in three communities: Iguoafole, Ugolo, and Nikorowa.

The communities donated 10Ha, 15Ha, and 15Ha of land, respectively, for the planting of arable crops like mango, budded oranges, and African rose wood. The project is turned over to the leaders of the communities and is expected to support their livelihoods in exchange. The Okomu National Management and the Edo State Government inked a 30-year conservation efforts agreement with the Africa Nature Investor Foundation, a non-governmental organization. Due to the involvement of numerous stakeholders, including the hiring of young people as park rangers and the distribution of loans to women for agribusiness empowerment, the initiative had a huge influence on all of the Park's support zone communities. In line with the findings of Imam et al. (2022), which indicated that agroforestry has the potential to enhance rural communities' cultural activities, promote gender equality, increase food security, and boost smallholders' income, empowerment programs like agroforestry, beekeeping, and aquaculture were among those aimed at enhancing the wellbeing of the residents of the support zone communities.

The impact of the Okomu Biodiversity Stakeholders Platform (OBSP) and the Grievance Redress Committee was less than what others had previously claimed, with a mean below 3.00. The Okomu Biodiversity Stakeholders Platform (OBSP), a program platform that spreads conservation awareness and has greatly aided in biodiversity conservation, is in line with the SCERA (2022) report that found a discernible increase in community members' familiarity with the terms biodiversity, sustainability, and conservation. Our data, however, indicates that a vast majority of respondents think that more needs to be done to educate the local population about conservation and support village meetings as the most effective way to raise awareness.

Word Clouds

Word clouds presented in Figures 4a, 4b, and 4c demonstrated that training was the most popular program, that it improved the livelihoods of the community members, and that the support zone villages welcomed the programs.

Figure 4a: Identification of Support Zone Communities Programs (Word Cloud)

Figure 4b: Impact of Support Zone Communities Programme (Word Cloud)

Figure 4c Impact of Support Zone Programs on Communities (Word Cloud)

Conclusion

According to the research's findings, seven support zone communities programs were found, and they directly affect the well-being and standard of living of the local populations surrounding Okomu National Park while also promoting the growth of biodiversity. Restoring the park's depleted resources has been

made possible in large part by interventions from the ANI Foundation initiative programs, such as hiring young people to work as park rangers and giving loans to women.

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