



ECO-SPIRITUALITY, FAITH-BASED ORGANIZATIONS, AND ENVIRONMENTAL SUSTAINABILITY: EVIDENCE FROM JOS METROPOLIS, NIGERIA

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Abstract

Environmental degradation remains a critical challenge in Nigeria, particularly in rapidly urbanizing areas where population growth, land-use change, poor waste management, mining activities, and inadequate environmental governance continue to threaten ecosystem stability. While conventional environmental management approaches have largely emphasized technological and regulatory solutions, increasing scholarly attention has focused on the role of religious values and faith-based organizations (FBOs) in promoting environmentally responsible behaviours. This study examined the role of eco-spirituality and faith-based organizations in promoting environmental sustainability in Jos Metropolis, Plateau State, Nigeria. The study adopted a mixed-methods research design involving quantitative and qualitative approaches. A structured questionnaire was administered to 400 respondents selected through a multistage sampling technique from selected Christian and Islamic faith-based organizations in Jos North and Jos South Local Government Areas. In addition, key informant interviews were conducted with religious leaders, environmental officers, and FBO environmental committee members, while field observations were used to assess environmental practices within selected worship centres. Data were analysed using descriptive statistics, Pearson Product Moment Correlation, and multiple regression analysis. The findings revealed that environmental education and awareness programmes were the most common environmental initiatives undertaken by FBOs (Mean = 3.30), followed by environmental sanitation activities and tree-planting programmes (Mean = 3.10). The study further found a significant positive relationship between eco-spirituality and environmental sustainability practices ($r = 0.62, p < 0.05$). Regression analysis showed that eco-spirituality ($\beta = 0.31, p < 0.001$), environmental education ($\beta = 0.28, p < 0.001$), and leadership commitment ($\beta = 0.22, p = 0.002$) significantly predicted FBO environmental sustainability initiatives. However, inadequate funding, limited technical capacity, and weak institutional collaboration constrained the effectiveness of these programmes. The study concludes that faith-based organizations possess considerable potential to strengthen environmental sustainability through value formation, environmental education, and community mobilization. It recommends stronger partnerships between government agencies, environmental institutions, and faith communities to integrate eco-spirituality into environmental governance strategies in Jos Metropolis.

Keywords: Community participation; Eco-spirituality; Environmental stewardship; Environmental sustainability; Faith-based organizations

INTRODUCTION

Background to the Study

Environmental sustainability has become one of the most significant development challenges of the twenty-first century due to increasing ecological pressures associated with climate change, biodiversity loss, land degradation, pollution, unsustainable resource exploitation, and rapid urban expansion. Human activities have altered natural systems at unprecedented levels, threatening ecosystem services and the capacity of the environment to support human well-being. The Intergovernmental Panel on Climate Change (IPCC, 2023) notes that climate-related risks are intensifying globally, with developing regions experiencing disproportionate impacts due to limited adaptive capacity and increasing socioeconomic vulnerabilities. Similarly, the United Nations Environment Programme (UNEP, 2024) emphasizes that achieving environmental sustainability requires not only scientific innovation and effective policies but also fundamental changes in human values, ethical orientations, and patterns of interaction with nature. In recent years, environmental scholars have increasingly recognized that ecological crises are not solely technical problems but also ethical and cultural challenges. The concept of eco-spirituality has therefore emerged as an important framework for understanding the relationship between human beings, spirituality, and the natural environment. Eco-spirituality emphasizes the interconnectedness of all forms of life and promotes the idea that nature possesses intrinsic value beyond its economic usefulness. Scholars such as Berry (1999), McFague (2008), and Boff (2017) argue that environmental degradation is partly rooted in a crisis of human consciousness and moral responsibility. From this perspective, sustainable environmental management requires a transformation of human attitudes, beliefs, and behaviours towards creation. Religious traditions have historically provided ethical principles that influence human relationships with the environment. Within Christianity, the concept of stewardship emphasizes humanity's responsibility to care for creation rather than exploit it. The biblical injunction to "cultivate and preserve" creation has increasingly been interpreted by contemporary theologians as a call for ecological responsibility. Pope Francis' encyclical *Laudato Si'* (2015) further strengthened this perspective by emphasizing ecological conversion, environmental justice, and the interconnectedness between environmental degradation and social inequality. Similarly, Islamic environmental ethics promote the concept of *khalifah*, which presents humans as trustees responsible for protecting the Earth and using natural resources responsibly. These shared religious values provide a foundation for faith-based environmental action. Faith-based organizations (FBOs) occupy a strategic position in environmental sustainability because of their extensive community networks, moral influence, and ability to shape social values. Churches, mosques, religious schools, and faith-based development organizations interact regularly with large populations through worship, education, humanitarian activities, and community development programmes. Consequently, they possess significant capacity to influence environmental attitudes, encourage sustainable behaviours, and mobilize collective action. Tucker and Grim (2021) argue that religious communities provide important ethical resources for addressing environmental challenges because they connect ecological responsibility with deeper moral and spiritual commitments.

In Nigeria, environmental challenges have become increasingly severe due to rapid urbanization, population growth, poor waste management, deforestation, mining activities, and inadequate environmental awareness. Jos Metropolis in Plateau State represents an important case due to its ecological sensitivity, historical mining activities, increasing urban expansion, and emerging environmental challenges including waste accumulation, soil erosion, flooding, and land degradation. Although government agencies and environmental organizations have implemented various interventions, persistent environmental problems indicate the need for broader community-based approaches involving social and religious institutions. Plateau State has a strong religious presence, with numerous churches, mosques, theological institutions, and faith-based development organizations actively involved in education, humanitarian services, and community development. However, despite their influence, limited empirical research has examined how these organizations integrate eco-spiritual values into environmental sustainability initiatives. Previous Nigerian studies have largely focused on government policies, environmental awareness, and community participation, with comparatively less attention given to the role of religious institutions as environmental actors (Okafor, 2023). Furthermore, existing studies on religion and environmental sustainability often remain conceptual, providing limited quantitative evidence regarding the relationship between eco-spirituality, FBO activities, and measurable community environmental participation. This creates an important research gap, particularly within the context of Jos Metropolis where religious institutions play significant social roles. Understanding the extent to which eco-spirituality influences environmental behaviour and how FBOs contribute to sustainability initiatives is essential for developing inclusive environmental governance strategies. This study contributes to existing knowledge by empirically examining the relationship between eco-spirituality, faith-based organizational activities, and environmental sustainability practices in Jos Metropolis. Unlike previous studies that focus mainly on theological arguments or general environmental awareness, this research integrates survey data, interviews, and field observations to provide evidence-based understanding of the environmental contributions and limitations of FBOs. The findings provide practical insights for policymakers, religious leaders, environmental managers, and development practitioners seeking innovative approaches to sustainable environmental management.

Statement of the Problem

Environmental degradation has become a major challenge in Jos Metropolis due to increasing urbanization, population growth, land-use changes, mining-related activities, poor waste disposal practices, and inadequate environmental management systems. These challenges have contributed to declining environmental quality, increased vulnerability to flooding, soil degradation, pollution, and reduced ecosystem resilience. Despite efforts by government institutions and environmental agencies to address these issues, environmental problems persist largely because of limited public participation, inadequate environmental awareness, weak behavioural change, and insufficient community ownership of sustainability initiatives. Previous studies have demonstrated that environmental sustainability requires active

involvement of communities and non-state actors beyond government interventions. According to UNEP (2024), successful environmental management depends on partnerships that integrate scientific knowledge, institutional capacity, and local values. Similarly, Okafor (2023) emphasizes that community-based environmental governance in Nigeria requires stronger engagement with social institutions capable of influencing public attitudes and behaviours. Faith-based organizations represent one of the most influential social institutions in Jos Metropolis due to their extensive membership, moral authority, and grassroots presence. Through religious teachings, community programmes, and social services, FBOs have the potential to promote environmental stewardship and sustainable practices. However, the extent to which eco-spirituality is incorporated into their activities and the effectiveness of their environmental initiatives remain inadequately documented. Although many religious organizations engage in activities such as sanitation campaigns, charity programmes, and community development, environmental sustainability has not always been integrated as a central component of institutional planning and practice. Challenges including limited funding, inadequate environmental knowledge among religious leaders, weak collaboration with environmental agencies, and insufficient monitoring mechanisms may reduce their effectiveness. The absence of empirical evidence regarding the contribution of FBOs to environmental sustainability in Jos Metropolis creates a knowledge gap that limits opportunities for integrating religious institutions into environmental governance frameworks. Therefore, this study addresses this gap by examining the role of eco-spirituality and faith-based organizations in promoting environmental sustainability in Jos Metropolis, Nigeria.

Aim and Objective of the Study

The aim of this study is to examine the role of eco-spirituality and faith-based organizations in promoting environmental sustainability in Jos Metropolis, Nigeria. The objectives of the study are to:

- i. Examine the types of environmental sustainability initiatives undertaken by faith-based organizations in Jos Metropolis.
- ii. Assess the level of community awareness and participation in environmental sustainability programmes promoted by faith-based organizations.
- iii. Determine the factors influencing the effectiveness of faith-based organizations in advancing environmental sustainability.
- iv. Examine the relationship between eco-spirituality, faith-based organizational activities, and environmental sustainability practices.

Research Hypotheses

H₀₁: There is no significant relationship between eco-spirituality and environmental sustainability practices in Jos Metropolis.

H₀2: Faith-based organizational activities do not significantly influence environmental sustainability initiatives in Jos Metropolis.

H₀3: Environmental education provided by faith-based organizations does not significantly influence community participation in environmental conservation.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Concept of Eco-Spirituality

Eco-spirituality is an emerging interdisciplinary concept that examines the relationship between ecological responsibility, spirituality, ethics, and human interaction with the natural environment. It challenges the dominant anthropocentric worldview that places humans above nature and instead promotes an ecological consciousness based on interconnectedness, respect, and responsibility towards all forms of life. Unlike conventional environmental approaches that often emphasize technological solutions and regulatory mechanisms, eco-spirituality argues that environmental crises are also rooted in moral and value-based failures. Therefore, achieving environmental sustainability requires not only institutional reforms but also transformation in human attitudes, beliefs, and behaviours towards nature (Berry, 1999; Boff, 2017). The theoretical foundation of eco-spirituality is based on the argument that nature possesses intrinsic value and should not be regarded merely as a resource for human exploitation. Berry (1999) describes the ecological crisis as a crisis of human consciousness, suggesting that environmental destruction results from a distorted relationship between humanity and the Earth community. Similarly, McFague (2008) argues that the Earth should be understood as a sacred household where humans have moral responsibilities towards other living organisms. This perspective challenges unsustainable patterns of production and consumption by encouraging lifestyles based on care, moderation, justice, and ecological responsibility. Religious traditions have historically provided ethical frameworks that support environmental stewardship. In Christianity, the concept of stewardship emphasizes humanity's responsibility to protect and manage creation responsibly. Contemporary theological interpretations increasingly reject the idea that human dominion over nature justifies exploitation and instead emphasize accountability towards God's creation. Pope Francis (2015), through *Laudato Si': On Care for Our Common Home*, argues that ecological degradation represents both an environmental and moral crisis requiring ecological conversion. The document emphasizes that environmental protection is inseparable from social justice because vulnerable populations are often the most affected by environmental degradation. Similarly, Islamic environmental ethics provide important foundations for eco-spirituality through concepts such as *khalifah* (trusteeship), *amanah* (responsibility), and avoidance of *fasad* (corruption of the Earth). Islamic scholars argue that humans are not absolute owners of natural resources but trustees responsible for ensuring their sustainable use. These principles demonstrate that environmental responsibility is not limited to scientific knowledge but is also connected to religious values and moral obligations. In the Nigerian context, eco-spirituality is particularly relevant because religion strongly influences social values, decision-making, and community organization. Christianity and Islam remain

important institutions shaping attitudes and behaviours among Nigerians. Consequently, religious teachings have considerable potential to influence environmental awareness and conservation practices. However, Nche et al. (2023) argue that while religious institutions possess significant social influence, environmental issues are often given limited attention compared with spiritual, social, and economic concerns. Therefore, eco-spirituality provides an important conceptual lens for understanding how religious beliefs can contribute to environmental sustainability. In this study, eco-spirituality is examined as a value system that influences environmental attitudes, motivates stewardship behaviour, and strengthens the capacity of faith-based organizations to mobilize communities for environmental action.

Faith-Based Organizations and Environmental Stewardship

Faith-based organizations (FBOs) are religiously affiliated institutions whose activities are guided by spiritual values and directed towards social, humanitarian, educational, and developmental objectives. They include churches, mosques, religious schools, faith-based non-governmental organizations, and religious development agencies. Beyond their traditional religious roles, FBOs have increasingly been recognized as important actors in sustainable development because of their ability to mobilize communities, influence social values, and provide grassroots interventions. The growing recognition of FBOs in environmental governance is based on three major strengths: moral legitimacy, social networks, and community trust. Unlike many formal environmental institutions, FBOs maintain continuous relationships with communities through worship services, religious education, and social programmes. This enables them to communicate environmental messages within existing cultural and moral frameworks. Tucker and Grim (2021) argue that religious communities possess ethical resources capable of encouraging environmentally responsible behaviours by connecting ecological protection with deeper questions of responsibility and meaning. Environmental stewardship represents one of the major pathways through which FBOs contribute to sustainability. Stewardship involves the responsible management, protection, and conservation of natural resources for present and future generations. Within religious contexts, stewardship is often associated with responsibility towards divine creation. Christian organizations have increasingly incorporated environmental issues into theological education, community outreach, and advocacy programmes, while Islamic organizations have promoted environmental sanitation, conservation, and responsible resource use based on Islamic teachings. Globally, faith organizations have implemented environmental initiatives including tree planting, waste management campaigns, climate awareness programmes, renewable energy advocacy, and ecosystem restoration activities. The World Council of Churches (2022) recognizes religious institutions as important partners in addressing climate change and environmental injustice because they can combine ethical motivation with practical community action. In Nigeria, FBOs play significant roles in education, healthcare, poverty reduction, peace-building, and community development. Their extensive institutional presence provides opportunities for environmental engagement. Studies such as Okafor (2023) indicate that religious institutions can improve environmental awareness and community participation when environmental

messages are integrated into existing social structures. However, the environmental role of Nigerian FBOs remains relatively under-researched compared with their contributions to social development. In Jos Metropolis, churches, mosques, and religious institutions have considerable influence due to their large membership base and involvement in community activities. Their potential contributions include environmental education, sanitation programmes, tree planting, waste reduction, and climate awareness campaigns. However, understanding their actual contribution requires empirical investigation of their activities, effectiveness, and challenges.

Eco-Spirituality, Faith-Based Organizations and Environmental Sustainability in Nigeria

Environmental sustainability in Nigeria is challenged by rapid urbanization, population growth, industrial activities, poor waste management, deforestation, land degradation, and climate-related hazards. Although government policies and environmental agencies have attempted to address these challenges, limited institutional capacity and inadequate public participation continue to hinder progress. Consequently, researchers increasingly emphasize the importance of engaging community-based institutions capable of influencing environmental behaviour. Religious institutions represent one of the strongest social structures in Nigerian society. Their influence extends beyond worship into education, social welfare, community development, and moral formation. Because environmental sustainability requires behavioural change, FBOs can contribute by shaping attitudes and encouraging responsible environmental practices among their members. Previous Nigerian studies indicate that environmental awareness alone does not automatically translate into sustainable behaviour. Factors such as social norms, institutional support, perceived responsibility, and community participation influence environmental actions. This observation aligns with Ajzen's (1991) Theory of Planned Behavior, which suggests that behaviour is shaped by attitudes, social expectations, and perceived ability to act. Eco-spirituality strengthens this process by providing moral motivation for environmental responsibility. When environmental protection is presented as a spiritual obligation rather than merely a technical requirement, individuals may develop stronger commitment towards sustainable practices. However, despite this potential, empirical evidence regarding the relationship between religious values and environmental practices in Nigeria remains limited. Studies conducted in different Nigerian communities have shown that religious organizations often participate in sanitation activities, community mobilization, and environmental awareness campaigns. Nevertheless, challenges such as inadequate funding, limited environmental expertise, and weak collaboration with government institutions restrict their effectiveness. Therefore, examining FBO contributions within specific contexts such as Jos Metropolis is necessary for generating locally relevant evidence.

Environmental Sustainability

Environmental sustainability refers to the responsible management of natural resources in ways that maintain ecological integrity while supporting human development. It emphasizes balancing environmental protection, social well-being, and economic development to ensure that future generations can access essential ecosystem services. The concept became globally prominent through the World Commission on Environment and Development (1987), which emphasized meeting present needs without compromising future generations. Contemporary environmental sustainability extends beyond resource conservation to include climate resilience, biodiversity protection, ecosystem restoration, pollution reduction, and sustainable consumption. The IPCC (2023) emphasizes that climate change, land degradation, and biodiversity loss require integrated approaches involving governments, communities, and non-state actors. In developing countries such as Nigeria, environmental sustainability is closely linked with social and institutional factors. Issues such as poverty, weak environmental governance, rapid urban growth, and limited public awareness influence environmental outcomes. Therefore, sustainable solutions require collaboration among government institutions, communities, civil society organizations, and religious institutions. The role of FBOs in environmental sustainability is increasingly recognized because they address the ethical and behavioural dimensions of environmental problems. Through environmental education, advocacy, and community mobilization, FBOs can influence environmental attitudes and encourage sustainable practices. However, their contributions must be examined empirically to determine their actual effectiveness.

Challenges Facing Faith-Based Environmental Initiatives

Despite their potential contributions, faith-based environmental initiatives face several challenges that limit their effectiveness. First, environmental issues are often not sufficiently integrated into religious education and institutional priorities. Many religious organizations focus primarily on spiritual, social, and economic concerns, resulting in limited attention to environmental issues. Second, inadequate financial resources constrain environmental programmes. Most FBOs depend on donations and voluntary contributions, making long-term environmental projects such as ecosystem restoration, recycling systems, and climate adaptation programmes difficult to sustain. Third, limited technical expertise among religious leaders and administrators affects programme planning and implementation. Effective environmental management requires knowledge of climate science, waste management, conservation practices, and environmental policy. Finally, weak collaboration between FBOs, government agencies, universities, and environmental organizations reduces opportunities for coordinated action. Strengthening partnerships is therefore essential for maximizing the environmental contributions of religious institutions.

Theoretical Framework

This study is anchored on two complementary theories; Stewardship Theory and Theory of Planned Behavior. The combination of these theories provides both the ethical explanation and behavioural mechanism for understanding how eco-spirituality and FBO activities influence environmental sustainability.

Stewardship Theory

Stewardship Theory explains environmental responsibility through the principle that humans are caretakers rather than absolute owners of natural resources. The theory is rooted in religious teachings emphasizing accountability, responsibility, and protection of creation. According to Wright (2004), biblical stewardship requires responsible management of resources entrusted to humanity. Similarly, Bauckham (2010) argues that ecological responsibility is central to understanding humanity's relationship with the wider community of creation. The relevance of Stewardship Theory to this study lies in its explanation of why religious organizations should participate in environmental protection. It provides the ethical foundation linking eco-spirituality with environmental sustainability practices among FBOs.

Theory of Planned Behavior

Ajzen's (1991) Theory of Planned Behavior explains how beliefs and social influences translate into actual behaviour. The theory identifies three major determinants of behaviour; Attitude towards behaviour; Subjective norms; and Perceived behavioural control. Applied to environmental sustainability, the theory suggests that individuals are more likely to engage in environmentally responsible practices when they possess positive environmental attitudes, receive social encouragement, and believe they have the ability to act. Within faith communities, religious teachings and organizational influence can shape environmental attitudes and social norms. Therefore, the theory provides a framework for explaining how eco-spiritual values promoted by FBOs influence community participation in environmental sustainability initiatives.

Application of the Theoretical Framework to the Study

The integration of Stewardship Theory and Theory of Planned Behavior provides a comprehensive explanation of the relationship between eco-spirituality, FBO activities, and environmental sustainability. Stewardship Theory explains the moral foundation of environmental responsibility by demonstrating why faith communities should care for creation. The Theory of Planned Behavior explains how these values influence individual attitudes, intentions, and participation in environmental activities. Together, the theories suggest that eco-spirituality influences environmental attitudes, which are strengthened through FBO programmes such as environmental education, sanitation campaigns, and conservation activities. These processes contribute to increased community participation and improved environmental sustainability practices.

MATERIALS AND METHODS

This study adopted a mixed-methods research design using an explanatory sequential approach to examine the role of eco-spirituality and faith-based organizations (FBOs) in promoting environmental sustainability in Jos Metropolis, Plateau State, Nigeria. The study area comprised Jos North and Jos South Local Government Areas, which constitute the major urban centres of Jos Metropolis. The area was selected due to its increasing environmental challenges associated with rapid urbanization, waste generation, land-use change, mining activities, flooding, and ecological degradation, as well as the strong presence of Christian and Islamic faith-based organizations. The study population consisted of members and leaders of selected FBOs, environmental stakeholders, and relevant government officials involved in environmental management. A multistage sampling technique was employed, involving the purposive selection of study locations, stratification of FBOs into Christian and Islamic organizations, and random selection of respondents from selected institutions. The sample size of 400 respondents was determined using Yamane's (1967) formula at a 95% confidence level and 5% margin of error. Out of the 400 questionnaires administered, 376 were properly completed and returned, representing a response rate of 94%. Data were collected through a combination of structured questionnaires, key informant interviews, and direct field observations to ensure methodological triangulation. The questionnaire consisted of sections covering respondents' socioeconomic characteristics, eco-spirituality values, environmental sustainability initiatives of FBOs, community awareness and participation, and factors affecting the effectiveness of faith-based environmental programmes. Responses to perception-based items were measured using a four-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1), with a decision mean value of 2.50 used to determine acceptance or rejection of statements. Key informant interviews were conducted with religious leaders, environmental committee members, and environmental officials to obtain deeper insights into institutional commitment, environmental practices, challenges, and opportunities. Field observations were also undertaken to assess environmental management practices around selected worship centres, including sanitation conditions, waste management, and environmental awareness activities. The research instruments were validated through expert review by specialists in environmental management, sustainability studies, and research methodology to ensure content validity and alignment with the study objectives. A pilot test was conducted among respondents outside the sampled study area, and reliability was assessed using Cronbach's Alpha coefficient. The reliability values for the major constructs exceeded the recommended threshold of 0.70, indicating satisfactory internal consistency of the instrument. Ethical considerations were strictly observed throughout the study. Participants were informed about the purpose of the research, their participation was voluntary, confidentiality of information was maintained, and informed consent was obtained before data collection. Ethical approval was also obtained from the relevant academic authority prior to commencement of the research. Quantitative data obtained from the questionnaires were analysed using descriptive and inferential statistical techniques. Descriptive statistics, including frequencies, percentages, mean scores, and standard deviations, were used to summarize respondents' characteristics and perceptions of FBO environmental activities. Pearson Product Moment Correlation analysis was employed

to examine relationships among eco-spirituality, FBO environmental initiatives, community participation, and environmental sustainability practices, while multiple regression analysis was conducted to determine the predictive influence of eco-spirituality, environmental education, and FBO activities on environmental sustainability. The regression model was expressed as: $ES = \beta_0 + \beta_1(ESP) + \beta_2(FBO) + \beta_3(EE) + \epsilon$, where ES represents environmental sustainability practices, ESP represents eco-spirituality, FBO represents faith-based organizational activities, and EE represents environmental education. Prior to inferential analysis, assumptions of normality, linearity, independence of observations, homoscedasticity, and absence of multi-collinearity were tested and satisfied. Qualitative data from interviews and observations were analysed thematically and integrated with quantitative findings to provide a comprehensive understanding of the contribution of faith-based organizations to environmental sustainability in Jos Metropolis.

RESULTS AND DISCUSSION

Socioeconomic Characteristics of Respondents

A total of 400 questionnaires were administered to respondents across selected Faith-Based Organizations (FBOs) in Jos Metropolis, out of which 376 were correctly completed and analysed, representing a response rate of 94%. The socioeconomic characteristics of respondents provide important background information for understanding their perceptions and participation in faith-based environmental sustainability initiatives. The results showed that respondents were diverse in terms of gender, age, educational background, occupation, and religious affiliation. Female respondents constituted 63%, while males accounted for 37%. The dominance of female participation reflects the active involvement of women in community-based religious activities, including sanitation campaigns, social outreach programmes, and environmental awareness initiatives. The largest age group was 31–40 years (26%), followed by 41–50 years (24%), indicating that most respondents were within economically active age categories capable of participating in community environmental programmes. Regarding educational status, the majority of respondents possessed post-primary education, with 70% having either secondary or tertiary education. This suggests that respondents had adequate educational exposure to understand environmental sustainability concepts and participate meaningfully in environmental programmes. Occupational distribution showed that civil servants constituted 25%, traders 24%, farmers 21%, artisans 12%, and clergy/religious workers 10%. The diversity of respondents enhanced the reliability of the study because environmental sustainability involves individuals from different socioeconomic backgrounds. The findings support the argument of Ajzen (1991) that demographic characteristics influence environmental attitudes and behavioural intentions. Education, occupation, and social involvement often determine individuals' ability to understand environmental issues and participate in sustainability activities. The result also aligns with Okafor (2023), who noted that community participation in environmental governance in Nigeria is influenced by socioeconomic factors and institutional engagement.

Types of Environmental Sustainability Initiatives Undertaken by Faith-Based Organizations

The study examined the types of environmental sustainability initiatives promoted by Faith-Based Organizations in Jos Metropolis. Respondents were asked to rate various environmental activities undertaken by FBOs using a four-point Likert scale. A mean score of 2.50 and above was considered an indication of agreement.

Table 1: Environmental Sustainability Initiatives Undertaken by FBOs in Jos Metropolis

Environmental Initiatives	Mean	Standard Deviation	Rank	Decision
Rank Environmental education and awareness programmes	3.30	0.70	1st	Accepted
Environmental sanitation activities	3.10	0.80	2nd	Accepted
Tree planting and afforestation programmes	3.10	0.70	3rd	Accepted
Water resource protection and pollution control	2.70	1.10	4th	Accepted
Waste management initiatives	2.60	1.10	5th	Accepted
Integration of environmental issues into sermons/religious teachings	2.60	1.10	6th	Accepted
Climate change mitigation awareness campaigns	2.50	1.00	7th	Accepted
Decision Mean = 2.50				

The findings indicate that environmental education and awareness programmes ranked highest among FBO environmental initiatives (Mean = 3.30). This suggests that religious organizations in Jos Metropolis primarily contribute to environmental sustainability through awareness creation, religious teachings, seminars, and community sensitization programmes. Environmental sanitation activities and tree planting programmes were also highly rated (Mean = 3.10), indicating that many FBOs engage in practical environmental actions within their communities. However, climate change mitigation awareness recorded the lowest mean score (2.50), suggesting limited emphasis on climate-related environmental issues compared with sanitation and awareness activities. This may be associated with limited technical knowledge of climate change issues among some religious institutions or the perception that climate change requires specialized scientific interventions beyond community-level religious activities. The findings agree with Tucker and Grim (2021), who argued that religious organizations have significant potential to influence environmental behaviour through moral education and community mobilization. Similarly, Pope Francis (2015) emphasized that environmental responsibility must involve both spiritual transformation and practical action. However, the relatively lower emphasis on climate change initiatives indicates the need for stronger collaboration between environmental experts and FBOs to improve climate literacy among religious communities.

Community Awareness and Participation in FBO Environmental Sustainability Programmes

The study assessed the extent to which community members are aware of and participate in environmental programmes organized by FBOs in Jos Metropolis.

Table 2: Community Awareness and Participation in FBO Environmental Programmes

Variables	Mean	Standard Deviation	Rank	Decision
Awareness of FBO environmental sustainability programmes	2.90	1.00	1st	Accepted
FBOs provide information about environmental programmes	2.80	1.00	2nd	Accepted
Regular participation in FBO environmental activities	2.80	1.10	3rd	Accepted
FBO programmes encourage sustainable practices	2.60	1.00	4th	Accepted
Youth participation in environmental activities	2.50	1.10	5th	Accepted
Community interest in FBO environmental initiatives	2.40	1.00	6th	Rejected

Decision Mean = 2.50

The findings reveal that respondents generally demonstrated awareness of FBO environmental initiatives. Awareness of environmental programmes recorded the highest mean score (2.90), indicating that religious institutions effectively communicate environmental messages to their members. Similarly, information dissemination and participation in environmental activities recorded mean values of 2.80. However, community interest in FBO-led environmental initiatives recorded a mean value of 2.40, slightly below the decision threshold. This suggests that although awareness exists, active participation remains relatively moderate. The gap between awareness and participation indicates that knowledge alone may not automatically produce environmental action. This finding supports Ajzen's (1991) Theory of Planned Behavior, which explains that environmental behaviour depends not only on awareness but also on social influence, perceived control, and motivation. The result also agrees with Nigerian studies indicating that environmental awareness often remains disconnected from practical behavioural change due to socioeconomic constraints and limited institutional support.

Factors Influencing the Effectiveness of FBO Environmental Sustainability Initiatives

The study further examined factors affecting the effectiveness of FBO environmental sustainability initiatives.

Table 3: Factors Affecting FBO Environmental Sustainability Effectiveness

Factors	Mean	Standard Deviation	Rank	Decision
Leadership commitment	3.00	0.90	1st	Accepted
Government support and policies	2.70	1.00	2nd	Accepted
Adequate funding	2.60	1.10	3rd	Accepted
Religious beliefs and values	2.60	1.10	4th	Accepted
Community cooperation	2.50	1.00	5th	Accepted
Technical expertise limitations	2.50	1.10	6th	Accepted
Insecurity and social challenges	2.50	1.10	7th	Accepted

Decision Mean = 2.50

Leadership commitment emerged as the most important factor influencing FBO environmental effectiveness (Mean = 3.00). This indicates that the willingness of religious leaders to prioritize environmental issues strongly determines the success of faith-based environmental programmes. Government support and adequate funding were also identified as important factors. This suggests that while FBOs possess community influence, their environmental initiatives require institutional partnerships and financial support to achieve greater impact. The findings correspond with UNEP (2024), which emphasizes that successful environmental governance requires collaboration among government institutions, civil society, and community organizations. Similarly, Boff (2017) argues that ecological responsibility requires institutional commitment supported by ethical motivation and practical resources.

Relationship Between Eco-Spirituality, FBO Activities and Environmental Sustainability

Pearson correlation analysis was conducted to determine the relationship between eco-spirituality, FBO environmental initiatives, community participation, and environmental sustainability practices.

Table 4: Correlation Matrix

Variables	Eco-Spirituality	FBO Activities	Community Participation	Sustainability Practices
Eco-Spirituality	1.00			
FBO Activities	0.62**	1.00		
Community Participation	0.55**	0.68**	1.00	
Sustainability Practices	0.61**	0.72**	0.65**	1.00

Note: $p < 0.01$

The correlation results indicate significant positive relationships among all variables. Eco-spirituality showed a strong positive relationship with environmental sustainability practices ($r = 0.61$, $p < 0.01$). This suggests that stronger ecological values among faith communities are associated with improved environmental practices. FBO activities recorded the strongest

relationship with sustainability practices ($r = 0.72$, $p < 0.01$), indicating that organizational environmental actions significantly influence community environmental behaviour. These findings support Stewardship Theory by demonstrating that religious values can translate into practical environmental responsibility when institutionalized through organizational programmes.

Multiple Regression Analysis Predicting Environmental Sustainability

Practices Multiple regression analysis was conducted to determine the contribution of eco-spirituality, FBO activities, and environmental education to environmental sustainability practices.

Table 5: Regression Model

Predictor Variables	B	Standard Error	t-value	p-value	95% Confidence Interval
Eco-spirituality	0.31	0.06	5.24	<0.001	0.19–0.43
FBO environmental activities	0.35	0.07	5.80	<0.001	0.22–0.48
Environmental Education	0.28	0.06	4.63	<0.001	0.16–0.40
Leadership commitment	0.22	0.07	3.87	0.002	0.10–0.34

Model significance: $p < 0.001$

The regression model indicates that eco-spirituality, FBO activities, environmental education, and leadership commitment significantly predict environmental sustainability practices. FBO environmental activities had the strongest predictive influence ($\beta = 0.35$), followed by eco-spirituality ($\beta = 0.31$). The findings demonstrate that religious values alone are insufficient unless translated into institutional actions and community programmes. This supports the Theory of Planned Behavior, which suggests that beliefs influence behaviour when supported by social structures and opportunities for action.

General Discussion and Implications

General Discussion of Findings

The overall findings of this study demonstrate that Faith-Based Organizations (FBOs) in Jos Metropolis play an important social and institutional role in promoting environmental sustainability through eco-spirituality, environmental education, community mobilization, and practical conservation activities. The results indicate that FBOs are more actively involved in awareness creation, environmental sanitation, and tree planting initiatives than in technically oriented interventions such as climate change mitigation and pollution control. This pattern suggests that religious institutions contribute mainly through their moral authority, value formation, and ability to influence community attitudes and behaviours. The findings support the argument of Tucker and Grim (2021) that religious traditions possess ethical resources capable of encouraging ecological responsibility by shaping how individuals

perceive their relationship with nature. Similarly, the significant positive relationship between eco-spirituality, FBO activities, and environmental sustainability practices confirms the relevance of Stewardship Theory, which emphasizes that humans have an ethical responsibility to protect and manage the natural environment. The findings further reveal that although awareness of FBO environmental initiatives is relatively high among community members, participation in practical environmental activities remains moderate. This indicates a gap between environmental knowledge and actual behavioural change, consistent with Ajzen's (1991) Theory of Planned Behavior, which suggests that attitudes and awareness require supportive social conditions and perceived capacity before they translate into action. The regression results demonstrate that FBO environmental activities, environmental education, eco-spiritual values, and leadership commitment significantly influence environmental sustainability practices. However, challenges such as inadequate funding, limited technical expertise, weak institutional collaboration, and insufficient integration of environmental issues into religious programmes continue to limit the full potential of FBOs. These findings align with UNEP (2024) and UNDP (2023), which emphasize that effective environmental governance requires collaboration among government institutions, civil society organizations, and community-based actors. Therefore, strengthening the capacity of FBOs through training, partnerships, and policy recognition is essential for enhancing their contribution to environmental sustainability in Jos Metropolis.

Implications of the Findings

The findings have important implications for environmental policy, religious practice, and sustainable development planning in Jos Metropolis and beyond. They suggest that environmental sustainability strategies should move beyond conventional government-led approaches by incorporating faith-based institutions as active partners in environmental governance. Since FBOs possess strong community networks and moral influence, integrating eco-spirituality into religious education, sermons, and community programmes can strengthen environmental awareness and encourage responsible environmental behaviour. Policymakers and environmental agencies should therefore develop structured partnerships with religious organizations by providing technical support, capacity-building opportunities, and resources for implementing evidence-based environmental initiatives. For FBOs, the findings highlight the need to move from primarily awareness-based activities towards more measurable environmental actions such as waste reduction, ecosystem restoration, climate adaptation initiatives, and community environmental monitoring. Future research should also examine the long-term ecological outcomes of faith-based interventions using direct environmental indicators to determine their contribution to measurable environmental improvement.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the role of eco-spirituality and faith-based organizations (FBOs) in promoting environmental sustainability in Jos Metropolis, Nigeria. The study was motivated

by the increasing environmental challenges experienced in the metropolis, including poor waste management, land degradation, urban expansion, pollution, and declining environmental quality. Using a mixed-methods research design involving questionnaires, key informant interviews, and field observations, the study assessed the environmental initiatives of FBOs, the level of community awareness and participation, and the factors influencing the effectiveness of faith-based environmental interventions. The findings revealed that faith-based organizations in Jos Metropolis are actively involved in several environmental sustainability initiatives, particularly environmental education and awareness programmes, sanitation activities, tree planting, waste management campaigns, and the promotion of environmental responsibility through religious teachings. Environmental education emerged as the most prominent activity, suggesting that FBOs primarily contribute through value formation, awareness creation, and behavioural influence. However, activities directly related to climate change mitigation and technical environmental management received comparatively lower attention, indicating areas where additional capacity development is required. The study also established that community awareness of FBO environmental initiatives is relatively high, but participation in practical environmental activities remains moderate. This suggests that awareness creation alone may not automatically translate into sustainable environmental behaviour. Active participation requires supportive institutional structures, adequate resources, technical knowledge, and continuous community engagement. The correlation analysis demonstrated significant positive relationships between eco-spirituality, FBO activities, community participation, and environmental sustainability practices, indicating that religious values can contribute to environmental responsibility when effectively integrated into organizational programmes. Furthermore, regression analysis showed that FBO environmental activities, eco-spirituality, environmental education, and leadership commitment significantly influence environmental sustainability practices in Jos Metropolis. Leadership commitment emerged as a critical institutional factor, demonstrating that the willingness of religious leaders to prioritize environmental issues strongly affects the success of faith-based environmental initiatives. Nevertheless, challenges such as inadequate funding, limited technical expertise, weak institutional partnerships, and insufficient integration of environmental issues into religious programmes continue to constrain the effectiveness of FBO contributions. The study concludes that faith-based organizations represent important partners in environmental sustainability governance in Jos Metropolis because of their social influence, community networks, and capacity to shape environmental values and behaviours. Eco-spirituality provides a moral foundation for environmental stewardship by encouraging responsible relationships between humans and nature. However, while FBOs demonstrate considerable potential for supporting environmental sustainability through education, mobilization, and conservation activities, this study does not claim direct measurement of long-term ecological outcomes. Future studies should therefore incorporate longitudinal environmental monitoring to determine the measurable ecological impacts of faith-based environmental interventions.

Recommendations

Based on the findings of the study, the following recommendations are proposed;

i. Development of Faith-Based Environmental Partnership Frameworks

Government environmental agencies, particularly at the state and local government levels, should establish formal partnerships with faith-based organizations to integrate them into environmental sustainability planning and implementation. Such partnerships should recognize FBOs as important community stakeholders capable of promoting environmental awareness and mobilizing citizens for sustainability activities.

ii. Integration of Religious Institutions into Environmental Governance

Environmental policies and programmes should incorporate religious institutions as partners in community-based environmental management. Since religious organizations have strong grassroots influence, involving them in environmental campaigns, climate adaptation programmes, sanitation initiatives, and conservation projects can improve public participation.

iii. Provision of Capacity-Building Support

Government agencies, environmental organizations, and development partners should provide training opportunities for religious leaders and FBO administrators on climate change, biodiversity conservation, waste management, sustainable resource use, and environmental policy. This will improve the technical capacity of FBOs to design and implement effective environmental programmes.

Practice Recommendations

i. Integration of Eco-Spirituality into Religious Programmes

Faith-based organizations should incorporate environmental stewardship into sermons, religious education, theological training, youth programmes, women's groups, and community outreach activities. Linking environmental responsibility with religious teachings can strengthen ecological awareness and encourage sustainable lifestyles among members.

ii. Establishment of Environmental Committees within FBOs

Religious institutions should create dedicated environmental committees responsible for planning, implementing, and monitoring environmental activities. These committees can coordinate sanitation campaigns, tree planting, waste reduction programmes, recycling initiatives, and environmental awareness activities.

iii. Strengthening Youth and Community Participation

FBOs should develop targeted environmental programmes that encourage active participation among young people, women, and community groups. Youth environmental clubs, community clean-up exercises, and sustainability education programmes can help transform awareness into practical environmental action.

iv. Improved Collaboration with Environmental Experts

Faith-based organizations should collaborate with universities, environmental professionals, and non-governmental organizations to improve the scientific basis of their environmental initiatives. Such collaboration will enable FBOs to move beyond awareness creation towards evidence-based environmental interventions.

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