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Gender Dimensions in Sustainable Environmental Resource Management: Exploring the Role of Women in Rural Communities of Uyo LGA, Akwa Ibom state

Uzoma, I. E[1]., Uzoma, V. I[2] and Anukwu, C.S[1]

[1]Department of Geography and Natural Resources Management, University of Uyo
[2] Department of Law, Topfaith University, Mkpak Atak

Corresponding author's email: uzomaifeoma20@gmail.com Phone No: +2348061689668

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Abstract

This paper explores the intersection of gender and environmental resource management in rural Nigeria, focusing on the vital role women play in the sustainable use and conservation of natural resources. Women in rural Nigeria are key stakeholders in managing resources such as water, land, and forests, and their traditional knowledge and practices are essential for sustainable environmental management. However, gender inequalities often limit their participation in decision-making processes regarding resource use and conservation. This study reviews existing literature on gender and environmental resource management, identifies the barriers women face in participating in environmental governance, and explores the gendered impacts of environmental degradation. Narrative inquiry was used for the study and 50 women were purposively sampled. Qualitative analysis (inductive thematic analysis) was used to analyse the responses of the respondents. The paper highlights how women's involvement in environmental management can contribute to sustainable development and offers recommendations for integrating gender-sensitive approaches into environmental policy and practice.

Keywords - Gender, Environmental Resource Management, Women, Rural Communities, Akwa-Ibom State

1. Introduction

Nigeria, with its rich natural resources and diverse ecosystems, faces significant challenges in managing its environmental resources sustainably. While the country is endowed with abundant resources such as forests, water, and agricultural land, the exploitation of these resources has often led to environmental degradation, including deforestation, desertification, and water scarcity. In rural communities, where natural resources are the

backbone of daily life, women play a crucial role in managing these resources. Despite their significant contributions, women are often marginalized in formal environmental governance and decision-making processes, which can undermine the effectiveness of sustainable resource management. Sustainable Environmental Resource Management is increasingly recognized as essential for achieving global development goals, particularly in rural areas where communities depend directly on natural resources for their livelihoods. In Nigeria, rural communities rely on resources such as arable land, forests, water, and biodiversity to sustain their agricultural activities, domestic needs, and small-scale industries. However, the pressures of climate change, deforestation, population growth, and unsustainable practices have led to the rapid depletion of these resources, threatening the livelihoods of millions and undermining long-term ecological stability. Addressing these challenges requires an inclusive approach that accounts for the socio-cultural, economic, and gender dimensions of resource management. Environmental resource management is a critical issue in Nigeria, particularly in rural communities where access to natural resources such as water, land, and forests is vital for daily survival. In these contexts, women often bear primary responsibility for managing these resources through tasks such as farming, water collection, and fuel wood gathering. Despite this central role, women's contributions to environmental sustainability are frequently undermined by gender inequalities that restrict their participation in formal decision-making processes and access to resources.

Gender plays a pivotal role in environmental resource management, influencing the ways in which men and women access, utilize, and make decisions about resources. Women in rural Nigeria are often the primary custodians of natural resources, performing essential tasks such as farming, water collection, fuelwood gathering, and food processing. Despite their significant contributions, women frequently encounter systemic barriers that limit their access to land, credit, education, and decision-making forums. These constraints not only perpetuate gender inequality but also hinder the effectiveness of environmental management efforts. On the other hand, men, who often hold decision-making power in traditional and formal governance structures, may prioritize resource uses that align with their economic interests but fail to incorporate the sustainability concerns often raised by women.

The gendered nature of environmental resource management is not unique to Nigeria. Studies from other developing regions emphasize the critical role of gender-sensitive approaches in achieving sustainable development. For instance, Agarwal (2017) asserted that including women in forestry management programs in India led to significant improvements in forest conservation outcomes. Similarly, Nellemann *et al.* (2011)

argue that empowering women to participate in climate change adaptation and resource governance enhances community resilience and promotes equitable resource distribution. These examples demonstrate that the need to address gender disparities in order to enhance sustainable environmental outcomes.

In the Nigerian context, the intersection of gender and environmental resource management is shaped by complex socio-cultural norms and policy frameworks. Traditional gender roles often dictate that women shoulder the burden of labour intensive resource management activities, while men dominate leadership and policy-making positions. This division of labour reinforces power imbalances and excludes women from critical discussions about resource governance. Furthermore, the lack of gender-disaggregated data in environmental studies and policies has contributed to a limited understanding of how gender dynamics affect resource sustainability.

Recent studies have shed light on these dynamics. For example, Uduji et al. (2023) examined the role of corporate social responsibility (CSR) initiatives by multinational oil companies in Nigeria's Niger Delta region. Their findings indicate that despite women's unique and important responsibilities in the use and management of natural resources, they are typically less involved in formal governance processes, resulting in their interests and capabilities being under-represented and under-utilized. However, the study also shows that CSR initiatives have recorded significant success in addressing gender inequalities and enhancing the capacity of rural women in natural resources and ecosystem management. Additionally, the Women Environmental Programme (WEP) has been instrumental in raising awareness of the gendered impacts of climate change in rural Nigeria. WEP supports women's political and economic empowerment and advocates for natural resource management, land rights, social infrastructure, and the management of environmental conflicts.

This article explores the gender dimensions of sustainable environmental resource management in three rural communities in Akwa-Ibom state, with a focus on understanding the roles, challenges, and opportunities for men and women in resource governance. It examines the socio-cultural, economic, and institutional factors that influence gender roles in resource management and highlights case studies that illustrate the successes and failures of gender-responsive approaches. By advocating for inclusive and equitable policies, this article aims to contribute to the broader discourse on sustainable development and gender equality, emphasizing the importance of recognizing and leveraging the unique contributions of both genders in environmental stewardship.

2. Study Area

Uyo is located in the central part of Akwa Ibom State. It lies within longitudes $7^0 47^{'}$N and $8^0 03^{'}$N and latitudes $4^0 52^{'}$E and $5^0 07^{'}$E. It is bounded in the north by Ikono, Ibiono Ibom and Itu Local Government Areas, in the south by Ibesikpo Asutan, Nsit Ibom, Etinan and Mkpat Enin Local Government Areas, in the East by Uruan Local Government Area and in the west Abak Local Government Area (See Fig 1). It covers a total landmass of about 155.856 square kilometers. The limit of the capital city however exceeds some of the boundaries of Uyo Local Government Area, and covers approximately 314.65 square kilometers and is made up of three clans namely, Oku (15 villages), Etoi (22 villages) and Offot (22 villages).

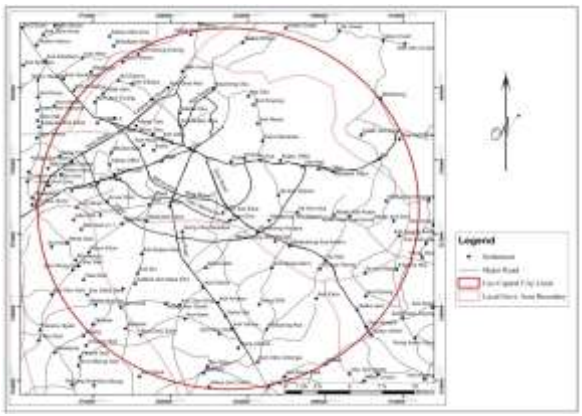

Figure 1: Uyo Urban

The area lies in the humid tropics which are characterized by two distinct seasons: dry and wet season. The dry season starts from November to March while the wet season lasts from April to October. The dry season is influenced by the North-Eastern Trade Winds known as the tropical Continental (CT) which originates from the Sahara desert. The wet season, on the other hand, is influenced by the movement of the rain-bearing Tropical Maritime Air mass (MT) which comes from the Atlantic Ocean. During the rainy season, a period of intense sunshine may be recorded in August (Udosen, 2008). The temperature of Uyo is constantly high with a mean monthly value of approximately 27^0C. Relative Humidity is at a constant high value of between 70% and 90% all year round. The city is affected by the hot and humid maritime air mass as a result of its proximity to Guinea coast. Consequently, rainfall is expected during every month of the year although a well – marked longer dry season occurs from mid – December to late February/early March or early August followed by a short dry season of about 2 – 4 weeks called August Break. During the rainy season, southerly winds bring moisture to all parts of the state.

3. Review of Literature

i. Gender and Environmental Resource Management

A growing body of literature has recognized the significant role of women in natural resource management, particularly in rural areas where they are responsible for tasks such as agriculture, water collection, and fuel wood gathering (Doss, 2011). Women's extensive involvement in these activities gives them unique knowledge about the local environment and the sustainable use of

natural resources. In many African countries, including Nigeria, women's roles are crucial for maintaining biodiversity, conserving water, and sustaining agricultural productivity (Oluwasanmi and Fagbenro, 2019).Women in rural Nigeria play a significant role in managing natural resources. They are responsible for key activities such as farming, water collection, fuel wood gathering, and small-scale land management, all of which are essential for household survival and community livelihoods (Doss, 2011).Women's knowledge of the local environment and sustainable resource use is often transmitted through generations. For instance, women are frequently involved in agroforestry practices and community-based conservation efforts (Oluwasanmi and Fagbenro, 2019).

However, scholars such as Challinor *et al.* (2017) and Agarwal (2018) have demonstrated that women's contributions go beyond subsistence activities. In their studies, they highlight how women in rural communities are actively involved in the stewardship of agricultural land, forest resources, and water bodies. Again, Akinbami (2015), examined women's involvement in forest conservation and the use of forest resources in rural Nigerian communities. The study highlighted the cultural and economic roles women play in ensuring sustainable forest use. In his findings, he revealed that women are central to the collection of non-timber forest products (NTFPs) and play a significant role in agroforestry practices. Nwankwo (2020), who also examined the involvement of women in fisheries resource management in the Niger Delta, related that women's roles in fish processing, marketing, and conservation. The study showed how women play an essential role in the fisheries value chain, but their contributions are undervalued due to gender biases. In general, women's roles have been exposed to be often unpaid, undervalued and taken for granted despite their significant contribution to local economies, sustainability of ecosystems and natural resource management.

More so, the unique knowledge and expertise that women bring to natural resource management are often deeply connected to their intrinsic attachment to the environment, shaped by their roles, responsibilities, and cultural practices (Agarwal, 2010). This knowledge, passed down through generations, includes understanding soil health, biodiversity, and water cycles, which are essential for sustainable resource management Senanayake (2006). Kandiyoti (2014) and Nightingale (2017) in their studies emphasize the importance of women's indigenous knowledge, especially in agriculture and forestry. Thus, women's intimate relationship with the environment, grounded in their everyday tasks, equips them with knowledge crucial for managing ecosystems, but this knowledge often remains excluded from formal scientific frameworks and policy design mostly as a result of gender discrimination and biases.

ii. Barriers to Women's Participation in Environmental Governance

Despite their critical roles, women face numerous barriers to participating in formal environmental governance. Patriarchal structures often limit women's access to decision-making forums, and cultural norms restrict their ability to influence policies related to resource management (Agarwal, 2009). In Nigeria, women's participation in environmental policy and planning is often confined to informal, community-based initiatives, which limits their influence on larger-scale environmental decisions (Fayemi, 2015).

Several barriers hinder women's participation in environmental governance. Patriarchal social structures and traditional gender roles often limit women's access to leadership positions and decision making forums. Women's roles in resource management are generally confined to the domestic or informal spheres, which reduces their influence on formal environmental policies (Agarwal, 2009). In Nigeria, women's exclusion from decision-making is particularly evident in agricultural and forestry policies, where men are typically the primary decision-makers.

Cultural norms and gender based discrimination further exacerbate these barriers. In many rural areas, women have limited access to education, property rights, and financial resources, which restricts their ability to participate in governance and access modern environmental management tools (Doss, 2011). These structural barriers prevent women from contributing their knowledge and expertise informal environmental management processes.

Also, several studies have outlined the barriers preventing women from participating equally in Natural Resources Management (NRM), despite their central role in resource use. Buechler et al. (2019) and Bryan et al. (2021*)*, identify structural barriers such as lack of access to land, limited decision-making power, and cultural norms that restrict women's involvement in formal NRM bodies. In many regions, legal frameworks fail to guarantee women's land rights, undermining their ability to manage resources effectively. Furthermore, O'Reilly et al. (2020) argue that women are often excluded from environmental decision-making processes, as the power dynamics in many societies prioritize male leadership, leaving women's contributions marginalized.

iii. Gendered Impacts of Environmental Degradation

Environmental degradation in Nigeria disproportionately affects women, particularly those in rural areas who depend on natural resources for their livelihoods. Deforestation, soil erosion, and water scarcity exacerbate the burdens of women, as they are primarily responsible for household water collection, food production, and fuel gathering (Okereke, 2013). Furthermore, climate change impacts, such as erratic rainfall and droughts, exacerbate gender inequalities, as women are less likely than men

to have access to adaptive resources and technologies (Fayemi, 2015). Women, particularly those in rural areas, are more vulnerable to the impacts of climate change due to their dependence on agriculture and natural resources. They often lack access to climate change adaptation resources, such as modern agricultural techniques, climate resilient crops, and financial capital, which limits their ability to adapt to changing environmental conditions (Fayemi, 2015).

Recent studies emphasize the need for gender-sensitive approaches to environmental management. A gender-responsive framework ensures that environmental policies account for the specific needs, contributions, and challenges of both men and women. In Nigeria, incorporating gender into environmental policies has the potential to improve resource management outcomes and promote more sustainable practices (Okereke and Atteridge, 2016). For example, gender sensitive approaches to forest management have been shown to enhance biodiversity conservation and promote sustainable livelihoods for rural communities (Agarwal,1992).Similarly, gender-responsive water management policies have been found to improve water access and equity for both men and women in rural areas (Doss, 2011). By promoting women's participation in environmental decision-making, these policies ensure that the unique knowledge and experiences of women are incorporated into resource management strategies.

Empowering women in NRM has gained attention as an essential component of environmental and economic sustainability. Gonzalez *et al.* (2016) and Snyder *et al.* (2018) illustrate that when women are empowered and have access to resources, training, and leadership opportunities, they can significantly enhance NRM outcomes. For example, women-led community groups in Sub-Saharan Africa have been instrumental in reforestation projects and water management initiatives. Empowerment not only improves environmental outcomes but also contributes to broader societal benefits, such as improved health, education, and gender equality. The literature also emphasizes the importance of policies that support women's rights and participation in NRM. Van der Ploeg (2016) and Sato (2020) argue that gender-sensitive policies and institutional reforms are essential for creating an enabling environment for women's full participation in natural resource governance. Such policies should ensure equitable access to resources, land tenure rights, and leadership roles in decision-making processes. Additionally, Johnson and Pomeroy (2022) advocate for integrating gender considerations into national and international environmental agreements, recognizing the critical role that women play in achieving sustainable development goals.

Recent studies highlight innovative approaches that empower women and leverage their contributions to NRM. Sah *et al. (2023)* explore

the role of technology in improving women's access to information, markets, and resources. In many developing countries, digital platforms have provided women with tools to monitor and manage natural resources more effectively, from early-warning systems for climate events to platforms for accessing agricultural knowledge. Yin *et al. (2021)* also examine how community-based natural resource management (CBNRM) programs that include women in leadership roles have led to more sustainable and equitable outcomes. Also, Odebode (2017), study explores how women in Southwest Nigeria are responsible for water resource management in their households and communities. This study showed that women's indigenous knowledge of water sources and sustainable practices has significant implications for policy-making and community development. The intersection of gender and social justice in NRM is a critical aspect in understanding the broader context of women's involvement. Scholars like Hawkins and Brockington (2018) and Mackenzie (2022) argue that women's roles in NRM cannot be viewed in isolation from other social issues such as poverty, education, and health. Addressing these intersecting inequalities is necessary to ensure women's full participation in natural resource management. Gendered power structures, economic inequities, and social norms need to be addressed for sustainable and inclusive NRM.

4. Conceptual Framework

i. Concept of Gender

The concept of gender refers to the socially constructed roles, behaviours, and attributes that a society considers appropriate for men and women. In many societies, including Nigeria, gender roles are deeply ingrained and often dictate the division of labour, access to resources, and participation in governance. In the context of environmental resource management, gender influences how resources are used, controlled, and managed, with women and men often having different roles, rights, and responsibilities in relation to natural resources.

In rural Nigeria, gender norms shape women's access to land, water, and other resources. While women are heavily involved in managing these resources, they often lack the legal rights and political power to influence decisions about their use. This unequal distribution of power and resources is a key factor in the gendered impacts of environmental degradation. Although gender is often used synonymously to define sex, it goes beyond mere physiological traits to entail a fluid and multi-dimensional construct shaped by culture, social and historical contents (Butler, 1990). The concept of gender can be first linked to Oakley (1972), where he argued that gender is a product of socialization rather than biological, thereby distinguishing between sex and gender. According to IUCAN (2004), gender implies attributes and opportunities associated with

being male or female, and the socio-cultural relationship between man and woman.

Over the years, concept of gender has expanded to encompass identity, expression, and systemic structures that reinforce gender norms. The controversy over the concept of gender can be tied to the Sociological conceptualization and biological conceptualization. While the sociologist view gender as a socially constructed attributes, roles and activities, the later views gender as the relationship between sex and a gender behaviour is one that differs by sex. For instance, men differ from women in physical strength (Connell, 2005). Intersectionality, a concept introduced by Crenshaw (1989), further highlights how gender intersects with race, class, and other social categories, creating overlapping systems of oppression and privilege. Thus, the general concept of gender points to an outstanding meaning that is invariably tied to different characteristics of each gender and their extended roles, capabilities and domains of interest. In other words, gender is not a singular or fixed concept but a multifaceted construct and the various aspects in which gender is understood, expressed, and experienced in society. This attribute of gender is referred to as the dimensions of gender.

There are many dimensions of gender, and these dimensions acknowledge that gender is construct influenced by social, cultural, psychological, and structural factors. Each dimension provides a lens for analyzing how gender shapes individual identities and societal dynamics. For instance, Lev (2004) suggests that gender identity is a deeply personal aspect of the self that may not align with biological sex, leading to the recognition of transgender and non-binary experiences. Connell (1987), on the other hand discusses how traditional gender roles reinforce patriarchal structures, limiting opportunities for both men and women. Goffman (1979) examined the portrayal of gender in advertisements, revealing how media perpetuates stereotypical images of masculinity and femininity. West and Zimmerman (1987) argue that gender is "done" in everyday interactions, demonstrating the performative aspect of gender expression.

In summary, literature reviewed underscores the fact that while women play a vital and often overlooked role in natural resource management, there is increasing recognition of their contributions to environmental sustainability. However, barriers such as limited access to resources, exclusion from decision-making, and gendered power imbalances remain prevalent. To overcome these challenges, a multi-faceted approach that includes policy reforms, empowerment programs, and recognition of indigenous knowledge is necessary. Empowering women in NRM not only enhances environmental sustainability but also contributes to broader social and economic development goals, particularly in the context of climate change and sustainable development. Therefore, it is penitent that studies related to gender should

be able to make clear differentiation on what dimension of gender it intends to examine, this will be able to provide better insight on how researchers, policy makers and stakeholders are guided. In this light, this study examined gender by adopting Connell (1987) dimension of gender that looks at gender bases on their roles. Gender roles are the expectations placed on individuals based on their perceived gender. These roles dictate appropriate behaviors, responsibilities, and societal functions. Thus, the role that women play in sustainable environmental resource management in rural communities.

ii. The Concept of Resource Management

According to Raja (2015) resource management is the efficient and effective deployment and allocation of an organization's resources when and where they are needed. Resources vary in terms of what an individual or a community finds to be useful. Resource may be categorized to include, natural, human, financial, physical, intellectual, time, and informational resources (Flintan, 2003). The ability to maximizing resource value while minimizing waste, ensuring long-term availability, and addressing environmental, social, and economic considerations is the main thrust of resource management. This is to say that **r**esource management involves the strategic process of planning, allocating, and utilizing available resources such as natural, human, financial, and technological assets in an efficient, equitable, and sustainable manner to achieve specific goals or objectives.

Resource management is a multi-disciplinary concept that uses a systematic approach in handling resources in order to maximize their utility while minimizing environmental degradation and societal inequalities. The concept of resource management can be traced to early resource use and exploitation of the natural environment. Where early human societies relied on the rudiments of resource management practices for their immediate survival needs rather than long-term sustainability (Diamond, 2005). However, as societies involved, especially with the advancement in technology, resource use and exploitation has gradually led to environmental degradation. Thus, giving rise for restructuring of resource management strategies. In recent times, the consciousness for promoting better environmental quality and resource use laid the foundation for sustainable resource management approaches.

The concept for resource management lies within four key theories and frameworks. These are:

a. **Sustainability theory**: this theory is based on the concept of sustainable development (Brundtland report, 1987). The concept advocates for the balance between economic growth, environmental protection and social equity. The report emphasizes the need to meet the

needs of the present without compromising the ability of future generations to meet their own needs. The Brundtland Report highlights that sustainable development requires policy changes, technological innovation, and shifts in societal values to ensure long-term well-being for both people and the planet (resource).

b. **System Theory**: System theory is an interdisciplinary framework that views resource, their management and surroundings environment as interconnected and interdependent system. The theory relates integrated resource management by considering the dynamic relationship between components. Meadows et al (1972) utilized system theory to analysis global trends in population growth, resource consumption and environmental impact. Their application was central to understanding the complex interconnected nature of earth's resources systems and the consequence of unsustainable practice.

c. **Tragedy of common**: This framework as outlined by Hardin (1968) highlight the overuse of shared resources due to individual self-interest. The concept underpins policy aimed at regulating common resource usage. The key elements in the tragedy of commons are common-pool resource, individual versus collective interest, open access and lack of regulation, and rationale of use.

d. **Ecological economics**: this concept was pioneered by Daly (1990), where he proposed a steady-state economy as model for addressing the limits of growth and ensuring the long-term balance between human activities and earth's ecological systems. The key principles of Daly's ecological economics are:

- Scale matter (i.e. earth's carry capacity)
- Equity and distribution of resources
- Qualitative development over quantitative growth, and
- Precautionary principle for resource use and environmental policies.

The application of resource management underpins the importance of sustainability, stewardship, equity, efficiency and resilience, while supporting ecological balance, integrated management and strategies that can effectively align human needs to environmental stewardship. Resource management has its application to various field such as sustainable forestry and agriculture, circular economy models, renewable energy, community-based resource management, etc. Thus, this concept can be applied to understand and study the role of women in rural community particularly using a community-based resource management approach.

5. Methodology

This study employed a qualitative (Narrative inquiry) research design to explore the gender dimensions of environmental resource management in rural Nigeria. Data was collected through semi-structured interviews and Focus Group Discussions with women and men involved in resource management activities across three Akwa-Ibom communities: Obio Offot, Effiat Offot and Nsukara Offot in Uyo, Akwa Ibom State. The study also reviewed policy documents, government reports, and relevant academic literature on gender and environmental management.

The participants were selected through purposive sampling, with a focus on women who are actively involved in managing natural resources, such as farmers, water collectors, and forest managers. 50 women were sampled were during the survey. Before the Focus Group Discussion, the women were selected and grouped into 5 groups of 10 participants each with shared characteristics (age, occupation and experience). They were also women whom we believed could provide valuable insights based on the study topic. A discussion guide of 20 questions was developed and the questions were open ended with prompts to guide the conversation. The discussion guide had three sections which were; the introductory questions to ease participants into the conversation, the transition questions that dealt with the core issues, and key questions to address the research objective.

In conducting the Focus Group Discussion, we sought the participants consent, reminded them of the confidentiality of the discussion and established few ground rules. The discussion was a 45-60 minutes discussion, with follow up questions and we encouraged the participants to participate freely.

The data was analyzed using inductive thematic analysis, there was familiarization with data collected, identifying key themes related to women's roles, barriers to participation, and the impacts of environmental degradation and interpretation of data, drawing meaningful conclusions.

6. **Results**

Table 1 – Qualitative Data for each Theme Generated in the Findings

Theme	**Qualitative Dataset**	**Some Respondents Responses**	**Communities of Response**
Women's Role in Resource Management	• Decision making power (participation in decision making, leadership roles) • Resource management knowledge and skills (traditional knowledge, innovative practices, sustainable resource use) • Resource use and access (equal access to resources and resource ownership) • Community involvement and social capital (women's role in community initiatives, cultural perceptions and barriers)	Decision Making Power **Facilitator's Question:** "How involved are you in the decision-making process when it comes to managing the land or other resources in your community?" **Response 1:** *"Well, in my family, I am the one who decides which crops to plant, because I understand the soil and weather conditions better. However, when it comes to larger community matters like water usage or forest protection, the men take the lead. We often do not have a say in meetings, though we contribute to discussions privately."*	Obio Offot
Barriers to participation in decision making	1. Cultural and social norms 2. Gender discrimination 3. Lack of education or awareness 4. Economic dependency 5. Limited access to information 6. Fear of reprisal or rejection 7. Political and institutional barriers 8. Inadequate support from leadership 9. Time and workload constraints 10. Traditional leadership structures	**Facilitator's Question:** What are the main barriers you face when it comes to participating in decision-making, particularly concerning resource management or community issues? **Response 1:** *"In my community, it's culturally believed that men should make the big decisions, like how to use the land and manage the water sources. Women are only expected to follow the instructions. It makes it hard for us to speak out or be included in important discussions."* **Response 2:** *"Cultural practices are a huge barrier. Women are seen as caretakers of the home, and not as leaders in the community. Even when we have valuable input, it's often dismissed because of these long-standing traditions."*	**Effiat Offot Nsukara Offot**
Gendered impacts of environmental degradation	1. Access to Natural Resources 2. Health and Well-being 3. Economic Activities and Livelihood 4. Social Roles and Responsibilities 5. Displacement and Migration	**Facilitator's Question:** How has environmental degradation affected the lives of men and women differently in your community? **Response 1:** *"Women are the ones who go to collect water and firewood. When the water sources dry up or the forests are destroyed, its women who have to walk farther and work harder.*	**Obio Offot Nsukara Offot**

	6. Access to Decision-Making Processes 7. Vulnerability to Natural Disasters 8. Gendered Coping Strategies 9. Impact on Women's Reproductive Health 10. Changes in Food Security and Nutrition	*This is a challenge that men don't face as often."* **Response 2:** *"For us, accessing firewood and water has become more difficult. The environment is changing rapidly, and women bear the brunt of this change, while men focus on the more formal economic work, like farming or fishing."*	
Limited access to climate change adaptation resources	1. Economic Barriers (lack of financial resources and cost of adaptation processes) 2. Language and literacy barriers 3. Insufficient knowledge on climate change 4. Institutional barriers 5. Technological barriers 6. Cultural and social barriers 7. Geographical barriers 8. Political barriers 9. Time constraints	**Facilitators Question:** "What financial challenges do you face when trying to implement climate adaptation strategies in your community?" **Responses:** *"The biggest challenge is money. Most of us can't afford to buy better seeds or irrigation systems that can help with drought. Even the fertilizers we need are too expensive, so we just use what we can find."* - *"In our area, there's no support from the government to help us pay for these things. If there was a loan or credit system to help us buy better equipment, it would make things much easier."* -*"Climate-resistant crops and water storage systems are too expensive. Sometimes we just wait for the rains to come, hoping they won't fail us."*	**Obio Offot** **Effiat Offot** **Nsukara Offot**

Source: Researchers' Compilation, 2025

From Table 1, the findings of the study revealed that:

i. **Women's Role in Resource Management**

Women are heavily involved in managing natural resources, particularly in agriculture, water collection, and firewood gathering. They possess traditional ecological knowledge that is crucial for sustainable resource management, including methods of soil conservation, water management, and agroforestry.

ii. **Barriers to Participation in Decision-Making**

Despite their significant roles, women face substantial barriers to participating in formal environmental decision-making processes. These barriers include cultural norms that restrict their access to leadership positions, limited education and training opportunities, and a lack of legal rights to land and resources.

iii. **Gendered Impacts of Environmental Degradation**

Women are disproportionately affected by environmental degradation, as they are primarily

responsible for household duties that depend on natural resources. Deforestation and water scarcity increase the time and labour required for daily tasks, which exacerbates the already heavy workloads of women in rural areas.

iv. **Limited Access to Climate Change Adaptation Resources:**

Women have less access to climate change adaptation resources, such as agricultural inputs, credit facilities, and training in sustainable practices. This limits their ability to adapt to changing environmental conditions, further reinforcing gender inequalities.

7. Discussion of Findings

The results of this study confirm that while women play a pivotal role in environmental resource management in rural Akwa-Ibom State, their contributions are often overlooked in formal governance structures. The marginalization of women from decision-making processes limits the effectiveness of environmental policies and hinders the development of gender-sensitive approaches to sustainable resource management.

The gendered impacts of environmental degradation are evident in the increased burden placed on women, particularly in the face of climate change. Women's limited access to resources and decision-making power exacerbates their vulnerability to environmental stressors. To address these challenges, it is crucial to adopt gender-responsive policies that recognize the contributions of women and support their active participation in environmental governance.

8. Conclusion

This paper highlights the critical role that women play in the sustainable management of natural resources in rural Nigeria. Despite their significant contributions, gender inequalities continue to limit their participation in formal environmental governance, which affects the effectiveness of resource management efforts. To promote sustainable environmental practices, it is essential to adopt gender-responsive approaches that recognize and enhance the role of women in resource management. By empowering women, improving their access to resources, and promoting their leadership, Nigeria can achieve more effective and inclusive environmental governance.

The integration of gender perspectives into sustainable environmental resource management is critical for achieving equitable and effective outcomes in Nigeria's rural communities. Women and men play distinct yet complementary roles in the use and stewardship of natural resources, with women often serving as the primary custodians of resources essential for household sustenance. However, systemic barriers rooted in socio-cultural norms, economic constraints, and institutional biases frequently exclude women from decision-making processes and hinder their access to critical resources like land, credit, and education.

This exclusion not only perpetuates gender inequality but also undermines the sustainability of environmental management initiatives. Evidence from both global and Nigerian contexts underscores the transformative potential of gender-sensitive approaches. Empowering women through targeted policies, capacity-building programs, and inclusive governance mechanisms can enhance resource conservation, improve community resilience, and foster equitable resource distribution.

To address these challenges, policymakers, development practitioners, and community leaders must prioritize gender equity in resource governance frameworks. This involves recognizing the unique contributions of women, providing them with the tools and platforms to participate meaningfully in decision-making, and addressing structural inequalities that limit their potential. Incorporating gender-disaggregated data into policy design and implementation will further ensure that interventions are tailored to meet the specific needs of both genders.

Ultimately, sustainable environmental resource management is not solely an environmental or economic issue but also a social one. By acknowledging and addressing the gender dimensions of resource governance, Nigeria can take significant steps toward achieving sustainable development goals, improving rural livelihoods, and fostering an inclusive society where the contributions of all individuals are valued and utilized for the common good. The insights and recommendations presented in this article aim to inspire further research and action to bridge the gender gaps in environmental resource management and build a more sustainable and equitable future for Nigeria's rural communities.

Based on this conclusion, the following recommendations are made;

i. Empower Women through Education and Training - There is a need to provide women with education and training in sustainable agricultural practices, climate change adaptation, and environmental governance. This will enhance their capacity to manage resources sustainably and increase their participation in decision-making processes.

ii. Promote Gender-Responsive Environmental Policies - Nigeria should integrate gender considerations into environmental policies and strategies. This can be achieved through gender analysis of environmental projects, ensuring that women’s needs and contributions are recognized and addressed.

iii. Strengthen Women’s Legal Rights to Land and Resources - Legal reforms should be implemented to ensure that women have equal rights to land, water, and other natural resources. This will enable women to have greater control over the resources they manage and

enhance their ability to contribute to sustainable environmental practices.

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