

LIVELIHOOD DIVERSIFICATION AND ECONOMIC EMPOWERMENT AS PATHWAYS TO SUSTAINABLE RURAL DEVELOPMENT AMONG WOMEN IN EBONYI STATE, NIGERIA

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Abstract

Rural women play a central role in livelihood systems in southeastern Nigeria, yet their contributions to economic development remain underexplored in integrated studies that combine agriculture and craft-based enterprises. This study addresses this gap by examining how livelihood diversification enhances women's economic empowerment and supports sustainable rural development in the Amankalu community in Oshiri within the Onicha Local Government Area of Ebonyi State, Nigeria. Grounded in the Sustainable Livelihoods Framework and gender empowerment theories, the study examines the intricate relationships between various income-generating activities, access to resources, and community resilience. Employing both primary and secondary sources, a qualitative methodology was implemented, engaging 10 women community leaders and local stakeholders through key informant interviews, while 12 participants contributed through focus group discussions. Photographic documentation captured rural women's involvement in agriculture and crafts. Findings revealed that women actively participated in diverse agricultural activities, including the cultivation of cassava, yams, and rice, as well as livestock rearing such as pigs, poultry, and goats. In addition, raffia-processed craft-based enterprises, particularly basket, mat, and broom weaving, serve as complementary income sources, often linked to local market systems. Despite these contributions, women face persistent challenges such as limited access to finance, land, and modern production technologies. This study concludes that livelihood diversification significantly enhances income stability and economic agency for rural women. To fortify women's productive capacities and ensure sustainable livelihoods, it recommends targeted policy interventions such as improved access to microcredit, capacity-building initiatives, enhanced market linkages, and gender-responsive rural development strategies.

Keywords: Agriculture, Amankalu rural women, Economic empowerment, Livelihood diversification, Raffia-Craft processing, Sustainable Development

INTRODUCTION

Rural women constitute a critical component of agricultural production and rural economies in Nigeria, contributing significantly to household food security, income generation, and community development. Across sub-Saharan Africa, women account for a substantial proportion of the agricultural labour force, contributing between 60–80% of food production

through activities such as crop farming, livestock rearing, and processing (FAO, 2025; FAO, 2023; World Bank, 2022).

Beyond farming, many rural women diversify into food processing and petty trading to stabilize household income. This mix of agricultural and non-farm activities has been described as a practical pathway to economic empowerment and livelihood security (Okoli *et al.* 2025; Kweka, 2025).

Yet their contributions remain largely undervalued due to structural inequalities and limited access to productive resources (Mela *et al.*, 2024). In Nigeria, rural women are actively engaged in diverse livelihood activities, including crop cultivation, livestock rearing, and small-scale enterprises, which collectively sustain rural households and local economies.

Agriculture remains a dominant livelihood strategy in rural Nigeria, with women participating in the cultivation of staple crops such as cassava, yams, and rice, alongside livestock production. However, increasing socio-economic pressures, climate variability, and limited access to land and capital have necessitated the adoption of livelihood diversification strategies among rural women. Recent studies highlight that women increasingly combine farming with off-farm activities such as petty trading and artisanal production to enhance income stability and resilience (Nwaka *et al.*, 2025). This diversification is not only a survival strategy but also a pathway to economic empowerment and improved well-being.

Despite numerous policy interventions aimed at promoting women's empowerment in agriculture, such as national agricultural development programs and gender-focused initiatives, significant gaps persist in implementation, access, and impact. Challenges such as limited access to land ownership, credit facilities, extension services, and markets continue to constrain women's productivity and economic advancement (Bot *et al.*, 2024). Furthermore, structural inequalities embedded in socio-cultural norms often limit women's decision-making power and control over resources, thereby undermining their potential contributions to sustainable rural development.

Existing literature has extensively examined women's participation in agriculture or entrepreneurship separately; however, there is a noticeable gap in integrated studies that explore the combined role of agricultural and craft-based livelihood activities in enhancing women's economic empowerment, particularly at the sub-national level. Moreover, limited empirical attention has been given to southeastern Nigeria, including Ebonyi State, where rural women engage in both farming and indigenous craft production as complementary livelihood strategies. Addressing this gap is essential for developing context-specific policies that reflect the lived realities of rural women.

This study is anchored in the Sustainable Livelihoods Framework and gender empowerment perspectives, which emphasize the interplay between assets, capabilities, and institutional contexts in shaping livelihood outcomes. The framework provides a holistic lens for understanding how rural women mobilize available resources to diversify income sources, reduce vulnerability, and enhance resilience. It also highlights the importance of social, financial, human, and physical capital in influencing livelihood strategies and outcomes (Fidelis & Adeyeye, 2025).

Against this backdrop, the study therefore examines livelihood diversification and women's economic empowerment as pathways to sustainable rural development in Amankalu, Oshiri in Onicha LGA of Ebonyi State, Nigeria. By integrating both agricultural and craft-based activities, the study seeks to address a critical gap by uncovering how rural women navigate economic challenges and leverage multiple income streams to improve their livelihoods. This research aims to contribute to ongoing policy debates on gender-inclusive rural development and inform interventions targeted at strengthening women's productive capacities and socio-economic well-being.

LITERATURE REVIEW

Livelihood diversification is widely understood as the process through which rural households construct a portfolio of multiple income-generating activities to reduce vulnerability and enhance resilience (Nwaka *et al.* 2025). In agrarian contexts like southeastern Nigeria, this often involves a combination of crop production, livestock rearing, and non-farm enterprises, particularly among women (Okoli *et al.* 2025; Onyema *et al.*, 2021). Economic empowerment, on the other hand, extends beyond income generation to include women's access to resources, control over productive assets, and participation in decision-making processes (Bot *et al.* 2024).

Rural women play a central role in agricultural systems, contributing significantly to food production and local economies, yet their efforts are often constrained by structural and spatial inequalities (FAO, 2023; World Bank, 2022). Studies show that women in southeastern Nigeria engage in mixed livelihood systems that combine crop production, livestock rearing, and non-farm activities, forming localized livelihood clusters (Onyema *et al.*, 2021; Gayo *et al.*, 2025).

In Nigeria, women's participation in agriculture is often influenced by land accessibility, soil fertility gradients, and proximity to markets (Obiadi *et al.*, 2020). However, despite their active engagement, women's economic empowerment remains constrained by spatial inequalities in access to productive resources. Land tenure systems, infrastructure deficits, restricted access to credit, weak institutional support systems, and limited financial inclusion often create uneven livelihood opportunities across rural areas. There are also issues of poor market access, low technological adoption, and climate-related risks affecting agricultural output (IFAD, 2021). In Ebonyi State, these disparities are further intensified by socio-cultural norms that restrict women's control over land and income, even where they contribute significantly to production (Mela *et al.*, 2024).

While diversification strategies have been shown to improve income stability, their effectiveness is mediated by gendered access to assets and opportunities. This suggests that livelihood diversification alone does not automatically translate into empowerment without addressing underlying socio-economic constraints.

Sustainable Livelihoods Framework (SLF) and Gender Empowerment Theory.

This study is grounded in the Sustainable Livelihoods Framework (SLF) and gender empowerment theory, which together help explain how rural women navigate everyday economic realities. The SLF emphasizes how individuals combine assets, human, social, natural, financial, and physical, to build sustainable livelihoods under varying institutional conditions (Chambers & Conway, 1992; Scoones, 2015). For rural women in Ebonyi State, this often means blending farming with craft activities to manage risks and income gaps. At the same time, gender empowerment theory highlights issues of access, control, and decision-making power, showing that resources alone do not guarantee empowerment (Doss, 2018). Women may participate actively in production, yet still lack authority over income or land. So, the interaction between livelihood assets and gendered power relations becomes really important in shaping outcomes (IFAD, 2021). Together, these frameworks offer a more realistic lens for understanding women's economic agency.

Study Area

The study was conducted in the Oshiri community. Figure 1 shows its location in the Onicha Local Government Area of Ebonyi State, southeastern Nigeria. Geographically, Oshiri lies between latitude 6°08'N–6°10'N and longitude 7°52'E–7°54'E, situating it within the Lower Benue Trough, a region characterized by sedimentary geological formations (Nwajide, 2013; Obiadi et al., 2020). The area falls within the tropical wet-and-dry climate zone, with mean annual rainfall of 1,500–2,000 mm and average temperatures of 27–30°C (NIMET, 2022).

Topographically, Oshiri exhibits gently undulating plains with localized depressions that are prone to seasonal flooding, influencing land use and settlement patterns. The soils are predominantly sandy loam to clayey, supporting intensive agricultural activities. Guinea savannah characterizes vegetation with patches of secondary forest due to continuous human activities (Obiadi *et al.* 2020; Obasi & Nnabude, 2019).

Onicha LGA had a population of 236,609 in 2006, with significant growth driven by agrarian livelihoods (National Population Commission, 2006). The local economy is largely dependent on smallholder agriculture, including cassava, yam, and rice farming, alongside livestock rearing and craft-based enterprises. These livelihood systems reflect a mixed subsistence–commercial orientation shaped by environmental and socio-economic conditions (Onyema *et al.*, 2021).

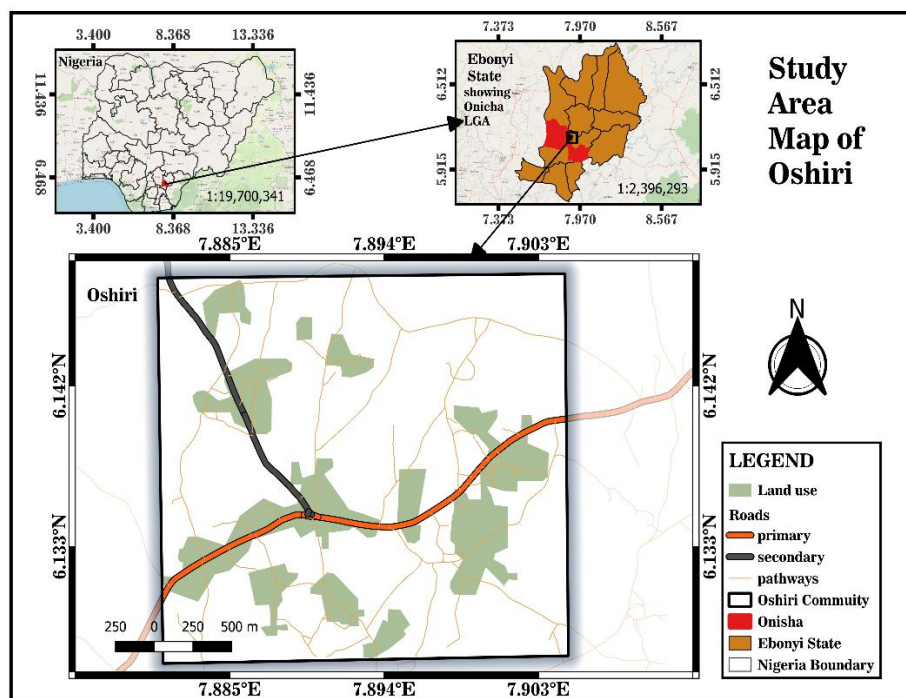


Figure 1: Map of Nigeria, showing Ebonyi State, Onicha LGA, and the study area, Oshiri Community

Source: Compiled by Authors (2026)

METHODOLOGY

This study adopted a qualitative research design, integrating both primary and secondary data sources to provide a nuanced understanding of women's livelihood diversification and economic empowerment in rural Ebonyi State. Primary data were generated through purposive sampling, enabling the deliberate selection of information-rich participants with direct experience in agricultural and craft-based activities (Patton, 2002; Creswell & Poth, 2018).

A total of 10 women community leaders and local stakeholders participated in key informant interviews (KIIs), each lasting between 45 and 60 minutes, allowing for in-depth exploration of institutional and community-level perspectives. In addition, 12 participants were engaged in focus group discussions (FGDs), which were organized into four groups of three participants each to encourage active participation and reduce dominance bias. Each FGD session lasted approximately 60–75 minutes, facilitating collective reflections and shared experiences (Krueger & Casey, 2015).

All interviews and discussions were conducted in the local Igbo language to ensure participants could express themselves freely. The responses were audio-recorded, transcribed, and carefully translated into English during data processing. This translation process was done with attention to preserving the original meanings and cultural context of participants' expressions, although minor interpretive variations may have occurred (Temple & Young, 2004).

Photographic documentation was also employed as a participatory visual method to capture women's involvement in farming, livestock rearing, and craft production, thereby enriching contextual interpretation (Pink, 2013). Secondary data were sourced from relevant academic literature and institutional reports to support data triangulation.

Data Analysis

Data analysis followed a thematic approach, involving systematic coding, categorization, and interpretation of emerging patterns across the datasets (Braun & Clarke, 2006). Themes were developed inductively, focusing on livelihood strategies, access to resources, and empowerment dynamics. Analytical rigor was ensured through triangulation, iterative coding, and reflexive interpretation, though some degree of subjectivity inherent in qualitative research remained unavoidable (Nowell *et al.*, 2017).

Ethical Considerations

This study adhered to established ethical research principles for studies involving human participants. All procedures were conducted in line with standard ethical guidelines (Israel & Hay, 2006). Informed consent was obtained from all participants after explaining the purpose of the study, and participation was entirely voluntary. Participants were assured of confidentiality and anonymity, and no personal identifiers were recorded. They were also informed of their right to withdraw at any stage. All data were securely stored and used strictly for academic purposes.

RESULTS AND DISCUSSION

Livelihood Diversification among Rural Women

The findings from this study, based on a total of 22 participants across KIIs and FGDs, demonstrate that livelihood diversification among rural women in Amankalu Oshiri extends beyond a coping strategy to reflect a structured livelihood system influenced by vulnerability context and asset constraints as conceptualised within the Sustainable Livelihoods Framework (SLF). Farming remains the dominant livelihood activity, as illustrated in Figure 2, where cassava cultivation is common, confirming agriculture as the primary livelihood and natural capital base. Amankalu women cultivate staple crops such as yams, cassava, maize, plantain, cocoyam, bananas, and local pepper, and also process palm oil and rear livestock, including poultry, goats, pigs, and ducks. This pattern reflects broader agricultural systems in Nigeria, where rural women contribute significantly to food production and household sustenance (FAO, 2023; World Bank, 2022). However, one community woman leader noted, "*Farming is what we depend on, but the money we get is not always steady*" (KII 1). This instability highlights the income vulnerability dimension of SLF, where reliance on climate-sensitive natural resources exposes households to shocks.

However, FGDs reveal that agriculture alone does not ensure livelihood security, prompting diversification into raffia-based craft. Women consistently reported combining farming with raffia-based craft production, including basket weaving, mat making, and broom production.

Figure 3 shows a key informant during an interview session at Amankalu village giving details on the preparation of ‘raffia’ used in craft making.

These activities are often carried out during off-farm periods, suggesting a seasonal rhythm to diversification. As one participant noted, “*When farming slows down, we turn to weaving to keep income coming*” (FGD 2). This aligns with the diversification theory and SLF’s emphasis on multiple income portfolios as risk management strategies (Ellis, 2000). The seasonal shift between framing and weaving reflects adaptive livelihood strategies caused by temporal variability.

Interestingly, diversification in this context is not random but spatially and culturally embedded. Importantly, the existence of the women-led raffia Nwa Afia market, operated by Amankalu women, is captured in Figure 4, demonstrating social capital and localized economic organisation. This reflects how livelihood systems evolve within specific socio-cultural and geographic contexts. Yet, despite this innovation, diversification remains largely at a subsistence or semi-commercial level, constrained by limited access to broader markets and production inputs (Akpa *et al.* 2024; Mapanje *et al.* 2023).

From a Gender Empowerment Theory perspective, diversification plays a dual role. While KIIs tended to frame women’s contribution in household terms, FGD emphasizes individual agency and financial autonomy, indicating emerging but uneven empowerment. Income levels (₦30,000-₦100,000) remain fluctuating and seasonally dependent, reflecting weak market structures and limited value-chain integration (IFAD, 2021). Although women contribute to household welfare, control over income remains constrained, highlighting the distinction between income generation and true empowerment.

This slight difference in perspective highlights a gap between institutional recognition and lived experience. Diversification, in this sense, serves both collective and individual empowerment functions, though not always equally realized (Onyema *et al.*, 2021; World Bank, 2022).



Figure 2: Showing a large Cassava Farmland managed by the Community Women in Amankalu, Oshiri, Onicha LGA.

Source: Compiled by Authors, 2026.

Economic Empowerment and Income Dynamics

Economic empowerment among rural women in Amankalu Oshiri appears to be gradual and uneven. Findings from KIIs indicate that women earn between ₦30,000 and ₦100,000 monthly, depending on harvest yields and market patronage. Income levels fluctuate significantly, with peaks during festive periods such as Christmas and Easter. As one respondent explained, “*During Christmas, we sell more because our people come back home*” (KII 3). This seasonal dependency highlights the vulnerability of rural economies to temporal demand cycles (FAO, 2025; Akpa *et al.*, 2024).

Market structures play a critical role in influencing these income patterns. The Nwa Afia market serves as a niche platform for raffia, as shown in Figure 4, while larger markets such as Nkwo and Eke, located in Oshiri town, provide broader trading opportunities for the sale of the raffia and its products by Amankalu women, as revealed in Figure 5. However, these markets operate on limited schedules, often lasting only a few hours, which restricts income expansion. Moreover, the fragmented nature of these market systems limits integration into larger value chains, thereby constraining economic growth (IFAD, 2021; Onyema *et al.*, 2021).

FGD participants further emphasized that while these livelihood activities generate income, the level of financial autonomy remains modest. Many women contribute to household expenses, including food provision and children’s education, yet decision-making power over income is often shared or constrained. This reflects the broader conceptualization of economic empowerment as not just income generation but also control over resources and agency.

At the same time, there is a subtle but important shift. Women increasingly view diversified livelihoods as a means of achieving some level of financial independence, even if limited. As one participant stated, “*The money we make helps us feed and train our children*” (KII 8). This suggests that while structural barriers persist, diversification is gradually enhancing women’s economic agency, albeit in partial and uneven ways (FAO, 2023).



Figure 3: A key informant during an interview session providing details on the preparation of the fresh “raffia” for craft making at Amankalu village

Source: Compiled by Authors (2026)



Figure 4: Showing the women-led ‘Nwa Afia’ market exclusively for the sale of raffia in Amankalu village, Oshiri
Source: Compiled by Authors (2026)



Figure 5: Showing the ‘Eke Market’ where raffia and other products are sold in Oshiri Town.
Source: Compiled by Authors (2026)

Findings from key informants, as indicated by one of the community women stakeholders, ‘‘ We lack fertilizers and good tools to improve our farming, though local Government support comes once in a while, not when we really need it.’’ (7). Access to agricultural inputs also remains a critical challenge. Participants noted the lack of basic farming materials such as improved seeds, fertilizers, pesticides, and durable tools.

Although occasional support is received from government agencies or non-governmental organizations, such interventions are inconsistent and rarely aligned with women’s immediate

needs. This irregular support structure reinforces dependency rather than sustainable empowerment (Mela et al., 2024; IFAD, 2021).

Financial limitations also featured prominently. Key informants highlighted the absence of formal credit systems tailored to rural women, while FGD participants described reliance on informal savings groups and rotating credit schemes. Although these systems provide some support, they are often insufficient for scaling up production or investing in improved technologies. This finding aligns with broader literature on financial exclusion and its impact on women's livelihoods (IFAD, 2021; Bot et al., 2024).

Challenges Facing Rural Women

Despite their active engagement in livelihood activities, rural women in Amankalu Oshiri face significant structural, environmental, and institutional challenges. One of the most critical issues is access to and ownership of land. Both KIIs and FGDs revealed that women rarely own land, relying instead on husbands, family allocations, or informal agreements. As one participant noted, *"We don't own the land; we only farm on family land"* (KII 5). Widows are particularly vulnerable, often losing access to land after the death of a spouse, as reflected in the statement, *"After my husband died, I lost access to his land"* (KII 6).

Structural barriers further limit livelihood outcomes, reflecting entrenched gender inequalities in land tenure systems, which limit women's capacity to invest in long-term agricultural production (Doss, 2018; Mela et al., 2024).

Similarly, access to agricultural inputs remains highly constrained. Women reported limited availability of improved seeds, fertilizers, pesticides, and technology, added to physical and financial constraints, reinforcing vulnerability. Although occasional support is received from government agencies or NGOs, such interventions are inconsistent and poorly aligned with local needs. As one informant stated, *"We lack fertilizers and good tools... government support comes once in a while"* (KII 7). This irregular support reinforces dependency rather than sustainable empowerment (IFAD, 2021).

Financial exclusion further compounds these challenges. Women rely largely on informal savings groups, which, although helpful, are insufficient to scale up production or adopt improved technologies. This aligns with broader findings on the limitations of informal financial systems in rural development (Bot et al., 2024).

Environmental challenges are equally significant. Participants reported declining soil fertility, soil erosion, and flooding, which further reduces agricultural productivity. This reveals the interaction between vulnerability context and livelihood assets within SLF. Moreover, these issues further reflect broader patterns of climate variability and environmental degradation in southeastern Nigeria (Nwaka et al., 2025; Akanwa et al., 2022).

Additionally, time poverty driven by unpaid care responsibilities, where women juggle farming, craft production, and household responsibilities, limits their ability to expand economic activities. This often-overlooked dimension significantly limits productivity, thereby illustrating how gendered social structures intersect with livelihood systems to constrain empowerment outcomes (FAO, 2023).

Conclusively, the findings suggest that while diversification enhances the resilience of rural women in Amankalu, Oshiri, it does not automatically translate into sustainable livelihoods or full empowerment. Instead, livelihood outcomes are constrained by structural inequalities, limited asset access, weak institutional support, and environmental factors, reinforcing SLF's proposition that livelihood sustainability depends on the interaction between assets, institutions, and vulnerability contexts.

Addressing these challenges requires not only promoting diversification but also improving access to land, inputs, markets, and institutional support systems. Without such interventions, Amankalu women will only represent a semi-resilient but constrained livelihood system, where women actively navigate risks but remain limited in their capacity to achieve transformative economic empowerment.

Pathways to Sustainable Rural Development

The findings suggest that while livelihood diversification provides a foundation for resilience, it alone is insufficient to achieve sustainable rural development. Instead, a more integrated approach is required, one that addresses structural inequalities while enhancing women's productive capacities.

First, improving access to land is critical. Gender-sensitive land reforms and community-level interventions could enhance women's tenure security and enable long-term investment in agriculture (Perelli et al. 2024; World Bank, 2023).

Second, strengthening access to agricultural inputs and technologies is essential. Consistent and needs-based support from government and development agencies could significantly improve productivity and income levels (IFAD, 2021).

Third, market integration must be enhanced. Expanding rural market infrastructure, improving storage facilities, and linking local producers to regional value chains could help women move beyond subsistence-level production (Onyema et al., 2021).

Fourth, strengthening women's cooperatives and social networks could improve collective bargaining power and access to resources. Current findings suggest that existing cooperatives are weak and underutilized, limiting their potential impact (Assan, 2025).

Finally, diversification strategies should be supported through targeted capacity-building programs, particularly in value addition and small-scale enterprise development. Given the existing skills in raffia production and craft-making, there is significant potential for scaling these activities into more sustainable economic ventures.

In summary, the study demonstrates that rural women in Amankalu Oshiri are already engaging in diverse and adaptive livelihood strategies. However, without addressing the structural, environmental, and institutional barriers they face, the full potential of these strategies for sustainable rural development may remain unrealized.

CONCLUSION

This study demonstrates that rural women in Amankalu Oshiri play a central role in sustaining household livelihoods through a combination of agricultural production and craft-based enterprises. Livelihood diversification, particularly the integration of farming with raffia processing and petty trading, serves as a critical strategy for income stabilization and resilience in the face of seasonal and environmental uncertainties. However, while these activities contribute to household welfare and offer some degree of financial independence, they do not fully translate into economic empowerment. Persistent structural constraints, including limited land ownership, inadequate access to credit and inputs, weak market systems, and socio-cultural restrictions, continue to limit women's productive potential and decision-making power. The findings suggest that achieving sustainable rural development requires more than promoting diversification; it demands targeted, gender-responsive interventions that address these systemic barriers. Strengthening institutional support, improving access to resources, and enhancing market integration will be essential to unlocking the full economic potential of rural women.

Author Contributions (Credit Statement)

Angela Akanwa: Conceptualization, Study design, Supervision, Validation, Writing original draft, Writing, review, and editing. Anita Ugwu: Data curation, Investigation, Methodology, Formal analysis, Visualization, Writing, review & editing.

Declaration of Competing Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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REFERENCES

- Akanwa, A.O., Okedo-Alex, I.N., & Joe-Ikechebelu, N.N. (2022). Persistent Climate-Driven Floods: A Voiced Case of Indigenous Women Experiencing Eco-social and Health Risks in a Southeast Community in Anambra State, Nigeria. In: *Chatterjee U, Everard M, Kashyap A, Mahata D, Panda G.(eds) Indigenous People and Nature, Chapter 22, pp 495-523, Elsevier 2022*
- Akpa, A. F., Amegnaglo, C. J., & Chabossou, A. F. (2024). Women's engagement in agriculture and income inequality in sub-Saharan Africa. *Social Sciences & Humanities Open*, 9, 100888. <https://doi.org/10.1016/j.ssaho.2024.100888>
- Assan, N. (2025). Integrating gender and indigenous knowledge in Sub-Saharan African agriculture: Pathways to climate resilience and food security. *International Journal of Research and Innovation in Social Science*. <https://doi.org/10.47772/IJRISS.2025.90400010>

- Bot, M. D., Nyey, U. N., Domchak, C., & Okoye, P. C. (2024). Women's empowerment in agriculture and rural development in Nigeria. *University of Jos Journal of Political Science*, 1(2), 198–216.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chambers, R., & Conway, G. (1992). *Sustainable rural livelihoods: Practical concepts for the 21st century* (IDS Discussion Paper No. 296). Institute of Development Studies. <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/777>
- Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design* (4th ed.). SAGE. <https://us.sagepub.com/en-us/nam/qualitative-inquiry-and-research-design/book246896>
- Ellis, F. (2000). Rural livelihoods and diversity in developing countries. Oxford University Press
- Doss, C. (2018). Women and agricultural productivity: Reframing the issues. *Development Policy Review*, 36(1), 35–50. <https://doi.org/10.1111/dpr.12243>
- Fidelis, F. I., & Adeyeye, M. M. (2025). Agripreneurship as a catalyst for rural women empowerment and sustainable livelihoods in Northeastern Nigeria. *Journal of International Business, Economics and Entrepreneurship*.
- Food and Agriculture Organization (FAO). (2023). *The status of women in agrifood systems*. FAO.
- Food and Agriculture Organization of the United Nations. (2023). *The status of women in agrifood systems*. <https://www.fao.org/documents/card/en/c/cc5343en>
- Gayo, L., Lwankomezi, E. B., & Katonge, J. H. (2025). Women and youth engagement in agroecology and its contribution to sustainable development and social equity. *Discover Agriculture*, 3, 252. <https://doi.org/10.1007/s44279-025-00432-z>
- International Fund for Agricultural Development (IFAD). (2021). *Rural development report*. IFAD.
- International Fund for Agricultural Development. (2021). *Rural development report*. IFAD. <https://www.ifad.org/en/web/knowledge/publication/asset/42044274>
- Israel, M., & Hay, I. (2006). *Research ethics for social scientists*. Sage Publications.
- Krueger, R. A., & Casey, M. A. (2015). *Focus groups: A practical guide for applied research* (5th ed.). SAGE Publications. <https://us.sagepub.com/en-us/nam/focus-groups/book246347>
- Kweka, A. (2025). Women's economic and social empowerment in agricultural value chains. *East African Journal of Business and Economics*, 8(2), 333–343. <https://doi.org/10.37284/eajbe.8.2.3588>
- Mapanje, O., Karuaihe, S., Machethe, C., & Amis, M. (2023). Financing sustainable agriculture in sub-Saharan Africa: A review of the role of financial technologies. *Sustainability*, 15(5), 4587. <https://doi.org/10.3390/su15054587>
- Mela, K., Paul, A., & Yakubu, L. (2024). Women empowerment programmes toward sustainable development in Nigeria: Challenges and policy options. *AKSU Journal of Administration and Corporate Governance*, 4(1), 151–160. <https://doi.org/10.61090/aksujacog.2024.012>
- National Population Commission (NPC). (2006). *Population and housing census of the Federal Republic of Nigeria*. Abuja: NPC.

- NIMET. (2022). *Nigerian Meteorological Agency annual climate review*. Abuja: NIMET.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1), 1–13.
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods*, 16(1).
<https://doi.org/10.1177/1609406917733847>
- Nwajide, C. S. (2013). *Geology of Nigeria's sedimentary basins*. Lagos: CSS Press.
- Nwaka, G., et al. (2025). Livelihood diversification among women farmers in Nigeria. *Climate Risk Management*.
- Obasi, R. A., & Nnabude, P. C. (2019). Soil characteristics and suitability for crop production in southeastern Nigeria. *Nigerian Journal of Soil Science*, 29(1), 78–85.
- Obiadi, I. I., Okogbue, C. O., & Onuigbo, N. E. (2020). Geological and geomorphological characteristics of southeastern Nigeria. *Journal of Earth Sciences*, 8(3), 101–110.
- Okoli, E. I., Okonkwo, A. U., and Akanwa, A.O. (2025). Exploring the Nexus of Flooding, Food Security, and Gender Vulnerability: A Case Study of Women Farmers in 8 Ogbaru LGA, Nigeria. *International Journal of Research Publication and Reviews* 6 (7), 3344-3351
- Onyema, M. C., Ezeh, C. I., & Nwibo, S. U. (2021). Rural livelihood systems and economic activities in Ebonyi State. *African Journal of Agricultural Research*, 16(5), 678–686.
- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). SAGE Publications.
<https://us.sagepub.com/en-us/nam/qualitative-research-and-evaluation-methods/book232962>
- Perelli, C., Cacchiarelli, L., Peveri, V., & Pulighe, G. (2024). Gender equality and sustainable development: A cross-country study on women's contribution to the adoption of climate-smart agriculture in Sub-Saharan Africa. *Ecological Economics*, 219, 108145.
DOI: <https://doi.org/10.1016/j.ecolecon.2024.108145>
- Pink, S. (2013). *Doing visual ethnography* (3rd ed.). SAGE Publications.
<https://uk.sagepub.com/en-gb/eur/doing-visual-ethnography/book236416>
- Scoones, I. (2015). *Sustainable livelihoods and rural development*. Practical Action Publishing.
<https://practicalactionpublishing.com/book/2015/sustainable-livelihoods-and-rural-development>
- Temple, B., & Young, A. (2004). Qualitative research and translation dilemmas. *Qualitative Research*, 4(2), 161–178. <https://doi.org/10.1177/1468794104044430>
- World Bank. (2022). *Gender in Agriculture Sourcebook*.
<https://openknowledge.worldbank.org/handle/10986/2694>
- World Bank. (2023). *Women, Business, and the Law 2023*. <https://wbl.worldbank.org>