

Research Brief

Environmental Conservation Practices in Ondo State



July 2025

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drpc

info@drpcngr.org

Key Findings

- Women perform 60–85% of tasks in land preparation, nursery, planting, and fertilization, playing a foundational role in cocoa farming. Despite this, their contributions remain undervalued in formal policies and support programs.
- Men dominate physically demanding and hazardous tasks like tree cutting and chemical spraying. Women handle most of the planting, fermentation, drying, and packaging stages but are excluded from technical training and mechanized roles.
- Women use shade retention, composting, natural pest control, and recycled materials to maintain soil health and reduce chemical use. These sustainable practices reflect their deep environmental knowledge and resourcefulness.
- High cocoa prices have led to the expansion of farms into forest areas, causing widespread deforestation. This growth, driven by both smallholders and large-scale actors, often violates environmental regulations.
- Women receive only 30–33% of cocoa income if they do not own land, due to high input costs and middlemen exploitation. Limited bargaining power and lack of direct market access reduce their profitability.
- Government and cooperative programs rarely reach women, who report being bypassed in input distribution and training. This exclusion perpetuates gender inequality in access to land, credit, and technical support.
- Most women have never heard of key policies like the AU Cocoa Agenda 2063 or the EU Deforestation Regulation. This shows a major disconnect between policy formulation and rural farmer engagement, especially for women. New farmers often exploit children for cheap labour, sidelining women from employment. This trend harms children's education and deepens poverty in cocoa-growing communities.
- Unpredictable rainfall and rising temperatures disrupt planting and drying, causing post-harvest losses. Women must work longer hours to protect crops, increasing stress and reducing income.
- Women organize cooperatives to share transport, tools, and market access, improving sustainability and reducing costs. However, these efforts lack formal recognition and support from government and private actors.
- Women respondents do not process cocoa beans because they are unaware of what the processed products are used for and lack the necessary skills to carry out the processing.

Executive Summary

This study explores the critical yet underrecognized role of women in the cocoa value chain in Ondo State, Nigeria, with a special focus on their environmental conservation practices. Drawing on rich qualitative data from focus group discussions and key informant interviews, the research reveals that women contribute significantly to every stage of cocoa production from land preparation and nursery development to fermentation, drying, and packaging, while also spearheading sustainable practices such as shade retention, organic composting, and natural pest control. Despite these contributions, women face systemic barriers, including limited land access, low participation in decision-making, inadequate policy outreach, and minimal access to inputs and training opportunities.

The findings highlight several key shifts in cocoa farming over the last five years, including increased deforestation due to farm expansion, rising input costs, and unpredictable weather patterns that challenge traditional farming and drying methods. The expansion of cocoa cultivation has also led to the encroachment on forest reserves, increased use of child labour, and exclusion of women from the lucrative stages of value addition. While women have developed innovative, eco-friendly responses to environmental challenges, their efforts are often unsupported by formal institutions. Policy frameworks such as the EU Deforestation Regulation (EUDR), Cocoa Agenda 2063, and national sustainability programs remain largely unknown or inaccessible to rural women, exacerbating their marginalization within cocoa governance and market systems.

To build a more inclusive and sustainable cocoa sector, the report calls for gender-specific interventions across policy, institutional, and private sector platforms. It recommends that the government expand women's access to land, finance, and tailored extension services, enforce environmental regulations with grassroots inclusion, and raise awareness of international policies in local languages. The private sector is urged to invest in community-level processing infrastructure and integrate women into value-added activities and traceability systems. Finally, development partners and women's cooperatives are encouraged to scale training on eco-agriculture, expand resource-sharing platforms, and strengthen women's leadership in conservation advocacy. These targeted strategies are essential for aligning cocoa production with environmental sustainability, social equity, and economic empowerment for women in Ondo State.

Table of Contents

Key Findings	1
Executive Summary	2
About dRPC	4
List of abbreviations	5
1.0 General Introduction	6
1.1 Study Context	6
1.3 Objective	7
1.3 Methodology	7
2.0 Women's Role in the Cocoa Value Chain	9
2.1 Land Preparation and Nursery Development	9
2.2 Planting and Fertilizer Application	9
2.3 Pest and Disease Management	10
2.4 Fermentation and Drying	11
2.5 Packaging and Selling	12
2.6 Processing into Value-Added Products	12
3.0 Environmental Conservation Practices and Risks	14
3.1 Women's Environmental Conservation Practices	14
3.2 Women's Views of Men's Environmental Conservation Practices	17
4.0 Evolving Cocoa Farming Systems: Gender Dynamics and Implications	20
4.1 Shifts in Farming Practices	20
4.2 Climate and Environmental Impacts	23
4.3 Gendered Impact of Market and Technological Changes	25
4.4 Rising Rural Insecurity and Growing Fear	26
5.0 Policy and Institutional Environment: Gaps Between Regulation and Reality	28
5.1 National Cocoa Management Board Establishment Bill 2025	28
5.2. National and Regional Policies	29
5.3 Government and Cooperative Support Schemes	31
5.4 Private Sector Engagement in Environmental Sustainability	34
6.0 Strategy for Strengthening Sustainable and Gender-Responsive Cocoa Value Chains	35
6.1 Government	35
6.2 Private Sector	36
6.3 Women's Groups	36
6.4 NGOs/Development Partners	36
6.5 Cross-Cutting Strategies	36
Conclusion	37
References	38
Appendix	40

About dRPC

The development Research and Projects Centre (dRPC) is a Nigerian-based independent non-profit research and civil-society capacity-building organisation founded in 1993 by ten university lecturers during a time when local CSOs had limited voice in policy-making. Over the years, dRPC has supported over 1,000 Nigerian CSOs across sectors, including women's-groups, youth networks, and health professional associations, strengthening their ability to engage in evidence-informed advocacy, programme design, and policy oversight. In particular, during its engagement in the Partnership for Advancing Women's Economic Development (PAWED) years, dRPC led research and programme interventions on gender in agricultural markets, with a strong emphasis on women's economic empowerment, value-chain inclusion, and the structural constraints faced by women in agriculture and also supported the technical working group on gender in agriculture on gender responsive agriculture policy.

The current study builds on dRPC's longstanding track record in gender-responsive research and policy engagement by focusing on maternal nutrition financing, an area at the nexus of health, gender, and social policy. dRPC's institutional commitment to localized evidence, civil society engagement, and policy influence provides the foundation for this report to analyse how state-level fiscal, institutional, and programme frameworks shape maternal nutrition outcomes for women in Nigeria.

Contact:

For inquiries, partnerships, or further information, please reach out to the dRPC at:

Email: info@drpcng.org | **Phone:** +2347030353438 | **Abuja Office:** I.E. Madubuike Close off Ebitu Ukiwe

Street, Jabi 900108, Abuja, Federal Capital Territory | **Kano Office:** No. 36 Sardauna Crescent, Kano |

Website: www.drpcng.org

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Citation: development Research and Projects Centre (dRPC). (2025). *Environmental Conservation Practices in Ondo State*, dRPC Publication. Abuja, Nigeria. Available at <https://drpcngr.org/resources/#>

List of abbreviations

CAAPS	Common African Agro-Parks Programme
Gov	Government
AU	Africa Union
CRIN	Cocoa Research Institute of Nigeria
CocTA,	Cocoa Transformation Agenda
CRS	Corporate Social Responsibility
EIA	Environmental Impact Assessments
EU	European Union
EUDR	European Union Deforestation Regulation
FAO	Food and Agriculture Organization of the United Nations
FGD	Focused Group Discussion
FSSC	Food Safety System Certification
PIND	Foundation for Partnership Initiatives in the Niger Delta
GEF	Global Environment Facility
GAP	Good Agricultural Practices
KIIS	Key Informant Interviews
NAFDAC	National Agency for Food and Drug Administration and Control
NCMB	National Cocoa Management Board
NCMC	National Cocoa Management Committee
NESREA	National Environmental Standards and Regulations Enforcement Agency
NGOS	Non-Governmental Organizations
PS	Private Company
RA	Rainforest Alliance
WCF	Women Cocoa Farmer

1.0 General Introduction

1.1 Study Context

Ondo State, Nigeria's leading cocoa-producing region, leverages its favourable climate and fertile soil to drive economic and social development through cocoa cultivation, primarily by smallholder farmers who depend on the crop for their livelihoods. The cocoa sector is deeply embedded in the cultural and economic fabric of rural communities, with women playing a vital but often underrecognized role. Despite their contributions, women face systemic barriers. The AU Commodity Strategy, part of Agenda 2063's First Ten-Year Implementation Plan (2013–2023) and the Second Ten-Year Implementation Plan (2024 – 2033), promotes sustainable industrialization by optimizing commodities like cocoa through value addition and regional value chains.¹ While it does not explicitly mention women, gender equity is a cross-cutting priority in Agenda 2063, implicitly including women farmers in its focus on inclusive development and resource access. For instance, the strategy's emphasis on sustainable practices and addressing barriers to inputs like fertilizers indirectly supports women, who face significant challenges in these areas.²

The Common African Agro-Parks Programme (CAAPs), another Agenda 2063 flagship, aims to advance agro-industrialization by establishing large-scale agro-parks to enhance processing, logistics, and trade for commodities like cocoa. CAAPs explicitly recognize women's roles in policy discussions, emphasizing job creation and economic empowerment for women and youth in agricultural value chains. AU documents highlight women's contributions to cocoa processing and small-scale trade, advocating for agro-parks to provide training and infrastructure to support female entrepreneurs and workers in cocoa-producing regions like Ondo State. In Nigeria, the Cocoa Transformation Agenda (CocTA, 2011–2014) sought to boost cocoa production and support smallholder farmers through improved inputs and post-harvest handling.³ It focused on smallholder farmers, given their significant presence in Nigeria's cocoa workforce. The agenda's efforts to improve access to resources indirectly tackled barriers faced by women, such as limited land and input access, though it lacked specific gender-focused interventions.

Furthermore, the proposed National Cocoa Management Board (NCMB), introduced in May 2025, aims to regulate Nigeria's cocoa value chain, provide credit, enhance quality standards, promote domestic processing, and encourage climate-smart agriculture and youth participation. While the NCMB's mandate does not explicitly mention women, its emphasis on smallholder farmers and inclusive development implicitly encompasses them, as women are critical to cocoa production and processing. The NCMB's proposed credit schemes and training programs address gender disparities in financing, aligning with AU and Nigerian policies that recognize women's contributions to smallholder farming. Similarly, the National Cocoa Management Committee (NCMC), established in 2022, focuses on compliance with international sustainability regulations, such as the EU Deforestation Regulation, and is developing a national framework for traceability.⁴ The NCMC collaborates with farmer associations, including women's cooperatives. Its sustainability focus aligns with gender-inclusive practices, ensuring women farmers benefit from traceability systems and access to premium markets.

¹ https://au.int/sites/default/files/newsevents/workingdocuments/43517-wd-Agenda_2063_STYIP_Feb_2024_Launch_Version.pdf

² https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Agenda2063_Popular_Version_English.pdf

³ https://www.icco.org/wp-content/uploads/4-FEASIBILITY-STUDY-ON-AFRICA-COCOA-EXCHANGE__Annex_NIGERIA.pdf

⁴ [https://www.eeas.europa.eu/sites/default/files/documents/2024/Volume%201%20Nigeria.%20Mapping%20of%20value%20chains%20v02%20rev16.09.24%20\(1\)_0.pdf](https://www.eeas.europa.eu/sites/default/files/documents/2024/Volume%201%20Nigeria.%20Mapping%20of%20value%20chains%20v02%20rev16.09.24%20(1)_0.pdf)

Nigeria's broader trade and value chain policies, including a 30% expansion of cocoa plantations,⁵ and the ECOWAS Common External Tariff, emphasizes value addition to raw materials like cocoa to enhance economic returns and regional trade.⁶ These policies implicitly include women through their focus on smallholder farmers. This study will use women's lived experiences in Ondo State to analyse their roles in cocoa production and the sustainability of their conservation practices.

1.3 Objective

The primary objective of this study is to expand knowledge of the environmental conservation practices of Women in the Cocoa Value Chain in Ondo State. The strategic objectives are:

1. To increase the recognition of the roles of women across different stages of the cocoa value chain in Ondo State.
2. To improve understanding and visibility of the environmental conservation practices adopted by women in cocoa production and processing.
3. To strengthen knowledge of gendered differences in environmental practices.
4. To enhance women's participation in environmental policy implementation and sustainable farming initiatives.
5. To promote strategies for enhancing women's inclusion in environmentally sustainable cocoa production systems.

1.3 Methodology

This study employed a qualitative research design, combining Focus Group Discussions (FGDs) and Key Informant Interviews (KIs) to generate context-specific insights into women's roles in the cocoa value chain and their environmental conservation practices in Ondo State, Southwest Nigeria. The approach was designed to be participatory and dialogic, allowing for a rich exploration of lived experiences, perceptions, and institutional responses across both grassroots and systemic levels.

Fieldwork and Sampling

A total of four FGDs were conducted between 24–25 June 2025 across Ile-Oluji and Okeigbo Local Government Areas (LGAs), two major cocoa-producing zones in Ondo State.

- Three FGDs were held with groups of women cocoa farmers and processors, each consisting of 8–10 participants. Participants ranged in age from their early 20s to 50s, representing diverse socioeconomic backgrounds, levels of farming experience, and positions within the value chain. They were purposely selected to ensure inclusion of landowners, tenant farmers, cooperative members, and women operating outside formal producer structures.
- A fourth FGD, held on 25 June 2025, engaged five state government officials from the Ondo State Ministry of Agriculture and Forestry, including officers involved in agricultural policy, extension, and rural development programming. This session explored institutional priorities, implementation challenges, and perceived barriers to women's effective participation in sustainable cocoa production.

⁵ <https://360.rmrhc.gov.ng/the-urgency-of-30-value-addition-to-nigerias-raw-material-exports/>

⁶ <https://openknowledge.fao.org/server/api/core/bitstreams/3a411707-1f26-402f-91e1-823a9aeab96c/content>

- One Key Informant Interview (KII) was conducted on 26 June 2025 with a private-sector actor involved in cocoa sourcing and processing. The discussion provided complementary perspectives on market incentives, sustainability standards, gender inclusion, and corporate social responsibility (CSR) within the cocoa sector.

Data Collection Procedures

All field sessions were guided by semi-structured interview instruments developed by the dRPC team. The instruments were designed to elicit detailed responses on gendered labour divisions, conservation practices, institutional support, and environmental risks. Discussions were conducted in both English and Yoruba, recorded with participants' consent, and supplemented with field notes capturing behavioural observations and non-verbal cues. The participatory nature of the sessions encouraged open, experience-based dialogue and peer validation among respondents.

Data Analysis

Transcribed data were subjected to thematic analysis to identify patterns and trends across participants' narratives. Key themes included land access, conservation behaviour, institutional support, market constraints, and environmental risks. During analysis, frequency ranking was applied to women's references to government support systems—categorising these based on both frequency of mention and perceived relevance. Participants also engaged in a self-assessment exercise, assigning percentage scores (0–100%) to indicate the relative involvement of women, men, and children across different stages of the cocoa value chain. These self-assessed values were aggregated and averaged to generate indicative percentages, providing an internally validated perception of gendered labour distribution.

Table 1: Ranking the Effectiveness of State Support Initiatives

Rank	Access to Women	Impact on Empowerment	Evidence from FGDs
Very High	Explicitly designed for women, widespread access and participation	Transformative; removes key structural barriers (e.g., land, finance, leadership)	Women consistently report strong benefits, ownership, and long-term improvements
High	Broad access for women	Significant and direct empowerment impact	Multiple women report benefits and satisfaction
Moderate	Partial or indirect access	Some benefits, but not transformative	Mixed responses; some women benefit, others are excluded or unaware
Low	Limited or no access for women	Minimal or no positive impact	Women report exclusion, dissatisfaction, or manipulation of the initiative
Very Low	Practically inaccessible to women or structurally biased against them	Disempowering; reinforces inequality or adds new burdens	Women report harm, exploitation, or a complete absence of support or inclusion

Ethical Considerations

All participants were informed of the study objectives, the voluntary nature of participation, and the confidentiality of responses. Personal identifiers were excluded from the transcripts to ensure anonymity. The study adhered to dRPC's internal research ethics protocol, aligned with the Bayero University Kano Ethics Review framework, ensuring gender sensitivity, informed consent, and data protection throughout the research process.

2.0 Women's Role in the Cocoa Value Chain

According to the respondents, several stages are involved in the cocoa value chain, starting with input supply, which includes acquiring seedlings, fertilizers, pesticides, and basic farming tools. These stages progress through land clearing and planting, harvesting and pod breaking, fermentation and drying, storage and transport, marketing and sales, and finally, processing and export, forming a continuous and interdependent production system as discussed in the subsequent paragraphs.

2.1 Land Preparation and Nursery Development

The cocoa value chain in Ondo State begins with land preparation and nursery development, foundational activities that determine the long-term productivity and sustainability of cocoa farms. This stage involves clearing land of grasses, shrubs, and, at times, trees to create a viable environment for planting. Women typically handle manual clearing using tools like cutlasses and hoes, focusing on smaller plots, while men undertake more physically demanding tasks such as felling large trees and removing stumps. After clearing, cocoa seeds are planted in nursery beds, often in polythene bags or makeshift containers filled with fertile soil, where they are watered regularly and monitored closely for pest control and healthy development. Women play a dominant role, contributing an estimated 60–80% of the labour required during this stage, as reported in focus group discussions. Their involvement spans the entire nursery cycle: preparing the soil, sowing seeds, watering, and nurturing seedlings until they are mature enough to be transplanted. Many women described their commitment using maternal metaphors, highlighting their emotional and physical investment. One participant shared, *"We watch them closely, like babies, because if they die, we have to start all over again"* (R3_FGD_WCF_03), illustrating the care and vigilance required during the nursery phase.

In contrast, men contribute about 15–35% of the labour mainly for physically intensive activities such as tree cutting or digging, and children, typically during school holidays, assist with lighter tasks like fetching water or carrying seed bags (5–15% participation). The gendered division of labour at this stage reflects broader socio-cultural norms, where women are tasked with the majority of unpaid agricultural labour, especially in early-stage, high-maintenance activities. This stage is not only labour-intensive but also resource-dependent. Women frequently cover expenses like polythene bags, watering cans, and shade plants out of pocket, often without external support or subsidies. One respondent emphasized this burden, stating, *"I am the one who clears the bush, digs the ground, and buries the cocoa seedlings"* (R1_FGD_WCF_02). The economic cost, combined with time and physical effort, underscores the critical yet undervalued role women play in sustaining the cocoa production system. Thus, their contributions at this stage are rarely acknowledged in formal policies or support programs. Despite being key drivers of seedling survival and land preparation, women remain underrepresented in decision-making spaces and are often excluded from training or input distribution schemes that could ease their workload or improve productivity.

2.2 Planting and Fertilizer Application

The planting and fertilizer application stage is where seedlings from the nursery are transplanted to the main farm. This process begins with digging holes in carefully marked plots, ensuring proper spacing to allow cocoa plants room to grow. Women and men work together to transplant the seedlings, placing them into pre-dug holes to establish strong roots. Fertilizers, such as NPK or organic compost, are applied to boost plant development and ensure healthy growth. Shade crops, like plantain, are often planted alongside to protect young cocoa plants from intense sunlight, a practice that supports their survival during the early years. *"The plantains are very*

important; they help protect the young cocoa from the hot sun. Without shade, the cocoa can dry and die,” says R3_FGD_WCF_03. This stage requires meticulous planning, as cocoa plants take approximately three years to mature and begin bearing fruit, demanding patience and consistent care.

Women are the backbone of this stage, contributing an estimated 55–85% of the labour, as reported in the focus group discussions. They take on critical tasks such as digging holes, transplanting seedlings, and applying fertilizers, ensuring the plants are well-established. Respondent explained, “I handle many of the duties that people think only men should do. I cultivate the land using my hoe and clear the roots and shrubs to prepare it for planting” (R3_FGD_WCF_02). Men contribute 10–35% of the effort, typically assisting with physically demanding tasks like digging deeper holes or transporting materials, while children participate minimally (5–15%), helping with tasks like carrying seedlings or planting shade crops during school holidays. Women’s dominance in this phase highlights their expertise and dedication to nurturing the cocoa plants through their early growth.

2.3 Pest and Disease Management

This stage involves regular weeding to eliminate competing plants that deprive cocoa trees of nutrients, using tools like hoes or, in some cases, spraying herbicides. To control pests and diseases, farmers apply pesticides, typically spraying early in the morning or late evening to avoid chemical degradation from sunlight. When chemical costs are prohibitive, some farmers resort to manual pest removal, picking off insects by hand, or hiring labourers to handle spraying. As Respondent noted, “I use chemicals like *Fari* and *Garnali 20* to control insects that attack my cocoa... When I can’t afford chemicals, I pick off some of the pests by hand” (R2_FGD_WCF_02). Women contribute less to this stage compared to others, accounting for 10–20% of the labour, as men dominate with 75–85% due to the physical demands of operating sprayers and handling chemicals. Women who participate in spraying take precautions, wearing protective gear to mitigate health risks, as highlighted by Respondent “I mix the chemicals myself, and I use protective wear so I won’t fall sick” (R2_FGD_WCF_03). Children are minimally involved, contributing about 5% of the labour, typically during school holidays, assisting with lighter tasks like carrying water for mixing chemicals. Women’s limited involvement reflects the gender division of labour, with men taking on tasks perceived as more hazardous or physically intensive, though women remain essential in weeding and supporting roles.

Table 2: Stages in Cocoa Value Chain

Stage	Activities	Recent Changes/Challenges	Gender Dynamics
Input Supply	Provision of seedlings, fertilizers, pesticides, and tools	Sharp rise in cost of inputs (fertilizers, herbicides, pesticides). Reduced frequency of application; Poorer farm productivity	Women struggle more with affording inputs. Some resort to manual weeding and traditional methods
Land Clearing & Planting	Clearing new plots, nursery care, and transplanting seedlings	Expansion into forest areas due to rising cocoa prices. Deforestation and EUDR violations; Mostly small-scale farming for new entrants.	Women play key roles in nursery care and planting. Land access remains limited.
Harvesting & Pod Breaking	Cutting ripe pods, collecting, breaking pods,	Still manual and labour-intensive. Increasing labour shortages, especially among youth	Men do heavy labour (tree climbing, cutting).

Stage	Activities	Recent Changes/Challenges	Gender Dynamics
	scooping wet beans		Women and children break pods, often sit for hours doing it.
Fermentation & Drying	Fermenting wet beans for 3–5 days; sun-drying beans on mats or tarps	Faster drying is now prioritised, reducing fermentation time, which leads to poorer flavour, lower cocoa quality. Unpredictable rain complicates drying, causes mold.	Women dominate this stage. Increased workload due to erratic rainfall (need to monitor and cover beans repeatedly).
Storage & Transport	Bagging and moving dried beans to points of sale or buyers	Some spoilage due to poor drying– Rising transport costs in remote areas.	Mostly handled by men or traders; women assist if they are farm owners.
Marketing & Sales	Selling to middlemen, cooperatives, or local buyers	Middlemen dominate the chain– Farmers lack direct access to high-paying buyers. Prices are unstable and often low despite the global price rise.	Women often receive only 30–33% of proceeds if they are not landowners. Lack of cooperatives worsens price negotiation.
Processing & Export	Industrial processing into cocoa butter, powder, and chocolate	Minimal local processing. Export quality is affected by drying issues.	Women have limited participation here due to capital and technology gaps.

Source: Developed from the Research Project FGDs and KII Dataset

2.4 Fermentation and Drying

The fermentation and drying stage is essential in the cocoa value chain, as it transforms wet cocoa beans into a stable, marketable product with developed flavour. After harvesting, wet cocoa beans are fermented in heaps or pits, typically covered with banana leaves, for 5–7 days to enhance their taste and quality. Following fermentation, the beans are spread on tarpaulins, mats, or raised bamboo platforms for drying, a process that takes 2–3 weeks depending on weather conditions. Regular turning of the beans is crucial to ensure even drying and prevent mold, especially during unpredictable rainy periods. As the Respondent noted, “I spread the beans on clean tarpaulin or raised drying racks. I turn the beans regularly for even drying... to make sure they are well dried and won’t spoil in storage” (R4_FGD_WCF_02).

Women are highly active in this stage, contributing an estimated 50–70% of the labour, playing a central role in both fermentation and drying. They manage the fermentation process by monitoring the beans, ensuring proper coverage with leaves, and checking for the right fermentation duration. Respondent noted, “After removing the beans, I ferment them using banana leaves. I pour the beans into a pit or heap, cover them properly, and leave them for about five to seven days. When fermentation is complete, I spread the beans on clean tarpaulin or raised drying racks. I turn the beans regularly for even drying. I dry the beans for about two to three weeks, depending on the weather, to make sure they are well dried and won’t spoil in storage.” During drying, they spread the beans, turn them regularly, and protect them from rain, often staying vigilant to avoid spoilage. Respondent emphasised, “I wake up early every morning to spread the beans on tarpaulin or mats... When it rains suddenly, I have to run quickly to cover the beans so they don’t get wet” (R5_FGD_WCF_02). Men contribute 20–40% of the labour,

primarily in tasks like carrying heavy loads or bagging dried beans, while children assist with 10–20%, helping with lighter tasks such as turning beans or keeping animals away from drying areas, particularly during peak seasons.

2.5 Packaging and Selling

The packaging and selling stage finalize the preparation of dried cocoa beans for the market among the respondents. This process involves cleaning the beans to remove debris, sorting them to ensure quality, and packing them into sacks for sale. Farmers weigh the beans to determine quantities, using scales to ensure accurate measurements. Beans are either sold directly to buyers who visit the village or transported to local markets for better prices. Women's groups or cooperatives play a significant role, organising collective marketing to negotiate higher prices and share transport costs, reducing individual expenses. As the Respondent noted, "I try to negotiate good prices, but sometimes the buyers cheat us. I also belong to a women's group that helps us get better prices and even helps with transport." (R5_FGD_WCF_02).

Women dominate this stage, contributing an estimated 60–70% of the labour, handling critical tasks such as sorting beans, weighing them, and negotiating with buyers. Their attention to detail ensures high-quality beans that meet buyer standards. Respondent 5 from Group 2 shared, "I sort the beans carefully, removing stones and bad ones, then weigh them before packing into sacks... Buyers trust my work because they know it's clean" (R6_FGD_WCF_02). Men contribute 20–30%, primarily in transporting heavy sacks to buyers or markets, while children assist with 10% of the work, helping with minor tasks like packing or carrying small loads, often during holidays. Women's groups enhance economic empowerment by pooling resources, enabling collective bargaining and shared logistics, which strengthen their market position.

2.6 Processing into Value-Added Products

The processing stage of the cocoa value chain involves converting dried cocoa beans into value-added products such as cocoa butter, cocoa powder, and cocoa liquor. These products are essential raw materials for the food, beverage, and cosmetics industries, both domestically and internationally. Processing typically takes place in either small cottage industries or large-scale commercial facilities, where beans undergo multiple stages, including roasting, winnowing, grinding, and pressing. Despite the increasing relevance of value addition in enhancing income and market competitiveness, many rural women cocoa farmers remain disconnected from this stage of the value chain. Focus group discussions revealed a striking knowledge gap among women farmers, who admitted to having little understanding of what cocoa beans are used for beyond direct sales. One participant explained,

"We don't reprocess the beans, we only sell. We do not have the skill to do it. If you know it, you can teach us." (R1_FGD_WCF_01)

This statement underscores a critical missed opportunity for capacity development in cocoa processing and value addition at the grassroots level. In contrast, private sector actors and government stakeholders demonstrate a much higher level of engagement and technical capacity in cocoa processing. A private sector respondent stated:

“We process cocoa into products like cocoa powder and other semi-finished goods... supplied to major food companies within Nigeria and abroad.” (KIL_PS_01)

While some small-scale women-led initiatives have made strides in local processing, such as using cocoa pod shells to produce soap, these efforts remain limited by resource constraints, lack of access to machinery, and absence of formal training. A government official noted the case of Madam Akinodju in Bankemi, Ile-Oluji, who processes cocoa into soap but struggles due to limited equipment and financial capacity (R1_FGD_Gov_01).

Within formal processing environments, women play an essential but often unrecognized role, particularly in cottage industries and larger organized facilities. They contribute an estimated 30–35% of the labour force, mainly in non-technical but critical roles such as sorting, quality control, and packaging. As highlighted by a private sector key informant:

“Women are the ones sorting the cocoa beans, making sure everything is clean and done properly.” (KIL_PS_02)

These tasks are vital for ensuring hygiene standards and product consistency, especially for export-quality goods. In contrast, men dominate the technical and mechanical aspects of processing, such as machine operation, roasting, and grinding, contributing 50–60% of the labour. Youths, including some children, provide limited support (5–10%), mostly in light tasks such as lifting sacks or cleaning workspaces. This gendered division of labour reflects broader structural inequities: while women are heavily involved in production and manual processing, they remain excluded from technical roles, value-added opportunities, and profit margins.

3.0 Environmental Conservation Practices and Risks

Environmental conservation practices observed across the FGD in the cocoa value chain among the women show a strong reliance on sustainable, low-impact methods that promote ecosystem health and resource efficiency, as stated in the subsequent paragraphs.

3.1 Women's Environmental Conservation Practices

Minimal Tree Clearing and Shade Retention: In the cocoa farms of Ondo State, women demonstrate a commitment to environmental conservation through minimal tree clearing and strategic shade retention, practices that balance agricultural needs with ecological preservation. By selectively clearing land, women preserve large trees such as mango or indigenous species, which provide essential shade for cocoa trees.

"When I clear land for cocoa, I don't cut down all the trees. I leave some big ones, like mango or bush trees, because they give shade to the cocoa and help keep the soil cool," by R1_FGD_WCF_02.

This approach not only maintains soil moisture but also prevents erosion, ensuring the land remains fertile for future planting. Such practices reflect a deep understanding of the symbiotic relationship between cocoa cultivation and the natural environment, fostering sustainable farming that supports long-term productivity.

Additionally, women enhance soil stability and protect young cocoa plants by integrating shade crops like plantain into their farms. This agroforestry technique shields delicate cocoa seedlings from harsh sunlight while contributing to soil health. As one woman explained,

"When the cocoa seedlings are ready, we move them to the main farm. We dig small holes in the places we marked before. Then we plant the cocoa and also plantain trees beside them" (R4_FGD_WCF_03).

Another added,

"The plantains are very important, they help protect the young cocoa from the hot sun. Without shade, the cocoa can dry and die" (R5_FGD_WCF_03).

This combined approach helps women create a microclimate that supports crop growth and reduces environmental degradation, showcasing their resourcefulness in promoting a nature-friendly ecosystem within the cocoa value chain.

Organic and Waste Recycling Practices: They reuse materials like old polythene bags, cans, and plastic containers for nursing cocoa seedlings to minimise waste and reliance on new resources. As one woman shared,

***“During the nursery stage, I try not to waste anything. I reuse old polythene bags to nurse cocoa seedlings instead of buying new ones. Sometimes, I also use old cans or cut plastic containers”
(R2_FGD_WCF_02).***

Additionally, women create compost from kitchen waste, such as yam peels, plantain skins, and ash, to enrich soil naturally.

“I make compost from kitchen waste things like yam peels, plantain skins, and ash from firewood. I mix it into the soil to help the seedlings grow naturally,” explained another woman (R1_FGD_WCF_02).

These practices reduce the need for chemical fertilizers, preserving soil health and lowering costs while fostering an eco-friendly approach to farming.

Further contributing to a circular economy, women repurpose cocoa pod shells for multiple uses, such as manure, mushroom cultivation, or black soap production:

“You see, when we break cocoa pods, we don’t throw the shells away. We pack them into a pit and leave them to rot. After some time, we use the decomposed pods as manure on the farm. Some women in our group also use the shells to grow mushrooms” (R4_FGD_WCF_02).

Similarly, a woman highlighted,

“After breaking cocoa pods, we don’t just throw away the pod shells. Some women collect the back shell, dry it, and some use it to make local black soap” (R1_FGD_WCF_03).

These efforts ensure that by-products are reutilised, reducing waste and generating additional income streams, which underscores women’s role in sustainable resource management within the cocoa value chain.

Local innovations for pest and disease control: There is also evidence of natural pest control methods to minimise chemical overuse, safeguarding soil, water, and beneficial insects like bees. They prepare mixtures from locally available resources such as neem leaves, bitter leaves, pepper, and ash, and they create eco-friendly solutions to manage pests. As one woman explained,

"For pest control, I avoid too many chemicals. I make local mixtures using bitter leaves, neem leaves, pepper, and ash. I soak them in water for two days and spray them on the cocoa. It smells bad, but it works" (R4_FGD_WCF_02).

Similarly, a respondent noted,

"We try not to overuse chemicals so that it doesn't spoil the soil or kill useful insects. Some of us even try to use natural methods, like ashes or neem leaves, when we cannot afford chemicals" (R2_FGD_WCF_03).

Soil and Water Conservation: Women skillfully integrate soil and water conservation strategies that safeguard the environment while bolstering farm resilience. They sow cover crops like groundnut, beans, and melon among cocoa trees, they curb soil erosion and boost fertility, creating a sustainable farming system.

"After weeding, we plant groundnuts or beans between the cocoa trees to cover the ground. This keeps the soil from washing away and also gives us extra food," shared a woman (R2_FGD_WCF_02).

Likewise, another emphasised, "Some of us plant cover crops like melon and beans in between the cocoa trees, to hold the soil and add nutrients" (R6_FGD_WCF_03). These efforts not only stabilise the soil but also yield additional crops, blending environmental care with economic benefits.

Women also maximise water use by repurposing cocoa-washing water to nourish vegetable gardens, a clever approach to conserving scarce resources in dry seasons. "I collect the water used for washing cocoa and reuse it in my vegetable garden. I plant okra and ugu beside the cocoa farm, and the used water helps them grow," a respondent explained (R6_FGD_WCF_02). To further protect the land, they dig trenches to manage rainwater flow and cover bare soil with leaves to lock in moisture. "I dig trenches to prevent soil erosion during the rainy season, but my husband does not. I also cover exposed soil with leaves to preserve moisture," noted a woman from Group 2 (Respondent 8).

Sustainable Processing and Collective Efficiency: In the cocoa processing phase, women prioritise environmental care and resource efficiency. They use bamboo platforms for drying cocoa beans, ensuring the beans remain clean while promoting airflow to prevent contamination. "After fermentation, I dry the beans on a wooden platform I made from bamboo to avoid the bare ground. It keeps them clean and lets air circulate," noted a woman from (R5_FGD_WCF_02). This method not only preserves bean quality but also reduces the environmental footprint by avoiding soil disturbance, showcasing women's ingenuity in sustainable processing. They further enhance efficiency by storing cocoa beans in palm-frond baskets or reused sacks, bypassing plastic to cut down waste and maintain bean integrity. "I

store my dried cocoa in palm-frond baskets or sacks from the previous season, avoiding plastic bags that cause sweating and spoilage," shared a respondent (R6_FGD_WCF_02). This approach minimises non-biodegradable waste and ensures high-quality beans for the market, blending economic savvy with ecological responsibility. Through these distinct practices, women in the cocoa value chain champion a resource-efficient model that supports environmental sustainability.

They leverage collective strategies to enhance efficiency and reduce environmental impact by organising in groups to share transportation to markets, lower fuel consumption, and minimise wear on rural roads. *"When it's time to sell, we women in the group contribute money to carry our cocoa together to the market. Instead of using five or six different bikes or cars, we use one," explained a woman (R6_FGD_WCF_02).* This collaborative approach not only cuts down on emissions but also reduces costs, fostering both economic and environmental sustainability. These women pool resources to acquire shared tools like tarpaulins and sprayers, optimizing resource use and reducing individual expenses. *"We also contribute money every month to buy shared tools like tarpaulin and sprayers," shared another respondent (R9_FGD_WCF_02).* By collectively purchasing equipment, they minimize the need for redundant resources, enhancing efficiency while maintaining farm productivity. These cooperative practices highlight women's innovative efforts to balance economic viability with environmental stewardship in the cocoa value chain.

3.2 Women's Views of Men's Environmental Conservation Practices

Women observed that a growing number of men, especially those who have received training, are embracing eco-conscious methods that enhance both crop quality and environmental health. Some adopt shade-grown cocoa techniques, cultivating under existing forest trees or interspersing plantains to shield young plants and preserve ecosystems. *"My husband avoids bush burning now and plants shade trees like plantain among the cocoa," (R2_FGD_WCF_01).* Another noted, *"One man in our community now uses shade-grown cocoa methods, planting cocoa under older forest trees. He says it improves the quality and protects the forest" (R1_FGD_WCF_02).* These practices foster biodiversity and maintain soil integrity, reflecting a shift toward sustainable farming among educated or trained men. Moreover, men contribute to land preservation by digging canals to manage water flow and curb soil erosion. *"Some of the men also help us do good things too. Like digging small canals so that water can drain well and not wash away the soil," observed a respondent from (R9_FGD_WCF_03).* This technique ensures better water management, protecting the soil during heavy rains and supporting long-term farm sustainability. Such emerging practices, though not yet widespread according to the women, signal a promising move toward environmentally responsible cocoa farming among men.

Despite the positive efforts noted among some men, women observed that many men's environmental conservation practices are often undermined by a strong focus on rapid production. This drive for quick results leads to harmful methods such as extensive land clearing, bush burning, and heavy herbicide use, all of which degrade soil health and threaten biodiversity. *"Men mostly focus on yield and profit. They clear the land quickly, sometimes by burning bushes or using herbicides. This destroys some of the trees and animals living there," observed a woman (R1_FGD_WCF_02).* Similarly, another noted, *"They clear more land than they can manage and leave it bare. This causes erosion and poor soil quality" (R4_FGD_WCF_02),* highlighting how such practices, also referenced by other women, prioritize short-term gains over long-term environmental health.

Women also noted that most men apply chemical fertilizers and pesticides excessively, often without precise measurement, contributing significantly to soil and water degradation. “Men are more likely to use chemical fertilizers and strong pesticides without thinking about how they affect the soil and water,” stated a respondent (R3_FGD_WCF_02). This concern was echoed by others, with one woman adding, “They want to kill the insects fast, so they use too much chemical. This ends up harming the tree or the soil” (R6_FGD_WCF_03). Several respondents emphasized that such overuse pollutes water sources and disrupts ecosystems, revealing a broader tendency among some men to overlook sustainable practices in pursuit of immediate productivity unless they have received specific training or incentives.

While men often engage in physically demanding roles such as tree climbing for harvesting and pest management tasks that can contribute positively to farm health when handled properly, they also pose risks when managed carelessly. For example, careful harvesting can protect cocoa trees and extend their productivity. As one woman noted, “Men are very active during the harvest time. They climb the trees and cut the cocoa pods carefully so that the trees are not damaged” (R1_FGD_WCF_03). However, pest management still frequently involves unregulated chemical spraying. “Men also support in managing pests, especially when they spray the cocoa tree, but many of them don’t follow the right dosage,” observed another respondent (R6_FGD_WCF_03).

Tying these practices together, women observed a broader **profit-driven mindset** among many male farmers, who often prioritize rapid expansion and high yields over long-term environmental sustainability. This approach results in environmentally harmful activities such as large-scale land clearing, bush burning, and excessive herbicide use. “Most men I know don’t care much about long-term environmental effects. They clear more land than they can manage and leave it bare,” stated a woman (R4_FGD_WCF_02). Others similarly pointed out that men frequently “cut down all trees on the land before planting” to maximize short-term gains, contrasting with women’s approaches, which tend to preserve shade trees and promote soil health (R6_FGD_WCF_01).

Table 3: Environmental Conservation Practice by Gender

Thematic Area	Women's Practices & Quotes	Environmental Benefits	Men's Practices & Observations	Environmental Risks/Benefits
Minimal Tree Clearing & Shade Retention	Selective tree clearing, retention of shade trees (e.g., mango, indigenous species)	Maintains soil moisture, prevents erosion, supports biodiversity	Extensive clearing, bush burning, and herbicide use	Degrades soil, disrupts ecosystems
Agroforestry with Shade Crops	Interplanting plantains with cocoa	Creates microclimate, protects seedlings, enhances soil health	Emerging use by trained men	Helps preserve the ecosystem (in trained cases)
Organic Waste Recycling	Use of compost from yam peels, plantain skins, ash, Reuse of plastic bags and cans	Reduces chemical use, improves soil fertility, and lowers cost	Less evidence of similar reuse is reported among men	Missed opportunity for sustainable inputs

Thematic Area	Women's Practices & Quotes	Environmental Benefits	Men's Practices & Observations	Environmental Risks/Benefits
Cocoa Pod Reuse	Cocoa pod shells for manure, mushroom farming, and black soap.	Circular economy reduces waste, provides income	Not mentioned	-
Natural Pest Control	Neem, bitter leaves, pepper, and ash mixtures	Minimises chemical use, protects soil and pollinators	Overuse of chemicals without measurement	Soil/water pollution harms biodiversity
Soil Conservation	Use of cover crops (groundnut, beans, melon)	Prevents erosion, adds nutrients, boosts yield	Some men dig canals (in trained groups)	Helps manage erosion (in some cases)
Water Management	Reuse of cocoa-washing water for vegetables, mulching with leaves, and trench digging.	Water conservation, reduced erosion, and soil moisture retention	Inconsistent adoption among men	Risk of runoff and poor drainage without trenches
Eco-Friendly Processing	Bamboo drying platforms, reused sacks, and baskets	Avoids contamination, reduces plastic, protects bean quality	No similar sustainable methods mentioned	-
Collective Efficiency	Group transport and shared tools	Reduces emissions, fuel use, and costs	Not mentioned	-
Training-Inspired Change (Men)	Some men adopt shade-grown methods and erosion control	Encouraging a sustainability trend	Driven by access to training	Potential for scaling sustainable methods
Profit-Driven vs. Sustainability Mindset	Women prioritise soil health, waste reuse, and shade retention	Supports long-term farm viability	Men often prioritise profit and rapid expansion	Leads to ecosystem degradation
Heavy Tasks with Mixed Impact (Men)	-	-	Climb trees carefully for harvesting (positive). Chemical spraying (negative)	Benefit when careful; risk when chemicals are misused

Source: Developed from the Research Project FGDs -WCF Dataset

4.0 Evolving Cocoa Farming Systems: Gender Dynamics and Implications

4.1 Shifts in Farming Practices

Reduced Fermentation and Drying Time: One notable shift highlighted by women in the cocoa value chain is the move toward faster drying processes, which has reduced the traditional fermentation time for cocoa beans. This change, driven by market pressures and economic constraints, has had a tangible impact on the quality of the beans produced. According to the Respondent, "In the past, we used to wait three to four days after plucking the pods before drying the cocoa beans, and this helped to make the cocoa stronger and sweeter. But now, people rush the process. They start drying the same day they pluck, and this affects the taste and quality" (R1_FGD_WCF_02). This indicates a departure from traditional methods that prioritised longer fermentation to enhance flavour, in favour of quicker turnaround times to meet buyer demands. The shift to faster drying is largely influenced by external pressures, such as the urgency from buyers for rapid delivery. This rush compromises the fermentation process, which is critical for developing the rich flavour profile that high-quality cocoa demands. Respondent 1 further noted, "Some of them don't ferment properly, and that spoils the beans. I feel the change is due to pressure from buyers who want fast delivery, but it reduces the standard." The emphasis on speed over quality reflects a broader trend where economic incentives and market dynamics are reshaping traditional practices. Farmers, particularly women who are heavily involved in post-harvest processes, express concern that this practice diminishes the value of their cocoa in both local and international markets, potentially affecting their income.

Harvesting and Pod Breaking: The harvesting and pod breaking stage is a labour-intensive process crucial for extracting the raw material, wet cocoa beans. Ripe cocoa pods are carefully harvested using cutlasses or long knives, ensuring minimal damage to the trees to preserve future yields. The pods are gathered into piles, often in a central location on the farm, before being broken open to extract the wet cocoa beans inside. This task requires precision to avoid damaging the beans or the tree branches. As the Respondent described, "When the cocoa pods are ripe, I use a cutlass or a long knife to harvest them... I do this carefully so I don't damage the tree or the beans inside" (R3_FGD_WCF_02). Women and children frequently assist in gathering the pods and breaking them open, while men typically handle the cutting due to the physical demands of climbing trees or using tools.

Women play a significant role in this stage, contributing an estimated 15–30% of the labour, primarily focusing on gathering pods into piles and breaking them open to extract the beans. Respondent noted, "I sit down for hours breaking open the pods with a small cutlass and scooping out the beans into a basin. This task is time-consuming and messy, but very important" (R4_FGD_WCF_02). Men dominate with 50–70% of the labour, particularly in tree-climbing and pod-cutting tasks, which are considered more physically demanding. Children participate in 10–20% of the work, especially during peak harvest seasons, assisting with pod collection or bean extraction, often during school holidays. Women's involvement in gathering and breaking pods is critical to ensuring the beans are ready for the next stage of processing.

Increased migration into cocoa farming (and deforestation): The surge in cocoa prices over the past decade has significantly reshaped the demographic and economic landscape of cocoa farming in Ondo State. Respondents highlighted that the crop's growing market value has made it a far more attractive livelihood option than it was in previous years. One woman recalled,

"The price per kilogram used to be about ₦600 ten years ago, but now it has gone up significantly. That increase has attracted more people back into farming" (R1_FGD_WCF_02). Another added, "It is true cocoa is now a sweet business. In the last few years, cocoa has changed people's lives here. Some have built houses, others have sent their children to university" (R4_FGD_WCF_03).

This economic shift has spurred a wave of new entrants into cocoa farming, including individuals who had previously abandoned agriculture or sold their land. Many are returning to farming as a survival strategy following job losses or financial instability, especially in urban areas. One respondent observed,

"Some people lost their jobs or couldn't find regular work, so they turned to cocoa farming as a way to survive. Even the young people who used to prefer riding okada (motorbike taxis) are now interested in farming cocoa" (R2_FGD_WCF_02). Another echoed this trend, noting, "Before now, only the older people were serious with cocoa, but now even the youth are getting involved. Life in the town is harder, and there is less work" (R4_FGD_WCF_03).

What was once largely a generational or family-based occupation has now become a viable economic opportunity for a broader and more diverse group, including urban returnees, unemployed youth, and non-traditional farmers. This demographic transformation reflects cocoa's increasing appeal as a stable and potentially profitable livelihood, especially in the face of growing urban hardship and rural unemployment. However, this influx has unintended environmental consequences, as the expanding population of cocoa farmers, new and returning, has increased pressure on available farmland.

Expansion into New Forest Areas: The rapid expansion of cocoa farming in Ondo State has driven widespread deforestation, as both new and existing farmers increasingly clear forested land to establish cocoa farms. This trend is primarily driven by the rising profitability of cocoa, combined with the limited availability of existing arable land, particularly in densely farmed regions. One respondent emphasized the scale of the transformation, stating:

"Yes, many people are expanding into new forests to farm cocoa. In fact, almost all the forest areas in our village have been cleared and turned into cocoa farms" (R1_FGD_WCF_02).

The surge in cocoa prices has made the crop highly attractive, not only to local smallholders but also to external investors and new entrants, including individuals from outside the state who see cocoa farming as a viable path to economic gain. As a result, pressure on land has intensified, particularly in cocoa-producing areas like Ile-Oluji and Oke-Igbo LGAs, where both small-scale

and large-scale operations are proliferating. However, this expansion is unfolding with limited oversight and poor compliance with environmental regulations, notably the European Union Deforestation Regulation (EUDR). Farms are increasingly encroaching on forest reserves and protected ecosystems, contributing to biodiversity loss, soil degradation, and broader ecological imbalance. A representative from the private sector acknowledged this risk, noting that much of the expansion is taking place outside formal land-use plans or sustainability frameworks (FGD_PS_01).

The scale and environmental impact of cocoa farming vary significantly between different types of farmers. Wealthier individuals and cooperatives, often backed by capital and machinery, engage in large-scale land clearing, sometimes up to 10–20 hectares per operation. These mechanized efforts intensify the rate and scale of deforestation. By contrast, smallholder farmers, particularly women, typically clear much smaller plots due to constraints in capital, tools, and labour. Yet, despite their lower individual footprint, their cumulative impact also contributes to forest loss. As one woman explained:

"Most of the farming here is small-scale, especially for those just starting... Only a few people, mostly the wealthy or those in cooperatives, are doing large-scale cocoa farming"
(R3_FGD_WCF_02).

While large-scale farms are the main drivers of deforestation, even small-scale expansion, when multiplied across hundreds of households, adds significant pressure to forest ecosystems. The lack of access to legal, affordable farmland pushes both groups into vulnerable ecological zones, creating a conflict between economic opportunity and environmental sustainability.

Increase in child labour: A concerning trend has been the increased use of child labour, particularly by new farmers, as a cost-saving measure, which undermines community welfare and sustainable development. Women farmers have observed that some new entrants to cocoa farming exploit vulnerable children from nearby villages, hiring them for low wages to perform tasks like weeding and carrying pods, as one respondent noted, "We have also noticed that some of the new farmers are using children on their farms. Maybe not their own children, but poor children from nearby villages. They are used because they are cheap to hire. They give them small money to weed or carry pods, instead of paying adults properly. It is not good. Children should be in school, not working on cocoa farms full-time" (R3_FGD_WCF_03). This practice is driven by economic pressures and the high cost of adult labour, with farm owners opting for cheaper child labour despite its detrimental impact on children's education and prospects, further exacerbating poverty cycles in rural communities.

The reliance on child labour not only violates ethical standards but also displaces women from employment opportunities, intensifying economic strain on households and communities. Women farmers express deep concern about the social and economic consequences, stating, "The truth is, many families are poor, and when someone offers a child small money to work, they send the child. Some children don't even want to go, but they are forced. The big farm owners take advantage of this. They don't want to pay adult labour, so they use children. It is cheaper for them, but it is dangerous for the children, and it destroys their future. We are not happy about this. When women are not employed and children are being used as labour, it brings trouble to the community. Women lose income, and homes suffer" (R3_FGD_WCF_03). This shift

contributes to a vicious cycle where women's reduced income limits their ability to support their families, while children's involvement in labour jeopardizes their education, perpetuating poverty and undermining community stability.

The increasing prevalence of child labour in Ondo State's cocoa farming, as highlighted by women's groups who noted new farmers exploiting vulnerable children for cheap labour, was acknowledged by both the government and private sector. The Ondo State government, firmly opposing child labour, has launched a campaign against it, with a state official stating, "Ondo State is firmly against child labour. Recently, the government printed and distributed over 5,000 copies of the state's Child Labour Handbook" to raise awareness and enforce regulations. Similarly, private cocoa processing companies like Johnvents Industry Limited adopted a policy prohibiting child labour, declaring, "It is the policy of Johnvents Industry Limited not to engage any person below the age of 18 years in the workforce," aligning with the United Nations resolution on child labour to address this growing trend and promote ethical practices in the cocoa value chain.

Changes in Chemical Usage and Availability: Farmers are increasingly adopting newer, more effective chemical products such as 'Actara 25 WG' and 'Clear Weed', which are perceived to perform better than previously used treatments. As one respondent stated, *"The name of the chemical we used on the farm is Actara 25 WG and Clear Weed. These products are more effective in controlling pests and diseases compared to what we used in the past..."* This shift suggests a growing responsiveness to emerging agrochemical technologies aimed at enhancing productivity and crop resilience.

However, the transition to these newer inputs is occurring within a context of rising input costs, which disproportionately affect smallholder women farmers. Many respondents highlighted that the prices of fertilizers, pesticides, and herbicides have increased significantly, leading to reduced application frequencies or a return to traditional alternatives. For example, a woman from Group 2 explained: *"The price of fertilizer is now too high. Before, I could buy what I needed for my farm, but now I can't afford enough. Sometimes, I only apply fertilizer once instead of two or three times as required. The same thing is happening with pesticides and herbicides."* This illustrates a key constraint: although more effective products are available, economic limitations are hindering their consistent use.

Additionally, there is a nostalgic reference to older, legacy agrochemicals that were seen as highly potent. According to Respondent 1 from Group 3, *"In the time of our fathers and forefathers, they used very strong and original chemicals to treat the cocoa. Those ones worked very well, and pests feared them. Those chemicals are now hard to find, and even when we see them, they are too expensive for us to buy."* This highlights both a generational perception of efficacy and a current gap in affordable, trusted inputs. It also reflects a broader tension between innovation and access, where smallholder farmers are caught between high-performing modern products and unaffordable or unavailable legacy options.

4.2 Climate and Environmental Impacts

Increased Costs of Inputs and Reduced Application: The women farmers consistently noted that the escalating prices of fertilizers and pesticides have made it difficult to afford adequate quantities, forcing them to reduce application frequency. This directly affected the health and productivity of their cocoa farms. As the Respondent stated, *"The price of fertilizer is now too high. Before, I could buy what I needed for my farm, but now I can't afford enough. Sometimes, I only apply fertilizer once instead of two or three times as required. The same thing is happening with pesticides and herbicides. The cost has gone up so much, and it affects how well my cocoa*

trees grow" (R2_FGD_WCF_02). This reduction in input use led to lower yields, as insufficient fertilization and pest control weakened cocoa plants, making them more susceptible to diseases and pests.

The high cost of inputs has compelled many women to either scale back their cocoa farming activities or resort to less effective alternatives, further impacting yields: "Many women I know now farm less cocoa because of this problem" (R2_FGD_WCF_02). The inability to apply fertilizers and pesticides as frequently as needed has led to poorer crop quality and reduced harvests, as the cocoa trees do not receive the necessary nutrients or protection. This economic constraint not only affects immediate production but also discourages women from expanding their farms, as the financial burden outweighs potential returns. To cope with the high costs, some women turned to traditional or less expensive methods, such as manual weeding or natural pest control, though these are less efficient and labour-intensive. The rising costs of inputs often intersect with other challenges, such as unpredictable weather, exacerbating the difficulties faced by women farmers: "These past few years, the weather has been very unpredictable. Sometimes we have too much rain during drying, and sometimes the rains come late. It affects everything – planting, spraying, drying" (R5_FGD_WCF_02).

Unpredictable weather patterns: Women cocoa farmers expressed deep concern about the instability of weather conditions, particularly during the crucial drying phase. The drying of cocoa beans typically requires several days of consistent sunlight, but the increasing frequency of sudden or prolonged rainfall has made this process more difficult and labour-intensive. As one respondent lamented:

"These past few years, the weather has been very unpredictable. Sometimes we have too much rain during drying, and sometimes the rains come late. It affects everything: planting, spraying, drying. I have lost some of my beans to mold because I couldn't dry them well when the rain refused to stop" (R2_FGD_WCF_02).

This evidence shows a wider trend observed among women farmers, who often lack the resources, such as covered drying racks, modern storage facilities, or accurate weather forecasts, to mitigate the risks of unpredictable weather. In essence, this leads to losses from mold and affecting the quality of cocoa beans, which directly impacts farmers' income. Similarly, the Respondent emphasised the shift in seasonal reliability, saying,

"Before, the rain used to come at the right time, and we could plan our planting around it. But now, the weather is not stable. Sometimes rain falls too much, other times it doesn't come at all. The sun too is hotter than before, and it affects the young cocoa plants"
(R2_FGD_WCF_03).

The erratic rainfall and hotter temperatures complicate planting schedules, making it difficult for farmers to ensure healthy growth of young cocoa plants, which are sensitive to extreme conditions. The impact of these weather changes extends beyond planting to post-harvest

processes, significantly increasing women's workload and stress levels. Respondent further explained the challenges during drying, stating,

"Drying the beans is one of the hardest jobs I do. I wake up early every morning to spread the beans on tarpaulin or mats. I stay by the drying area all day to make sure the beans are turned and protected from the rain. When it rains suddenly, I have to run quickly to cover the beans so they don't get wet" (R5_FGD_WCF_02).

The need to constantly monitor and protect beans from sudden rains underscores the labour-intensive adjustments women farmers must make due to unpredictable weather. Respondents also connected these changes to broader climate shifts, noting, "This climate change has really disturbed our farming. We don't know how the season will behave anymore, so we just try our best" (T2_FGD_WCF_03). This reflects a sense of uncertainty and adaptation among women farmers, who must navigate these environmental challenges with limited resources, further complicating their efforts to maintain consistent cocoa production and quality in the face of hotter temperatures and unreliable rainfall patterns.

4.3 Gendered Impact of Market and Technological Changes

Shift in Labor Dynamics: There is reduced availability of hired labour. Respondent articulates this trend, stating, "Some young people now say cocoa farming is too slow and stressful. They don't have the patience to wait three or more years for harvest. They want quick money" (R6_FGD_WCF_03). This shift created a labour shortage, particularly for tasks requiring physical strength, such as land clearing and spraying, which were traditionally supplemented by hired youth labour. The move away from cocoa farming reflects broader socio-economic changes, where urban migration and the allure of immediate income in cities like Akure have diminished the pool of available workers, leaving farmers to rely more heavily on family labour or their own efforts.

This labour shortage impacted women, who are already deeply involved in most stages of cocoa production, particularly in small-scale farms. Women have had to take on an even greater share of the workload to compensate for the lack of hired help, often managing tasks like weeding, planting, and harvesting single-handedly. Respondent emphasises this burden, noting, "Women are doing most of the work in the early stages, clearing, nursing the cocoa seeds, planting, and weeding. We are the ones who go to the farm almost every day. Men may come once in a while to help with spraying or cutting down trees, but the everyday work is on the women" (R1_FGD_WCF_02). This dynamic is compounded by the lack of access to affordable labour-saving technologies, such as spraying machines, which some women cannot afford, forcing them to continue using manual methods like hand-weeding (R7_FGD_WCF_03).

Economic and Market Challenges: Despite the rise in cocoa prices, which have made the crop more attractive, the financial benefits for smallholder farmers, especially women, are often diminished by systemic issues in the market chain. Respondent highlights this struggle, stating, "After all the work, I don't even get a good return. When the cocoa is sold, the owner of the farm only gives me around 30 to 33 percent. The rest goes to pay for the labourers and chemicals. Sometimes, after removing expenses, I go home with almost nothing" (R4_FGD_WCF_02). This indicates that high input costs, such as fertilizers and pesticides, combined with labour

expenses, significantly erode profits, leaving women farmers with minimal earnings despite their extensive involvement in cocoa production. The reliance on intermediaries, who often dictate prices and exploit farmers' lack of bargaining power, further exacerbates this economic strain, pushing some women to question the viability of cocoa farming unless they own their land.

The absence of direct market access and standardised pricing systems compounds these challenges, limiting women's ability to secure fair prices for their cocoa. Respondent underscores this issue, noting, "Cocoa prices also go up and down. Sometimes, after all the hard work, we sell at a poor price. No standard market, and we don't have a direct connection to big buyers. Middlemen cheat us. They pay us small money and take the cocoa away" (R6_FGD_WCF_03). This lack of structured market systems leaves farmers, particularly women in rural areas like Ile-Oluji, vulnerable to fluctuating prices and exploitative practices by middlemen who capitalize on their limited access to larger markets. The situation is worsened by the lack of cooperative structures or government interventions to facilitate direct sales to buyers or provide price stabilisation mechanisms. As a result, many women farmers are trapped in a cycle of high effort and low reward, prompting some to diversify into other income sources like petty trading or vegetable farming to supplement their income while awaiting cocoa harvests (FGD_WCF_03).

4.4 Rising Rural Insecurity and Growing Fear

Rural insecurity emerged as a growing threat to cocoa farmers in Ondo State, posing significant risks across the entire value chain. While both men and women are affected, the consequences are disproportionately severe for women due to a combination of caregiving responsibilities, physical vulnerability, and the extended periods they must spend in remote forested areas during the cocoa season. Government reports and focus group discussions underscore the gravity of this issue. As stated by a government representative:

"The broader issue of rural insecurity remains a concern across many cocoa-growing communities. In recent years, we have witnessed a rise in incidents such as farmer-herder clashes, kidnappings, and banditry, which have affected both men and women who depend on agriculture for their livelihoods" (R2_FGD_Gov_01).

For women, the spatial dynamics of cocoa farming intensify these risks. Cocoa farms are often located deep within forests, far from residential areas. As a coping strategy, many women travel in groups for safety. Women farmers increasingly associate their vulnerability with the high economic value of cocoa. One woman explained:

"If you see someone going to a cocoa farm alone, that means the farm is not far. When it's deep in the forest, we go in groups so if someone shouts, 'Help me!' others can respond. If women go alone, they may be attacked and their cocoa stolen... just yesterday, someone was killed on my husband's farm. If you own cocoa trees, you can eat, sell in the

market, and sleep with peace of mind, but now that's threatened"
(R5_FGD_WCF_01)

However, experiences vary depending on location. A woman in Ile-Oluji noted:

"My farm is near here. Who will attack me? I go with my husband and children. Our farm is very close" (R10_FGD_WCF_01)

These contrasting narratives reflect the uneven geography of insecurity and suggest that proximity to residential areas may mitigate some risks. Nonetheless, the broader trend remains concerning, particularly for women whose mobility, livelihood, and safety are compromised by a volatile security landscape. Another respondent emphasized the long stays on farms during peak seasons, highlighting the tension between farming responsibilities and family care:

"The cocoa farms are far from where we live. We often spend up to four to five months inside the farm during the season. It is tiring and stressful, especially when we have children to care for at home"
(R3_FGD_WCF_02).

This dual burden of maintaining agricultural productivity while managing domestic roles under threat of violence erodes women's psychological resilience and deters sustained engagement in cocoa farming. Insecurity has also led to the abandonment of viable farmland and discouraged young women from entering or remaining in the sector (R3_FGD_WCF_01).

5.0 Policy and Institutional Environment: Gaps Between Regulation and Reality

5.1 National Cocoa Management Board Establishment Bill 2025

The National Cocoa Management Board (NCMB) Establishment Bill 2025 introduced by the Federal Government and transmitted to the National Assembly, represents Nigeria's most ambitious cocoa-sector reform in more than three decades. The Bill seeks to establish a single statutory authority to coordinate the entire cocoa value chain, harmonising production, processing, pricing, export regulation, research, input distribution, and sustainability compliance in line with global market standards. Developed as part of broader efforts to address declining productivity and weak competitiveness relative to Côte d'Ivoire and Ghana, the proposal builds on the earlier National Cocoa Management Committee (2022) and received Federal Executive Council approval on 5 May 2025 before being formally laid in both chambers of the National Assembly. However, legislative progression was paused on 18 November 2025 following President Tinubu's directive for further stakeholder consultations. The NCMB's mandate includes stabilising prices to protect farmers from exploitative middlemen; enforcing quality and grading standards that meet EU regulations.

Historically, the Nigerian Cocoa Marketing Board (1947–1986) stabilised prices and generated large surpluses, but it was an elite, male-dominated institution.⁷ Governance structures listed male colonial officials, chiefs and big farmers, with no recorded women representatives.⁸ Licensed buying agents needed large capital and tonnage thresholds, which crowded out the small women traders who had previously moved cocoa from villages to urban markets. While millions of women provided labour in production and processing, and some worked as local cocoa traders, marketing board policies were gender-blind: they did not target women with credit, cooperatives, extension or scholarships, and did not collect gender-disaggregated data.⁹ Contemporary studies still find that about three-quarters of cocoa farmers in South-West Nigeria are men,¹⁰ that male household heads take most production decisions, and that women's contributions are concentrated in labour-intensive tasks with limited control over income.¹¹

Relevance of the NCMB Bill to Women in the Cocoa Value Chain

Insights from the FGD with AWITA Women in Cocoa Cluster show that rural women view the proposed Board through two lenses: *opportunity* and *risk* (See dRPC, 2025)

Women's Expectations Aligned with the NCMB Mandate

Women identified several potential benefits that directly mirror the goals of the Bill, including:

- Fair pricing: P1 said, *"Maybe they can control the price so we don't sell very cheap again... sometimes the buyers cheat us because we don't know the correct price."*

⁷ <https://api-ir.unilag.edu.ng/server/api/core/bitstreams/41213735-111f-4f28-94de-6b287c5cdabb1/content>

⁸ <https://www.ajol.info/index.php/naj/article/view/251400/238722/>

⁹ <https://dspacep01.emporia.edu/bitstream/handle/123456789/2807/Osuala%201970.pdf?sequence=1&>

¹⁰ https://www.academia.edu/83403301/Gender_Involvement_in_Cocoa_Farming_Activities_in_South_West_Nigeria

¹¹ https://www.academia.edu/66212966/Bean_Sourcing_Methods_by_Gender_Among_Nigerian_Cocoa_Marketers

- Access to inputs: P6 noted, *“A Board can also help control fake chemicals in the market.”*
- Training and extension: P4 stated, *“If they bring extension officers to guide us, it will help us improve our production.”*
- Financial support and loans: P5 added, *“If the Board gives fertilizers, chemicals and loans, it will reduce our suffering.” (dRPC 2025)*

Women’s Concerns Relevant to NCMB Implementation

Women also raised deep concerns that must be addressed as the Bill is implemented:

- Fear of elite capture: P5 warned, *“If only big farmers benefit, then poor farmers like us will not see the advantage.”*
- Fear of bureaucracy and exclusion: P6 said, *“If the Board becomes a place where we must pay many fees or do too much paperwork, it will disturb us.”*
- Fear of unfulfilled government promises: P1 explained, *“Sometimes they will tell us they are coming to help... but at the end nothing will happen.” (dRPC, 2025)*

5.2. National and Regional Policies

In recent years, the introduction of environmental regulations, notably the European Union Deforestation Regulation (EUDR), has begun to shape cocoa farming practices as part of the effort to curb deforestation and promote sustainable agriculture. The EUDR mandates practices such as reforestation, requiring farmers to plant 15–20 trees per hectare, and imposes restrictions on cocoa cultivation in forest reserves to ensure compliance with international environmental standards. Respondent 2 from the Private Sector explains, “There is this European Union Deforestation Regulation (EUDR), which aims to prevent deforestation in which Nigeria is signatory... for every hectare of land, there must be 15 to 20 trees planted.” However, awareness of these regulations among farmers, particularly women in rural areas like Ile-Oluji, remains critically low. Many farmers are unaware of the EUDR’s implications, such as the risk of losing market access if their cocoa is sourced from deforested areas, as highlighted: “The Farmers didn’t even know what the regulation meant... Without that awareness, many farmers would have lost their market access completely” (R2_FGD_Gov_01). This lack of awareness is compounded by the state’s request for an extension until January 2026 to educate farmers and map farms, underscoring the gap between policy formulation and grassroots communication.

The enforcement of these environmental regulations is notably weak, further undermining their impact. Despite initiatives like the Ondo State Forest law enacted in 2006 and the allocation of 100,000 hectares in 2018 (and ongoing) for farming to balance conservation and agricultural needs, illegal encroachment into forest reserves persists. As the Director Forestry in the Ondo State Cocoa Revolutionary Agency stated, “Even when the government says, ‘Don’t enter this land,’ people still enter. There is too much impunity.” The absence of a comprehensive database to track farm locations and sizes hinders effective monitoring: “No, because without reliable data like accurate maps of farm locations and actual farm sizes, it becomes difficult for enforcement agencies to clearly distinguish between legitimate cocoa farms and protected forest areas” (R1_FGD_Gov_01). This weak enforcement, coupled with limited outreach to rural women farmers, who are integral to the cocoa value chain, means that policies like the EUDR have not yet fully translated into on-the-ground changes.

The virtually non-existent awareness of the African Union's Cocoa Agenda 2063 among women cocoa farmers in Ondo State reveals a critical disjunction between continental policy ambitions and local-level engagement. Despite the Agenda's stated aim of transforming Africa's cocoa sector through sustainable production and inclusive economic growth, its relevance has not reached the women who form the backbone of cocoa cultivation. Multiple respondents confirmed they had never heard of the policy, highlighting a complete absence of grassroots sensitization or policy translation into actionable knowledge. As one woman put it,

"No, I have never heard of anything called the Cocoa Agenda 2063. Nobody has ever mentioned it to me during any of the meetings or training I have attended" (R1_FGD_WCF_02). Another reinforced this, saying, "In this our Ile-Oluji community, nobody has ever come to talk to us about Cocoa Agenda 2063. We don't even know what it means" (R2_FGD_WCF_03).

This disconnect reflects broader systemic failures in policy dissemination, particularly for women in rural areas who are often sidelined in cooperative leadership, policy discussions, and extension service outreach. The exclusion is not merely logistical; it is embedded in the structural design of information flow, where policy communication defaults to male-dominated farmer groups or urban networks. As one frustrated respondent explained,

"If there is a cocoa agenda that is supposed to help us, we want to know about it... They make plans and policies, but they don't reach the real farmers" (R4_FGD_WCF_03).

Even when government programs such as input distribution or seedling support are announced, access mechanisms remain vague or entirely inaccessible to women. Respondents consistently reported hearing about these programs secondhand, often through radio or informal market conversations, without any follow-up or structured outreach. For example, one woman stated,

"I only know that the government gave out 5kg of fertilizer one time, but they didn't give it to the women. It was mostly the men that got it" (R2_FGD_WCF_02). Another added, "I once heard on the radio that the state government is supporting cocoa farming, but I don't know how to access it. No one has explained how to benefit" (R10_FGD_WCF_03).

These responses reveal a gendered information gap, one that not only marginalizes women from institutional support but also reinforces the perception that policy benefits are designed for men or elite stakeholders. As one respondent bluntly stated, "We are doing cocoa work every day, yet we are not carried along in these big, big plans... Maybe it is for people in the city or for big men"

(R3_FGD_WCF_03). In essence, the gap is not simply about awareness; it is about representation, access, and equity.

Table 4: Policy Frameworks on Environmental Conservation

Policy/Regulation	Objectives	Current Status in Ondo State	Challenges Identified	Gender Implications
EU Deforestation Regulation (EUDR)	Prevent cocoa-related deforestation. Require 15–20 trees planted per hectare Prohibit farming in forest reserves	Ondo State requested an extension to January 2026 for mapping and sensitization. Low awareness among grassroots farmers	Poor awareness, especially among women. No clear maps of farms. Weak enforcement in forest reserves. Farmers risk losing EU market access.	Rural women are largely unaware. No targeted communication in local languages. Missed opportunities for compliance support
Ondo State Forest Law (2006)	Protect forest reserves. Allocate designated land for cocoa farming.	Law exists but is widely flouted. 100,000 hectares allocated for legal cocoa farming. Rampant encroachment into protected forests	Impunity in forest encroachment. No monitoring database. Weak institutional enforcement	Sural women lack access to legal farming plots. Engage in farming without legal land rights
AU Cocoa Agenda 2063	Promote sustainable cocoa production and youth/women inclusion across Africa.	Not known to farmers in Ondo. No sensitization reported at the local level	No grassroots awareness Disconnect between policy and practice. Absence of training or funding tied to this initiative	Rural women are unaware of possible benefits. Excluded from the pan African cocoa development programmes

Source: Developed from the Research Project FGDs –Gov Dataset

5.3 Government and Cooperative Support Schemes

While cooperative societies and government programs are designed to serve as key support structures for cocoa farmers in Ondo State, women's access to these opportunities remains limited and uneven due to a combination of structural, institutional, and gender-based barriers. Women's cooperatives and informal farming groups have emerged as important platforms for resource sharing and mutual support. These groups often enable collective action, such as sharing tools, co-financing equipment, or negotiating better market prices. For instance, one woman explained, *"I also belong to a women's group that helps us get better prices and even helps with transport"* (R5_FGD_WCF_02). Another respondent highlighted the collaborative nature of her group, saying, *"We share the work in a way that helps each other manage our farms better..."* (R9_FGD_WCF_02). Such grassroots organizing demonstrates the potential of cooperatives to bridge input and market gaps for women cocoa farmers.

However, the impact of these cooperatives is often constrained by weak institutional linkages and inconsistent access to government programs. Several women reported joining cooperatives with the expectation of receiving government-backed support, such as fertilizer, seedlings, or training, only to be disappointed. As one respondent noted, *"I joined a cooperative because they said it would help us get government support for cocoa, but up till now, nothing has come"* (T6_FGD_WCF_02). This suggests that cooperatives are not systematically integrated into state-level schemes, or that existing support tends to favour more established, male-dominated groups.

Government initiatives, including the Cocoa Revolution Project, seedling distribution, fertilizer subsidies, and land allocation programs (up to 4 hectares per beneficiary), are designed to improve productivity among smallholder farmers. Officially, these programs are meant to be inclusive. As one government official explained, *"The government supplies seedlings, nursery, and provides support through its agricultural extension services free of charge"* (R2_FGD_Gov_01). Yet, in practice, women often report being bypassed during implementation. One woman observed, *"They also brought cocoa seedlings, but they took them to the men's nursery as usual. I have never seen a programme where the women farmers are called to benefit directly"* (R2_FGD_WCF_02). This disparity points to a systemic gender bias in how support schemes are rolled out, where informal male networks or assumptions about male land ownership result in the marginalisation of women, despite their significant labour contributions across the cocoa value chain. It also reflects a lack of targeted engagement with women's groups and poor monitoring to ensure equitable distribution of government support.

Table 5: State Support Scheme

Initiative	Description	Key Quote	Effectiveness
Agricultural Inputs	Provision of seedlings and fertilizers to farmers, including women.	"Farmers also receive incentives like fertilizers, insecticides, herbicides, and training to improve yields. The establishment of the 2,000-hectare cocoa plantation is part of this broader strategy to boost production and provide employment."	Low: Inputs often distributed to men, limiting women's access.
Land Allocation	Allocation of up to 4 hectares to women and youth for cocoa farming.	"Programmes such as land allocation schemes for women and youth, where each beneficiary receives up to 4 hectares, are tracked to monitor labour participation."	High: Directly addresses land access, a key barrier for women.
Training and Extension Services	Training on good agricultural practices, sustainability, and market access through CRIN, FAO, and NGOs.	"The Cocoa Research Institute of Nigeria (CRIN), FAO, and international NGOs like World Relief and PIND Foundation have organized capacity-building sessions."	Moderate: Valuable, but does not reach many rural women.
Cooperative Support	Support for cooperatives to provide inputs, training, and market access, with women in leadership roles.	"We have many registered cocoa cooperatives in Ondo State. These groups are vital for organizing training, accessing incentives, and implementing donor programmes."	High: Enables women to access resources and better prices.

Cocoa Processing Initiatives	Establishment of processing facilities (e.g., Catalytic Industry) to encourage value addition.	"A cocoa processing company has been established by Ondo state, formerly known as Catalytic industry, as part of the government efforts to ensure that cocoa must be processed and various products are produced from it."	Low: Limited awareness and access for women.
Security Efforts	Deployment of local security and surveillance to curb rural insecurity affecting cocoa farms.	"We now see Amotekun patrols more frequently, especially during the harvest period. They help prevent farm theft and reduce fear of attacks in isolated farms."	Moderate: Presence improves safety, but coverage is uneven and insufficient for remote areas.

Source: Developed from the Research Project FGDs -Gov Dataset

Respondents, particularly from government agencies, acknowledged the contributions of NGOs and development partners such as Lutheran World Relief, the FAO Global Environment Facility (GEF-7) initiative, the World Cocoa Foundation, and others in supporting cocoa farmers through training, market access facilitation, and livelihood diversification. However, these interventions were described as sporadic, donor-dependent, and rarely sustained, particularly in rural areas where the need is greatest. One government respondent noted:

"They supported us with training and sometimes helped connect us to buyers. Even though the support wasn't always big or regular, it made a difference. They encouraged us to diversify by adding vegetables or plantain to our cocoa farms so we could earn more. So, to answer the question directly, yes, there have been some efforts, mostly through NGOs and foundations" (R2_FGD_Gov_01).

From the perspective of women farmers, the demand for consistent, gender-responsive support remains urgent. While isolated efforts exist, the lack of regular, structured training programmes, especially on market access, financial literacy, and compliance with new regulations such as the EU Deforestation Regulation (EUDR), has left many women reliant on traditional methods. This limits their ability to increase productivity, diversify income, or meet sustainability standards. As one participant put it:

"We want to learn how to sell our cocoa at better prices and how to get support, like inputs or loans... If you know anyone who can help us, connect them to us... There's also less support from the government or NGOs now. Before, they used to bring training or seedlings, but now we hardly see any help... We just do what we know. We've been using the same methods for years because nobody comes to teach us new ones" (R3_FGD_WCF_02).

Access to land, inputs, and finance continues to present formidable structural barriers, particularly for women operating small-scale farms. Land scarcity is a growing issue, with one

respondent stating, “Yes, the land is getting finished. People have encroached almost everywhere now” (R3_FGD_Gov_01). Unlike large investors, most women rely on inherited or marginal plots and lack the financial resources to expand. Similarly, high input costs further restrict their productivity. Even when training or inputs are technically available, financial constraints and lack of access to microcredit or cooperative financing prevent women from fully benefiting. A government representative confirmed these challenges, stating, “The lack of access to finance, training, and market linkages remains a challenge for many others” (R2_FGD_Gov_01). These systemic gaps trap women in low-return positions within the cocoa value chain, making it nearly impossible for them to scale production or engage in value-added activities such as processing.

Beyond structural barriers, a deep trust deficit has taken root between women farmers and government actors, shaped by past experiences of unfulfilled promises and, in some cases, exploitation. One woman described a failed engagement:

“They talked and told us they would bring help, fertilizer, chemicals, and even training. We didn’t see anything again. No support came. Instead, they collected money from some of us in the name of registration and disappeared. Since then, we don’t trust such visits again” (R3_FGD_WCF_01).

This sentiment was echoed across several focus groups. Women reported that government or NGO visits often raise expectations but fail to result in tangible support, leaving them disappointed and distrustful. Such repeated breakdowns in accountability undermine future interventions, as women grow hesitant to participate in any new initiatives, regardless of potential benefits, out of fear of fraud or neglect.

5.4 Private Sector Engagement in Environmental Sustainability

The private sector in Ondo State integrates environmental conservation practices into cocoa value chain operations, prioritizing sustainable processing and waste management to minimize ecological impact. Transiting from diesel to cleaner energy sources like solar systems to reduce carbon emissions, enhancing operational efficiency while aligning with global climate goals. A private cocoa manufacturing company, Ondo notes, “We are gradually shifting from diesel to solar energy systems, particularly for parts of our facility operations. This has helped us reduce our carbon emissions and align with broader climate goals” (KII_PS_01). Additionally, cocoa by-products such as shells and cakes are recycled for use in farming or animal feed, promoting a circular economy. Water efficiency is emphasized through the reuse and treatment of effluents to prevent environmental pollution, ensuring that discharged water is safe for surrounding communities.

However, in terms of compliance with sustainability standards and certifications, certifications like Rainforest Alliance and FSSC 22000 Version 6 mandate strict adherence to ethical and environmental standards, influencing daily operations through traceability and sustainable farming requirements. The sector is also preparing for the EUDR, effective January 2026, by implementing digital traceability systems that use GPS and unique farmer IDs to verify deforestation-free cocoa sourcing. As stated, “We’re also training local enumerators to collect real-time data during harvests and deliveries. This system helps us verify that our cocoa is

deforestation-free” (KII_PS_01). Regular environmental audits, conducted biannually for internal reviews and annually for Environmental Impact Assessments (EIAs), monitor emissions, waste, and resource use, ensuring compliance with national and international regulations set by agencies like NESREA and NAFDAC. (KII_PS_01).

Furthermore, the private sector supports farmers in adopting eco-friendly practices through targeted training and community engagement, fostering sustainable agriculture and biodiversity. Through programmes like the Outgrower Support Programme, farmers are trained in good agricultural practices (GAP), integrated pest management, and agroforestry, encouraging the planting of shade trees to enhance soil health and prevent erosion. The document highlights, “We give them training on how to farm in ways that don’t destroy the land, like how to manage weeds without using too many harmful chemicals, and how to plant trees to provide shade and protect the soil” (KII_PS_01). These efforts promote shade-grown cocoa, which supports biodiversity and ecological balance. Collaboration with cooperatives in areas like Idanre further amplifies these initiatives, as the private sector works with local farmers to implement climate-smart practices that align with environmental conservation goals.

6.0 Strategy for Strengthening Sustainable and Gender-Responsive Cocoa Value Chains

Based on the findings from the situational analysis of women in the cocoa value chain in Ondo State, the following strategic recommendations are proposed for the government, private sector, women’s groups, and NGOs/development partners.

6.1 Government

- **Targeted Gender-Inclusive Policy Implementation:** The government should implement gender-specific interventions within existing frameworks like the NCMB and Ondo State Forest Law, ensuring women receive at least 40% of inputs and are included in credit and training programs. Creating women-focused extension services and a robust monitoring system will address gender bias and improve access to sustainable farming resources.
- **Strengthen Policy Dissemination and Enforcement:** To raise awareness of policies like the EUDR and Cocoa Agenda 2063, the government should utilize local media, workshops, and women’s cooperatives, delivering content in Yoruba and creating a farm database inclusive of women. Enhanced enforcement of the Ondo State Forest Law through increased patrols and stricter penalties will promote sustainability and protect women’s integration into cocoa systems.
- **Expand Land Access for Women:** Women should be prioritized in land allocation schemes, receiving at least 4 hectares each, and simplified registration to secure legal titles. Allocating land to women-led cooperatives will enhance productivity and conservation by promoting sustainable, collective farming practices.
- **Government must also intensify efforts against child labour in the cocoa labour force** by providing economic incentives, such as subsidies for eco-friendly inputs or microcredit for women’s cooperatives, can reduce reliance on cheap child labour by empowering adult farmers, particularly women.
- **Gender-sensitive security planning** to include deployment of patrols to female-dominated farming zones, establishing farm-stay shelters with basic safety features, and integrating rural women into community policing initiatives to ensure that their unique risks are adequately addressed.

6.2 Private Sector

- **Enhance Women's Inclusion in Value-Added Processing:** Invest in community-based processing hubs and affordable equipment to help women engage in cocoa value addition, such as making soap, powder, and mushrooms. Partnering with NGOs for targeted training and offering microcredit will empower women to diversify income and boost economic resilience.
- **Promote Sustainable Practices Through Outgrower Programs:** Expand outgrower programs can train women in agroforestry, shade-grown cocoa, and eco-friendly pest control to meet standards like the EUDR and Rainforest Alliance. Providing seedlings, traceability tools, and bio-inputs through cooperatives will support sustainable farming and improve women's market access.
- **Improve Market Access for Women Farmers:** To reduce exploitation by middlemen, buying centres should be established to link women's cooperatives directly with exporters for better prices. Training on negotiation and market standards, along with cooperative-based bulk sales, will increase women's income and strengthen their position in the cocoa value chain.

6.3 Women's Groups

- **Strengthen Cooperative Structures:** Women's cooperatives should be empowered through leadership training, shared equipment funds, and stronger links to government programs to boost collective bargaining and efficiency. Peer-learning sessions will enhance knowledge exchange in sustainable farming and processing, increasing resilience and economic empowerment.
- **Advocate for Inclusion in Policy and Programs:** Actively engage in advocacy, forming alliances, and attending policy forums to demand equal representation in agricultural support schemes. Sharing success stories of women's sustainable practices will build visibility and influence, pushing stakeholders to prioritize gender-inclusive policies.
- **Scale Eco-Friendly Practices:** Women's existing eco-friendly methods should be expanded through targeted training on composting, bio-pesticides, and cover cropping, with support from NGOs. Demonstration farms and access to affordable materials like bamboo drying platforms will promote wider adoption and reinforce women's role in sustainable cocoa production.

6.4 NGOs/Development Partners

- **Deliver Gender-Responsive Training Programs:** Regular, gender-responsive training on sustainable cocoa farming, value addition, and policy compliance should be delivered in partnership with institutions like CRIN and the FAO. Mobile units and added modules on financial literacy and leadership will ensure accessibility and empower women to actively participate in the cocoa sector.
- **Facilitate Access to Finance and Inputs:** Tailored microcredit schemes and eco-friendly input distribution through women's cooperatives will help overcome financial and resource access barriers. NGOs and cooperatives should advocate for government subsidies to ensure women farmers are prioritized in sustainable cocoa initiatives.
- **Bridge Policy Awareness Gaps:** Awareness campaigns using simplified policy guides in Yoruba, radio broadcasts, and cooperative forums will close the knowledge gap on regulations like the EUDR and Cocoa Agenda 2063. Including women's farms in digital traceability systems will support compliance and enhance their market access and visibility.

6.5 Cross-Cutting Strategies

- **Foster Multi-Stakeholder Collaboration:** A coordinated platform with women's representatives should be established to align government, private sector, NGO, and

community efforts for gender inclusion and sustainability. Quarterly meetings and data sharing on women's contributions will drive more cohesive, evidence-based interventions.

- **Promote Climate-Resilient Infrastructure:** Investing in climate-smart infrastructure like bamboo drying racks, water harvesting systems, and solar-powered dryers will help women adapt to erratic weather and reduce post-harvest losses. Subsidies and training for women's cooperatives will ensure accessibility and promote climate resilience.
- **Build Trust Through Accountability:** To rebuild trust with women farmers, stakeholders must ensure transparent delivery of support through published guidelines, toll-free feedback lines, and regular audits. These accountability measures will foster confidence and improve women's participation in cocoa programs.

Conclusion

This study provides a comprehensive situational analysis of women's contributions to the cocoa value chain and their environmental conservation practices in Ondo State. Women are actively involved in almost every stage of cocoa production, from land preparation, nursery development, and planting to fermentation, drying, marketing, and small-scale processing, contributing as much as 60–85% of the labour in many phases. Despite their critical roles, women remain systematically marginalized in terms of access to land, inputs, training, and decision-making power. Their environmental practices, such as shade retention, composting, natural pest control, and water conservation, demonstrate a strong commitment to sustainability. However, these efforts are often unsupported or unrecognized by formal institutions. This disconnect is further exacerbated by weak policy dissemination, exclusion from government schemes, and inadequate private-sector engagement tailored to their realities. Moving forward, strengthening the cocoa sector in Ondo State demands an intentional, gender-responsive approach that centres women's experiences and contributions. Interventions must address structural barriers to land, inputs, and credit, while also expanding access to training, processing technologies, and market linkages. Equally important is the need to improve women's awareness and involvement in sustainability frameworks such as the EU Deforestation Regulation and the AU Cocoa Agenda 2063. Targeted support from government, private sector actors, and NGOs should prioritize women's cooperatives, promote inclusive extension services, and institutionalize gender equity in environmental governance. Only through a coordinated and inclusive strategy can the cocoa value chain become more sustainable, equitable, and resilient for the women who sustain it.

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Appendix

Annex 1: Thematic Training Areas, Focus Content, Rationale, and Relevance to Women's Roles

S/N	Thematic	Training Focus Content	Why Important (Rationale)	Relevance to Women's Role
1	Sustainable Land Preparation & Nursery Management	Eco-friendly land clearing- Nursery soil care. Compost use. Seedling management	Enhances early plant survival and reduces reliance on harmful practices	Women contribute 60-80% of labour in this stage; foundational to productivity
2	Agroforestry & Shade Management	Interplanting cocoa with plantain. Retention of shade trees. Climate-smart microclimate design	Reduces erosion, heat stress, and promotes resilient cocoa systems	Women already use shade crops; training will improve consistency and outcomes
3	Organic Waste Recycling & Composting	Making compost from kitchen/farm waste. Cocoa pod reuse (manure, mushroom, soap)	Reduces the cost of inputs and improves soil health; supports the circular economy	Women practice this informally; scaling it reduces input dependence
4	Natural Pest and Disease Management	Local bio-pesticides (neem, pepper, ash). Safe chemical handling	Offers affordable, eco-safe alternatives to expensive chemicals	Builds on the traditional knowledge women already use informally
5	Soil and Water Conservation	Cover cropping (beans, melon). Trench digging. Mulching- Reuse of cocoa wash water	Prevents erosion and enhances soil fertility and water retention	Women practice some of these, but need technical training to scale impact
6	Climate Resilience & Weather Adaptation	Covered drying racks- Adjusting planting/drying to erratic rainfall Early warning & weather tracking	Reduces post-harvest losses and protects yields from unpredictable climate	Women face high losses from mold and unplanned rain; they increase resilience
7	Eco-Friendly Post-Harvest Processing	Fermentation best practices- Bamboo drying racks- Storage methods to reduce spoilage	Improves bean quality, supports compliance with market standards	Women dominate this stage; better practices improve income potential
8	Value Addition & Cottage Processing	Making soap, mushroom, and cocoa powder. Basic equipment training	Generates new income streams; reduces waste	Accessible for small-scale women farmers with low capital
9	Collective Marketing & Price Negotiation	Group selling- Negotiation skills. Cooperative marketing strategies	Improves income and bargaining power	Women often receive low returns; collective action strengthens market position
10	Financial Literacy & Resource Access	Budgeting. Navigating loan/credit schemes. Applying for government and NGO support	Empowers women to access inputs and scale operations	Women are often excluded due to a lack of awareness or documentation
11	Leadership & Cooperative Participation	Roles in cooperatives. Public speaking & representation. Decision-making in farmer groups	Enhances women's influence and access to shared benefits	Encourages inclusion in key support structures where women are often excluded
12	Policy Awareness & Market Compliance (e.g., EUDR, Cocoa Agenda 2063, Nigeria Forest Law)	Understanding EUDR requirements. Sustainable land-use regulations. National cocoa policies	Ensures compliance with buyer/export standards; prevents market exclusion	Most women are unaware of relevant policies, crucial for future access

Source: Developed from the Research Project FGDs and KII Dataset

Annex 2: List of Key Participants Interviewed

Table 1: Cocoa Women Farmers Participants

S/N	Group 1	Group 2	Group 3
1	Adebayo Elisbeth	Osunyinkan Marry	Ademeko Racheal O
2	Arowole Abosede	Ayandele Tomilayo	Bajewolu Atinuke
3	Omotayo Sheun	Olakitan Adekeye	Kehinde Grace
4	Oyenusi Olubunmi	Adefemiwa Labake	Fale Deborah
5	Kayode Elizabeth	Olajubu Abimbola	Olawole Yinka
6	Adesola Lola	Ayoni Janet	Ademuyiwa Abiodun
7	Omosho Morenike	Akinbusola Comfort	Akindoye Je Deborah
8	Daramola Funmilola	Adeyeye Christiana	Oluwatayo Omowumi
9	Akinbola Motunrayo	Akinsusi Victorial	Oluwakemi Akinde
10	Ogunyemi Ester	Oluwabusayo Seun	Akindoyete Omolewa

Table 2: Government official at the Ondo State Ministry of Agriculture and Forestry

S/N	Names	Designation
1	F.O Tundee Daramola	Permanent Secretary, Ondo State Ministry of Agriculture and Forestry
2	Mrs. Adedibga David	Director of Finance, Ondo State Ministry of Agriculture and Forestry
3	Omolakin Anthony	Administrative Secretary, Ondo State Cocoa Revolutionary and Management Agency
4	Adelusi Olakitan	Director of Seed Garden and Nursery
5	Shaba Vincent	Director of Plantation

Table 3: Private Sector - Johnvent Industry Limited

S/N	Name	Designation	Company
1	Seyi Kehinde	Sustainability Country Lead	Johnvent Industry Limited
2	Pamela Gabriel	Human Resources Manager	Johnvent Industry Limited