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Training in ecological charcoal production in Mount Bamboutus, West Region of Cameroon. Photo: CIFOR-ICRAF

Gender consideration in land restoration initiatives, Cameroon

A case study in three agroecological zones

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Empowering women in land restoration is not just a goal; it's a necessity for sustainable ecosystems and equitable futures.

Introduction

Cameroon, sometimes called “Africa in miniature” due to its ecological diversity, is home to a wide range of landscapes, including arid savannahs, fertile highlands, dense tropical forests and coastal ecosystems. These landscapes are crucial in supporting livelihoods and national economic development. However, increasing pressures from deforestation, population pressure and expansion of agricultural activities have severely affected the productivity and resilience of these ecosystems (Molua, 2002). Women are at the forefront of managing and utilizing the landscape, particularly for agriculture, which accounts for over 70% of rural livelihoods in Cameroon (FAO, 2019). Despite being central to agriculture production, however, women are often excluded from decision-making processes and land

restoration initiatives, limiting their capacity to implement effective conservation strategies (Noudem et al. 2025).

The UN Decade on Ecosystem Restoration (2021–2030) has brought global attention to the critical need for restoring degraded ecosystems in order to combat climate change, enhance biodiversity and improve livelihoods (UNEP, 2021). Despite women's substantial contributions to natural resource management and agricultural labour, they face systemic barriers such as limited access to land rights, financial resources and decision-making platforms. These inequities hinder their participation in restoration initiatives, thereby reducing the effectiveness and sustainability of such efforts (FAO, 2019). Studies show that women account for nearly half of the world's smallholder farmers and produce 70% of Africa's food (Odiwuor, 2022; Abass, 2018). Yet less than 20% of land in the world is owned by women (Abass, 2018).

According to James et al. (2021), women play essential roles in land restoration due to their deep connection to natural resource management and their significant contributions to agricultural and community livelihoods. This should make them key stakeholders in efforts to restore degraded lands and ensure sustainable agricultural practices.

Cameroon has committed to restoring 12 million hectares of deforested and degraded land by 2030 as part of the Bonn Challenge and the African Forest Landscape Restoration Initiative (IUCN, 2018). This ambitious pledge is the largest in the Congo Basin, home to the world's second-largest tropical rainforest. It aims to combat land degradation, enhance biodiversity and mitigate climate change. Additionally, Cameroon has set a target to reduce its greenhouse gas emissions by 32% by 2035, aligning with its Nationally Determined Contributions under the Paris Agreement.

While most studies highlight the importance of gender in land restoration initiatives, the concept is often overlooked or addressed only superficially (UNDRR, 2017). Greater attention is needed to examine how gender perspectives can be meaningfully integrated into project activities (see Figure 1). This includes enhancing decision-making and participation, improving outcomes and sustainability, and promoting equity and social justice.

The study presented in this article aimed to assess the development of gender-sensitive restoration options and encourage researchers and practitioners to pay greater attention to effectively integrating gender into land restoration projects. It investigated how selected land

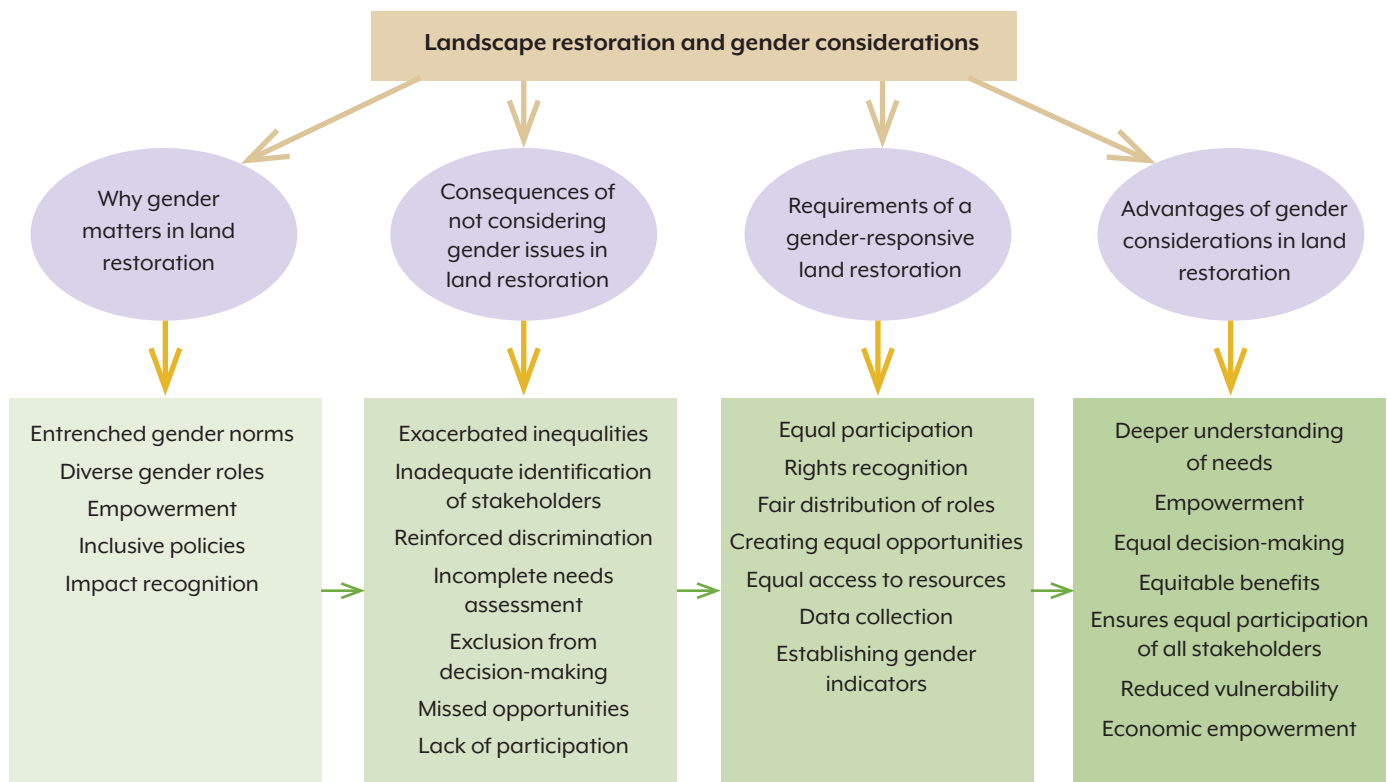


Figure 1. Conceptual framework for incorporating gender in landscape restoration

Source: Authors' fieldwork

restoration initiatives consider gender as a specific focus of analysis throughout the project cycle in the Bimodal Humid Forest, the Western Highland and the Sudano-Sahelian zones of Cameroon.

Methodology

The study focused on three of Cameroon's five agroecological zones (see Figure 2). These zones, in three different regions, were selected to capture the diversity of socio-cultural factors that influence women's participation in land restoration initiatives. Each zone has specific environmental and sociocultural dynamics that shape restoration practices.

- The Bimodal Humid Forest Zone is characterized by dense tropical forests, high rainfall and significant biodiversity. However, deforestation and unsustainable farming practices have led to severe land degradation.
- The Western Highland Zone is marked by high altitudes, fertile volcanic soils and intensive agriculture, including the cultivation of staple crops. However, population pressure and overexploitation of land have resulted in soil erosion and fertility loss.
- The Sudano-Sahelian Zone is semi-arid and faces harsh climatic conditions, including prolonged dry seasons and desertification (Kimengsi and Andin, 2018).

A total of 262 participants (women and men) from 17 communities engaged in the study, which focused on land restoration projects. The PAMSUB-PT (2014–2016) and DRYAD (2017–2019) projects were funded by IFAD and DFID-UK and implemented by the *Centre d'Appui aux Femmes et aux Ruraux* (CAFER). The PADESAR3C (2018–2022) and PAPRED (2020–2022) projects received funding from the Government of Quebec through its International Climate Cooperation Program and from the Government of Cameroon, through the Ministry of Economy, Planning and Regional Development, and implemented by *Action pour la Biodiversité et Gestion des Terroirs* (ABIOGeT). The COBALAM project (2020–2025) is funded by GEF and implemented by the Rainforest Alliance (RA) and Cameroon's Ministry of Environment. These projects align with national strategies for forest landscape restoration, emphasizing land restoration, tree management, sustainable agriculture, resilience to environmental degradation, and inclusivity.

Ten focus group discussions (FGDs) were conducted with men (86 participants); 12 were conducted with women (124 participants); and four were conducted with mixed groups (12 men and 40 women), centring on gender

integration in project planning, women's participation in decision-making, and the impacts of restoration activities (see Table 1). Key informant interviews (KIs) were held with seven project staff, discussing gender as a core variable in the identification of options and implementation. Data was collected by three senior scientists and a PhD fellow.

Perspectives on gender integration in land restoration projects

Beneficiaries' perspectives

All the projects assessed by the study combined sustainable agricultural practices with tree planting as a central activity aimed at restoring degraded lands. For example, agroforestry systems were introduced, where trees were integrated into farmlands to improve soil fertility and enhance biodiversity. Women played a significant role in project activities, particularly in managing tree nurseries and planting trees, as well as adopting sustainable farming techniques to increase crop yields. The COBALAM projects introduced ecological charcoal production as an innovative activity to reduce pressure on natural forests.

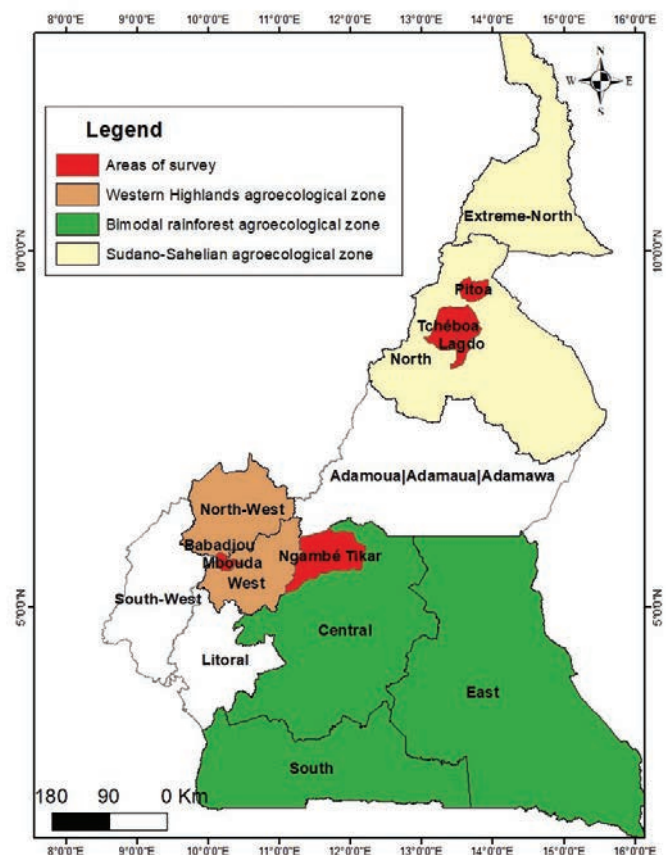


Figure 2. Location of study areas

Source: CIFOR-ICRAF, 2021

Table 1. Number of focus groups in each agroecological zone

Study site	Villages	Average no. of participants/FGD	No. of men FGD	No. of women FGD	Number of mixed FGDs	Total	Projects
Bimodal Humid Forest Zone, Center Region, (Ngambe-Tikar)	Mbondé, Kouen, Mambioko, Ngoumé, Gandié, Nyanka, Beng Beng	9	6	6	0	12	PAMSUB-PT DRYAD
Western Highland Zone, West Region, (Mount Bamboutos)	Badbajou, Bangang, Batcham	10	2	3	1	6	COBALAM
Sudano-Sahelian Zone, North Region (Ngong and Lagdo)	Bawan, Badankali Ravingha, Forty, Langi and Lagdo	8	2	3	3	8	PADESAR3C PAPRED
Total		9	10	12	4	26	

The authors' analysis indicates that the targeted beneficiaries of the project activities perceived a significant lack of gender integration in the design and implementation of the projects. A greater proportion of women beneficiaries reported feeling excluded from the project design process, highlighting a failure to involve women during the needs assessment. This oversight resulted in the projects' inability to adequately address the specific needs of women, such as access to resources, inclusive capacity building and representation in decision-making. When these aspects are overlooked, projects often fail to address the root causes of gender inequality in land restoration. For example, without women's voices in decision-making processes, projects may not reflect the diverse needs and perspectives of all stakeholders. For example, while the DRYAD project successfully facilitated participation in maize production as part of its activities, it became evident that women beneficiaries expressed a preference for alternative agricultural crops, such as cassava and cocoyam.

Failing to consider this preference underscores a shortcoming in the needs assessment process.

“Cassava and cocoyam are more profitable for us because they require less input, and we can sell them easily in local markets.” Another woman commented, “Maize takes too much effort, but with cassava, I can also feed my family.”

A woman participant

The authors' analysis reveals that general meetings organized by project staff, which brought together men and women in shared environments to discuss restoration priorities and potential interventions, failed to account for the diverse interests of different gender groups. Additionally, in the Center Region, 36 women reported a lack of awareness regarding project details, which significantly discouraged their participation, particularly during critical farming periods.

In the Western Highland Zone, beneficiaries noted that they were consulted individually, and that their needs were properly identified and considered gender socio-cultural norms that could influence their participation. They were responsible for deciding the kind of land restoration activities they wanted to execute, and were supported by the project staff members.

In the Sudano Sahelian Zone, the lack of direct communication with women about project goals can be attributed to the project's reliance on traditional leaders; information about projects was often shared through men community leaders. This approach inadvertently marginalized women, as they were not included in these discussions. Consequently, women frequently learned about projects indirectly, either through men family members or informal community networks, which often resulted in their delayed or incomplete understanding of the project's objectives and activities.

Notably, the PAPRED project's primary focus on cashew (*Anacardium occidentale*) appears to disadvantage



Women of the LAKI GAPELE Cooperative in the North Region of Cameroon setting up a nursery. Photo: CIFOR-ICRAF

women, as cashew is often perceived as a “male” species; in other words, one that is planted by men. Discussions with beneficiaries revealed a divergence in species preferences by men and women for the species proposed (cashew). Women expressed a preference for fruit trees such as baobab (*Adansonia digitata*), shea (*Vitellaria paradoxa*) and mango (*Mangifera indica*), as well as oleaginous trees and neem (*Azadirachta indica*). Men favoured species such as teak (*Tectona grandis*), acacia (*Faidherbia albida*), tamarind (*Tamarindus indica*), Siamese cassia (*Cassia siamea*), leucaena (*Leucaena leucocephala*) and moringa (*Moringa oleifera*). None of the species preferred by either men or women was advocated by the project management, however. This disparity in species prioritization highlights the need for a more inclusive approach that considers the preferences and interests of both men and women.

Project staff perspectives

In the Humid Forest Zone, project staff recognized that addressing gender disparities and ensuring the equal participation of women and men is crucial to the success and sustainability of land restoration initiatives. Despite this recognition, however, the project staff did not engage men and women separately during needs identification, which limited their ability to address gender-specific concerns. They observed that the data collected did not differentiate between men’s and women’s experiences, nor did it inform critical project indicators such as decision-making and equal participation.

The Western Highland Zone showcased a more gender-responsive design. Project staff understood the social dynamics that influence women’s access to land, and incorporated gender considerations throughout the project cycle. Women’s participation increased because

project activities were adapted to their specific challenges, and women gained greater access to training and decision-making, which allowed them to contribute meaningfully to the project's success. The project ensured gender-responsive planning and execution by hiring a gender specialist to guide the integration of gender considerations throughout the project cycle. The project staff ensured women's representation in project governance structures such as the Land Management Board and provided leadership training to women, enabling them to take on active roles and influence project outcomes.

In the Sudano-Sahelian Zone, staff aimed to ensure equal opportunities for participation in project activities. However, they observed that men were disproportionately involved in training sessions and other project-related activities. Despite some awareness of existing gender inequalities — including unequal access to training,

exclusion from decision-making, unequal resource ownership, and heavier workloads for women — no corrective actions, such as providing gender-specific training, promoting women's leadership, and adjusting project activities to accommodate women's time constraints and responsibilities, were implemented.

Gendered decision-making dynamics

Analysis reveals that gendered decision-making dynamics across the sites studied influence the processes and outcomes of decision-making between men and women, with an impact on women's participation in land restoration initiatives. In the context of this study, men dominate decision-making, leading to the marginalization of women's voices and perspectives. Table 2 illustrates decision-making dynamics across the different projects, revealing distinct patterns shaped by gender roles, power structures, and sociocultural norms.

Table 2. Gendered decision-making dynamics across projects in three zones of Cameroon

Decision type	Participants	Decision-making dynamics	Observations	Project
Household decision-making	Men and women	Joint decision-making on crops; roles vary	Women participate, but roles differ	PAMSUB-PT DRYAD
Community-level decisions	Women and men	Limited involvement by women; men dominate	Women are often excluded from community decisions	PAMSUB-PT DRYAD
Project activities	Men and women	Men and women oversee activities, allocate resources	Women face systemic barriers to participation	PAMSUB-PT DRYAD
Income allocation	Women	Women have some control of their income, but need their husbands' approval	Women require permission to sell produce, justify needs	PADESAR3C PAPRED
Choice of species	Men and women	Women involved, but have limited say in species selection	Women and men must accept species chosen by the project team	PADESAR3C PAPRED
Market decisions	Men and women	Men usually decide what to buy without consulting wives	Women depend on husbands for purchasing decisions	PADESAR3C PAPRED
Utilization of income from sales	Men and women	Joint decisions on income from seedling sales	Women seek equitable representation in decision-making	PADESAR3C PAPRED DRYAD
Land management boards	Women	Women contribute to sustainable land decisions such as land rights and ownership	Training has empowered women's participation	COBALAM

Source: Authors' field data, 2024

Projects' impacts

Table 3 describes the various interventions carried out in each of the agroecological zones and the results they obtained. The list of activities is not exhaustive, but it gives a general idea of the restoration activities in each of the zones and their social, ecological and economic impacts.

Conclusion and recommendation

This article highlights critical gaps in gender integration in land restoration projects. The authors' analysis shows that

different forest land restoration options are implemented in each of the case study sites; they include sustainable forest management, tree crop-based agroforestry systems and use of improved cook stoves. Although women beneficiaries express a strong desire for greater involvement in restoration projects, systemic barriers such as cultural norms and entrenched gender roles continue to limit their engagement. Project staff are aware of the importance of gender issues; however, they have not fully translated this awareness into actionable strategies to address these barriers. For this reason, the land restoration

Table 3. Social, ecological and economic impacts of the projects

Impact type	Restoration activities	Results	Projects
Social	Support the creation of community businesses	20 community businesses created, 60% women	COBALAM
	Raise awareness of women in decision-making	About 1,000 people engaged, 56% women	
	Distribute improved stoves for women's well-being	60 stoves distributed	
	Establish Land Management Committees	5 committees set up in West Region	
Ecological	Develop agroforestry systems for fruit, medicinal, spices and timber species	1,100 fruit trees planted at seven schools in 2010 and 2015	PAMSUB-PT DRYAD
	Reforest farms	12.5 ha reforested, 54 plots, 904 plants 2015–2017	
	Create agroforestry nurseries	2,160 nurseries distributed to 54 agro-foresters	
	Restore community forests	8 community nurseries created in Adamaoua, North and Far North regions	PADESAR3C PAPRED
	Rehabilitate degraded land	About 500 ha rehabilitated	
	Improve soil fertility (composting, biofertilizers and ecological charcoal)		COBALAM
	Reforest with agroforestry trees	Creation of 623.5 ha of agroforestry plantations	PADESAR3C PAPRED
Economic	Train smallholders and nursery operators	1,500 smallholders, 60 nursery operators trained in tree planting	
	Distribute improved food and fodder seeds (maize, peanuts, beans, ground peas, <i>brachiaria</i>)	3,500 kg of improved seeds distributed	
	Install grinding mills	7 mills installed	
	Provide access to land	248 hectares (66 for agroforestry, 182 for agroecology)	

Source: Authors' field data, 2023

projects discussed here achieved only partial success, such as land restoration and resource conservation; they faced constrained social outcomes such as empowerment and equity. Only the land restoration project in the Western Highlands made attempts to address gender transformation activities, including women in land management boards in a bid to influence gender norms, roles and relations between women and men.

Based on this analysis, future projects should prioritize gender analysis as a core component during the design phase. This includes conducting comprehensive needs assessments that capture the preferences and concerns of both men and women. Additionally, projects should establish decision-making frameworks to enhance the agency of women in land management and restoration initiatives.

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