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Centering gender in sustainable palm oil of Indonesia: A systematic literature review

Muh Fardan Ngoyo*, Shadry Andriani, Dirmansyah Darwin, Putu Ananda Devi, Adi Zulkarnaen

Department of Economics, Faculty of Economics and Business, State University of Makassar, Jl. A.P. Pettarani, Gunungsari, Kec. Rappocini, Makassar, Sulawesi Selatan, Indonesia

*e-mail: muh.fardan.ngoyo@unm.ac.id

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ABSTRACT

As a major agricultural commodity in Indonesia, palm oil plays a significant role in economic development, especially in rural livelihood and poverty reduction. However, the current dynamics of palm oil expansion have attracted global attention toward social responsibility and environmental degradation, including gendered impacts that remain underexplored in sustainability narratives. This systematic review examines the incorporation of gender analysis in studies on sustainable palm oil in Indonesia, focusing on conceptual frameworks, methodological approaches, and policy implications. Bibliometric data were retrieved through Publish or Perish (PoP), collecting relevant literature from Scopus and Google Scholar from 2010-2025, complemented by keyword search strings in English and Bahasa Indonesia. For clustering and data visualization, this study employed VoSviewer to visualize and analyze keyword associations, trends, and thematic clusters. Preliminary findings indicate that while the sustainability literature on palm oil is extensive, gender-related studies are limited and often fragmented, with conceptualizations of gender varying from labor to land rights and participation. This study finds a cluster of publications focusing on the solid grounding of a feminist lens, while others pay more attention to gender roles, lived experience, and policy and practices at the regulation level. This review highlights critical gaps in integrating gender perspectives into sustainability initiatives and calls for more nuanced, intersectional approaches to ensure equitable outcomes in the palm oil sector. By synthesizing existing evidence, this study provides insights into strengthening gender-responsive sustainability strategies in Indonesia's palm oil sector.

Keywords: gender equality; women; sustainable palm oil; Indonesia; systematic literature review.


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1. INTRODUCTION

Palm oil is one of the main agricultural commodities in Indonesia, contributing to rural economic development and livelihoods. It is estimated that palm oil sector has absorbed 'a workforce of around 6 million people, with around 2.5 million being small-scale oil palm farmers, who have been enjoying the economic benefits of palm oil' (FAO, 2021). In addition, the finding claims that the expansion of palm oil cultivation is correlated with poverty reduction and widespread consumption in producing regions, with the increase of 10 percent in the share of district land under cultivation corresponding to an estimated decline of 5.36-percent in poverty and roughly 8 percent higher consumption growth compared to the regions without palm oil or no expansion (De Vos et al., 2023). Thus, this implies the significant of palm oil sectors for Indonesia's economic development, linking commodity expansion to rural employment and livelihood which significantly contribute to poverty reduction.

However, global concern over social responsibility and environmental degradation are two main debated topics toward palm oil dilemma. The large expansion of palm oil plantation has been considered unsustainable by accelerating on deforestation, peatland conversion, and biodiversity loss, (Pye, 2019; Qaim et al., 2020; Sharma et al., 2019; Vijay et al., 2016). Despite accelerated rural development, this sectors also simultaneously generating conflict over land through overlapping claims, labour precarity, and unequal benefit and power relations between rural communities and plantation companies in producing countries (Andrianto et al., 2019; McCarthy, 2010; Obidzinski et al., 2012). This phenomenon highlights the inherent tension between social and environmental concerns, which persist as simultaneous challenges despite the significant contribution of the palm oil industry to economic development.

Drawing from the tension between economic contributions and social and environmental aspects, gender issue remains a limited topics on palm oil discussion that examines how palm oil expansion affects rural communities across gender lines (Vos & Delabre, 2018)

highlight the dynamics of land acquisition for the development of large-scale oil palm plantations by exploring gendered experiences and responses. It challenges simplified narratives that oil palm uniformly generates local benefits by showing that impacts are uneven across social groups and gender categories. As such, numerous initiatives have been undertaken to respond these challenges, notably through sustainability certification and evolving regulatory frameworks that seek to accommodate social responsibility and environmental protection into palm oil governance. In Indonesia, both voluntary scheme through the Roundtable on Sustainable Palm Oil (RSPO) and mandatory scheme through Indonesia Sustainable Palm Oil (ISPO), for example, promote principles related to deforestation reduction, labour standards, and community engagement, and are increasingly positioned as key instruments for improving sustainability outcomes within the sector (Glasbergen & Schouten, 2015; Vijay et al., 2016).

However, from policy-oriented analysis, Basnett et al (2017) highlight crucial limitations in the gender aspects of certification schemes. It is argued that although the RSPO has the potential to serve as a foundation for addressing gender inequalities in the palm oil sector, its Principles and Criteria and auditing mechanisms remain insufficiently gender-specific, often rendering women's labour invisible and failing to address their exclusion from land access and decision-making processes (Basnett et al., 2017). Similarly, complementing this analysis, Fatimah et al. (2022) demonstrate that while ISPO formally incorporates non-discrimination principles, its criteria and indicators remain weak in addressing structural gender issues, particularly the prevalence of informal women workers and limited access to labour rights and social protection. Together, these studies suggest that despite formal commitments within both voluntary and mandatory certification schemes, gender equality remains marginal within sustainability governance, reinforcing concerns that certification has yet to deliver substantive protection or empowerment for women in Indonesia's palm oil sector.

In addition, an increasing amount of research indicates that although these programs might lead to market access and environmental compliance, they frequently fail to adequately address underlying social injustices, especially those pertaining to gendered access to land, working conditions, and decision-making authority (Elmhirst et al., 2017; Li, 2015; Qaim et al., 2020). Retnaningsih et al. (2022) highlight

how the persistence patriarchal norms has shaped labour structures and career options, systematically marginalizing women and limiting their agencies within this sector. [Sinaga \(2025\)](#) further reveals that sustainability-oriented plantation systems reproduce gendered harm by obscuring women's embodied exposure to toxic environments and precarious labour condition under the guise of bioeconomic and environmental imperatives. Similarly, [McCarthy & Sitorus \(2025\)](#) show that sustainability-driven palm oil expansion can coexist with deep nutritional insecurity and climate precarity, with gendered divisions of labour and care underpinning these outcomes yet remaining insufficiently addressed. Collectively, these studies indicate that sustainability governance often acknowledges gender only limited contexts, leaving underlying inequalities in land access, working conditions, and decision-making power largely persist. Taken together, this body of work unveils a crucial gap in sustainability narratives whereby certification schemes formally acknowledge gender equality yet fail to systematically identify or address the gender-differentiated impacts of palm oil expansion, leaving entrenched inequalities in land access, labour conditions, and decision-making power largely unchallenged.

Therefore, this study employs a systematic literature review to examine how gender perspectives are incorporated into sustainable palm oil research in Indonesia. It critically assesses gender lens within sustainability narratives of palm oil the methodological approaches used to operationalize gender analysis, and the implications of these choices for policy and practice. By identifying key gaps and limitations in existing studies, this review contributes to clarifying prevailing narratives and challenges in integrating gender perspectives into palm oil sustainability initiatives in Indonesia.

The paper is structured as follows. After the introduction, the theoretical background outlines the analytical frameworks guiding the study, followed by the methodology detailing the systematic review process including database search strings, inclusion and exclusion criteria, and analytical techniques. The findings and discussion present a key figures and thematic synthesis of the literature, which critically discuss clustering themes on gender perspectives, lived experiences of women in palm oil, and policy and practices settings. Ultimately, the conclusion will summarise key insights and contribution and potential of exploring future study.

2. THEORETICAL BACKGROUND

2.1. Feminist Lens on Sustainability

To analyse further the complexity of gender dynamics in the context of sustainable palm oil which inextricably linked to socio-economic and environmental aspects, especially with the imperative of sustainable development goals (SDGs) which grounded in the economic, social, and environmental pillars, multidisciplinary perspective is crucial to effectively address the complex and interrelated challenges of global sustainability ([Chiriacò et al., 2022](#); [United Nations, 2015](#)). It is acknowledged that palm oil has contributed to the implementation of the Sustainable Development Goals (SDGs) yet still need exploration on how palm oil contribution toward the goals of gender equality ([Hanifa & Pramudya, 2018](#); [Sukiyono et al., 2022](#)). Thus, it is essential to employ feminist lens with comprehensive analysis on sustainability.

Current literature and perspective on gender issues mainly draw from feminist political ecology and feminist political economy which inextricably linked to analysis of gender relations on socio-economic and socio-ecological transformation especially related to the discussion of inseparable connection between production social reproduction and the concept of care in relation to society-nature nexus ([Hackfort et al., 2025](#); [Mezzadri et al., 2022](#)). The concept of social reproduction emphasises the embeddedness of social reproduction in the production, showing how women's unpaid and informal work contribute largely on commodity production while remaining largely invisible in dominant narrative of development discourses. Several feminist scholars argue that women unpaid care work is the main core of economic accumulation and global supply chain, while also highlights how value creation in the Global South extracted from informal labor, mainly from women work, yet the contribution is often ignored and unrecognized ([Federici, 2021](#); [Mezzadri, 2019](#)).

In addition, Feminist political ecology contribute on advancing analysis on gendered political-economic processes within broader socio-ecological transformations. This perspective is a subfield of political ecology which critically addresses gendered inequality and injustice by focusing on how gender situate access to resources and gendered agency toward struggling for socio-ecological transformation (Elmhirst, 2015). Feminist political ecology is very much related to current dynamics of environmental change in the palm oil context such as deforestation, biodiversity loss, land use change associated with gendered access to resources (Elmhirst et al., 2017). Likewise, this theoretical grounding also has specific attention toward women care work and social reproduction which can actively support to respond socio-ecological crises and transformation (Bauhardt & Harcourt, 2018; Elmhirst, 2015; Hackfort et al., 2025).

Another core concept toward both perspective is related the position toward challenging patriarchal society and capitalism that considered the main contributor to gender inequality. These perspectives argue that economic and ecological relations strongly intersected with patriarchal relations and capitalist system intersect in ways that marginalize women and other oppressed groups, reinforcing unequal access to resources, power relation in terms of decision making and participation (Bauhardt & Harcourt, 2018; Elmhirst, 2015; Mezzadri et al., 2022; Sinaga, 2024). By challenging these systems, both frameworks employs intersectional lens to expose how gendered hierarchies are embedded in economic system, gender divisions of work, and access to resource management, advocating for transformative approaches that prioritize equity, sustainability, and social justice. From these perspective, despite all positive claims and criticism around economic development, social inequality, and environmental changes in the context of palm oil in Indonesia, it is important to look closer on how gendered impact and configuration shape the dynamic of sustainable palm oil initiatives that has been undertaken.

3. METHODOLOGY

This study employs Systematic Literature Review (SLR) approach to identify and evaluate current and relevant literature of certain topics that map research areas, gap, and methods (Denyer & Tranfield, 2009; Tranfield et al., 2003). This approach is relevant tools for synthesising existing scholarly evidence on the gendered social and environmental impacts of palm oil expansion and the role of sustainable initiatives. To critically examine the relevant literatures, this study is guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework that would be 'useful for critical appraisal of published systematic reviews' while improving the quality of systematic review report (Moher et al., 2009). The PRISMA flow begins by identifying studies through systematic searches across multiple databases, then screening titles and abstracts after removing duplicates, followed by assessing full-text articles for eligibility based on predefined criteria, and finally including those that meet all requirements in the qualitative and, if applicable, quantitative synthesis, while transparently reporting the entire process in a flow diagram with counts and reasons for exclusions (Page et al., 2021).

To complement the qualitative synthesis, a comprehensive bibliometric analysis was conducted to provide more comprehensive evaluation of literature, identification of trends in advancing scientific knowledge in specific discipline (Sundarakani & Ghose, 2024). Data extraction was carried out using the Publish or Perish (PoP) software, which enabled the collection of citation metrics and publication details from relevant database such as Scopus and Google Scholar. In addition, data visualisation and interpretation is also crucial part in the review which generate with the support of VOSviewer. This tool helps in generating maps that illustrate research trends, co-authorship networks, and keyword clusters (van Eck & Waltman, 2010). This approach not only highlighted the most influential authors and collaborative patterns but also revealed thematic structures within the field, offering a clear understanding of the intellectual and social dimensions of the research domain. See Figure 1

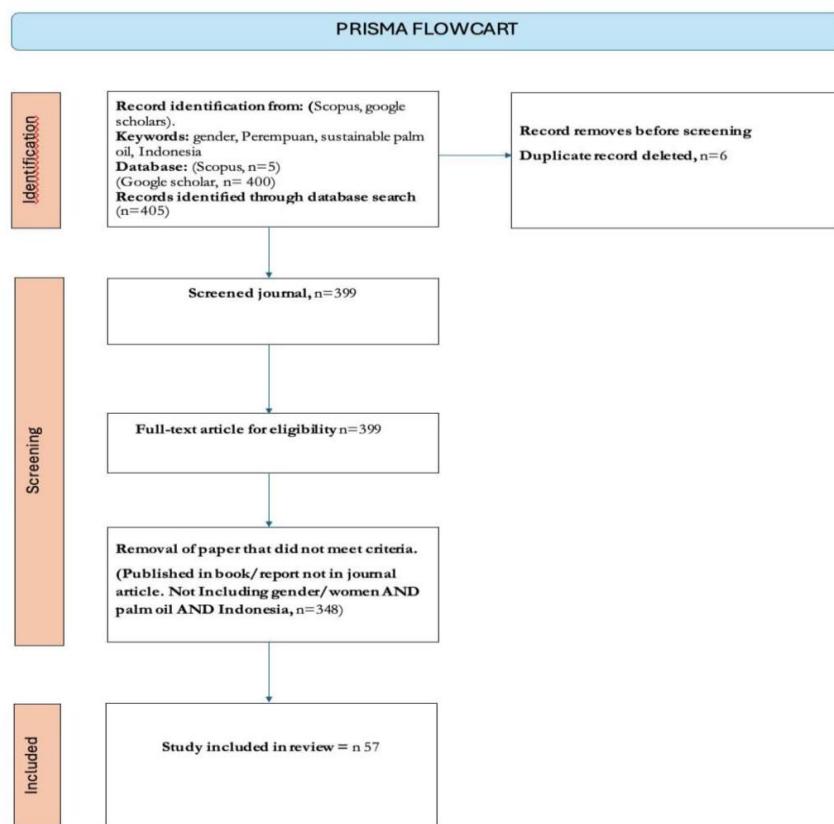


Figure 1. PRISMA Flowchart adopted from (Page et al., 2021)

3.1. Data Sources and Search Strategy

The literature search was conducted using PoP software, which facilitates systematic retrieval of bibliographic data from major academic databases. Primary searches were conducted using Scopus and Google Scholars to capture influential works in selected topics. A combination of keywords related to palm oil, women, gender, and sustainable palm oil, Indonesia was used. Search strings were constructed in the Table 1.

Tabel 1. Detailed Search String and Results

Database	Search String	Result
Google Scholar	("palm oil" AND Indonesia AND (gender OR women OR "feminist") AND (sustainability))	200
Google Scholar (Bahasa Indonesia)	("sawit" AND Indonesia AND (gender OR perempuan OR "relasi gender") AND (keberlanjutan OR berkelanjutan))	200
Scopus	("palm oil" AND Indonesia AND (gender OR women OR "feminist") AND (sustainability))	5

The search was limited to article published in English and Indonesia between 2010 and 2025, reflecting the period of accelerated palm oil expansion and the emerging trend of sustainability frameworks.

3.2. Inclusion and Exclusion Criteria

After data was retrieved from the database, the following step is to determine the most relevant journal/articles that meet the inclusion and exclusion criteria. The inclusion criteria were as follows: (1) articles published in reputable journals with a peer review, (2) using Indonesian or English, and (3) Directly connecting to the topics of gender; women; sustainable palm oil; Indonesia context. The exclusion criteria included articles that were non-academic publications, and articles that were not

relevant to the research focus. The article selection process was carried out through systematic steps (1) searching initial keywords, (2) screening title and abstract of the article, (3) scanning and skimming the text from selected articles to determine the relevance and quality, and (4) extracting data from articles that met the criteria.

3.3. Screening and Selection Process

All retrieved records from Scopus and google scholars were exported from PoP in RIS and CSV formats and imported into a reference management system for de-duplication. There are 399 papers after excluding duplication articles. In the screening process, titles and abstracts were first screened to remove clearly irrelevant studies. Full-text screening was then conducted to assess eligibility based on the inclusion criteria. In the selection process, considering exclusion criteria, it is selected 57 articles that relevant to review process (Table 2).

Table 2. Literature Selection Based on PRISMA Flowchart

Stage	Description	Amount
Identification	Searching initial database	405
Screening	Removing duplicate title/abstract by screening based on inclusion criteria	399
Eligibility	Screening full-text journals through scanning and skimming by considering inclusion/exclusion criteria	57
Inclusion	Conducting quality assessment to decide Final selection	57

3.4. Quality Assessment

For ensuring methodological quality, all selected studies were systematically appraised on the clarity of research objectives, rigor of research methods, reliability of data collection, coherence of findings, and alignment with the research questions. Using a three-point scale (high, medium, low), only studies rated as high or medium quality were included in the final analysis.

3.5. Data Analysis and Visualisation Using VOSviewer

To complement the qualitative synthesis, a bibliometric analysis was conducted using VOSviewer. From screening process, 57 articles eligible for review and analysis. Bibliographic data exported from PoP were used to visualise patterns and structures within the literature. Specifically, the analysis focused on co-occurrence of keywords, to identify dominant themes and emerging research clusters.

3.6. Ethical Considerations and Limitations

To ensure accurate representation of evidence and citation of all sources, ethical standards were rigorously conducted. Methodological limitations inherent to systematic literature reviews (SLRs), including potential publication and selection biases, were addressed through independent cross-checking by multiple reviewers, with discrepancies resolved through consensus. This systematic and transparent review process provides a robust basis for critically examining and synthesizing the intersections between sustainable palm oil, a gender lens, and the Indonesian context, thereby generating meaningful scholarly insights and well-defined practical implications for both academic discourse and policy development.

4. RESULT

4.1 Analysing thematic cluster

This study employed keyword co-occurrence analysis and overlay visualization using VOSviewer to map the intellectual structure of gender-related research in Indonesia's palm oil sustainability literature. This study analyse two main visualisation generated from VOSviewer; network visualization and density

visualization. From network visualisation, it can be seen that the most occurrence keywords and their correlation with other words. The visualisation also help to cluster keywords based on thematic areas.

The network visualization indicates that Indonesia functions as the principal hub, strongly connected to palm oil, gender, woman, and land, confirming that gender discussions are largely embedded within country-specific sustainability and land-use debates, rather than treated as an autonomous analytical field. Notably, “woman” appears more frequently and centrally than “gender”, indicating that the position of women seeing as subject such as labour or worker in the literatures rather than applying gender as a structural or relational analytical framework. See [Figure 2](#)

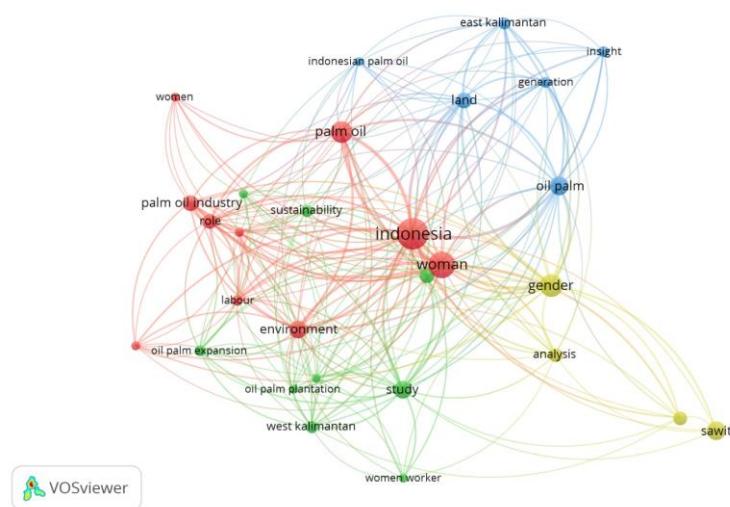


Figure 2. Network Visualisation of relevant keywords

Source: Processed from VoSViewer

The cluster visualization reveals four major thematic clusters, indicating how gender is positioned within the sustainable palm oil literature. See [Table 3](#)

Table 3. Cluster and thematic focus.

Cluster/thematic focus	Keywords
Cluster 1	Environment, Indonesia, labour, palm oil, palm oil sector, palm oil industry process, role, woman, women.
Cluster 2	Oil palm expansion, oil palm plantation, research, response, study, sustainability, west Kalimantan
Cluster 3	East Kalimantan, generation, insight, land, oil palm
Cluster 4	Analysis, gender, sawit, sustainable palm oil

Sources: Extracted from VoSviewer.

From cluster 1, it can be observed that women participation in palm oil generally acknowledged in palm oil industry as a labour or worker which most case study and analysts put more attention of working condition such informal, low-paid precarious and informal employment status even as supplementary income earners for rural households ([Sinaga, 2021](#)). In cluster 2 the keywords related to regional case studies, particularly in West Kalimantan that situate gender aspect is highly localized, but often descriptive. By highlighting West Kalimantan, it shows the empirical concentration of the literature

in frontier plantation zones which this area considered as the main producer region of palm oil in Indonesia.

While cluster 3, palm oil and land issues become an integral part of the keyword with specific case study also conducted in Kalimantan, where dispossession and land conflict are prominent. Gender and environmental nexus often analysed with the specific focus on impacts of land expansion where women are frequently depicted as disproportionately affected by land-use change and environmental degradation, particularly through their roles in food provisioning and household resilience (Villamor et al., 2015). Another interesting topic also related to generation which put attention on how gender and generation play important role in rural transformation in the dynamics of palm oil industry (Elmhirst et al., 2019). The last cluster is smaller and less dense, indicating that explicit gender analysis remains underexplored. Gender is more frequently treated as a variable rather than being examined as a set of power relations, intersectionality, or structural inequalities in sustainability analysis. This cluster is particularly evident within the gender mainstreaming agenda or policy improvement efforts in sustainable frameworks, such as certification programs (Basnett et al., 2017).

4.2 Analysis on Density Visualisation

Visualisation from VoSviewer also provides density of keywords that show how concentrated or prominent certain items are in bibliometric map. The figure indicates a strong concentration of research around the keywords ‘Indonesia,’ ‘palm oil,’ and ‘woman,’ suggesting that gender-related issues in the literature are primarily framed through nationally bounded case studies focusing on women’s participation in the palm oil sector. This concentration reflects an empirical emphasis on women’s roles in plantation labor, household livelihoods, and community-level responses to rural and environmental transformation.

In contrast, key concepts associated with gender equality, including empowerment, intersectionality, rights, and care work, appear as low-density or absent terms. This pattern indicates a systematic conceptual gap in which sustainability is framed largely in technocratic terms, prioritizing productivity and environmental compliance over social and distributive justice. The marginalization of these concepts limits the capacity of existing research to address the structural dimensions of gender inequality and underscores the need for future studies to integrate feminist political economy and feminist political ecology with intersectional lens in examining in sustainable palm oil in Indonesia. See Figure 3

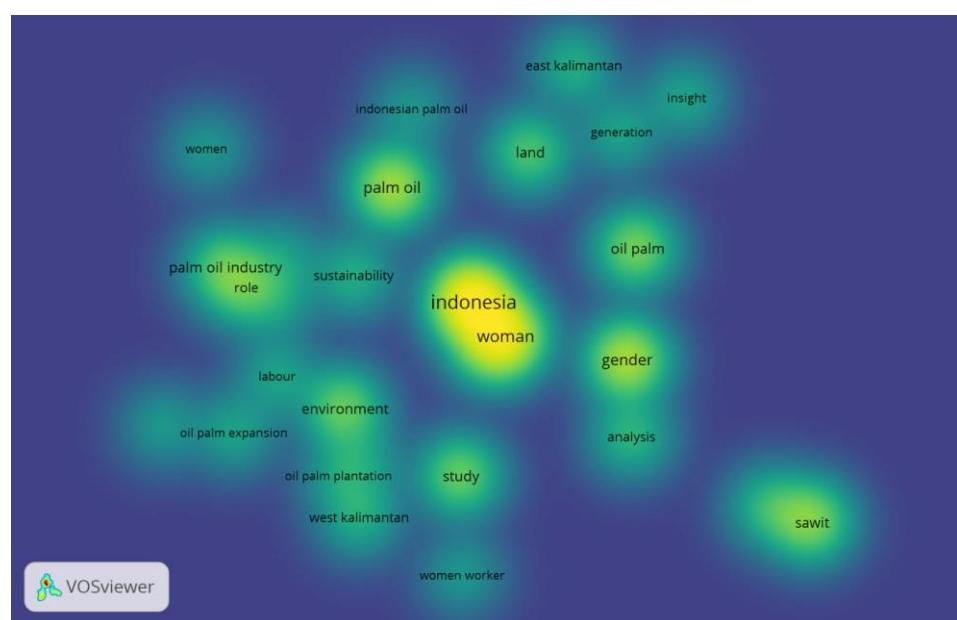


Figure 3. Density visualisation of relevant keywords

Source: Processed from VoSviwer

5. DISCUSSION

5.1 Interpreting Gender in Sustainable Palm Oil Literature

Main finding from this review is related to incorporation gender issues and perspectives into sustainability discourse both policies and practices. However, this study argue that there are three key main points of the findings that are interesting to explore. *First*, key studies on gender perspective with solid grounding of theoretical lens. This cluster mainly explore theoretical lens combining political economy and feminist political ecology with intersectional approaches. It is argued that ecological, social, and gendered power relations are intertwined in the palm oil sectors. Rather than treating gender as a variable or a technical issue, these studies frame it as a structural dimension embedded in specific context of land control, labour, and bodily politics. [Sinaga \(2025\)](#) highlights the paradoxical relationship between ecological degradation and women's reproductive health, revealing how monoculture oil palm production simultaneously sustains livelihoods and create embodied harm. Similarly, [Elmhirst et al. \(2019\)](#) emphasize that gendered experiences in oil palm landscapes are mediated by generational hierarchies and social norms, demonstrating that women's and men's participation in plantations cannot be understood outside broader relations of power and social reproduction.

Across these studies, patriarchy and colonial legacies emerge as persistent organizing forces shaping access to land, decision-making, and economic benefits. [Retnaningsih et al. \(2022\)](#) show that patriarchal norms remain deeply institutionalized within the palm oil sector, marginalizing women's labor and limiting their agency despite increased participation. Extending this argument, [Sinaga \(2024\)](#) adopts a decolonial and intersectional lens to argue that Indonesia's bioeconomy discourse reproduces unequal land relations by obscuring gendered and racialized exclusions. Synthesized together, this cluster reveals that dominant development narratives in the palm oil sector tend to instrumentalize gender while neglecting justice-oriented transformations, thereby reinforcing structural inequalities rather than challenging them ([Elmhirst et al., 2019; Retnaningsih et al., 2022; Sinaga, 2024](#)). See [Table 4](#)

Table 4. Key Studies in the Perspectives (Gender & Feminist Political Economy/Ecology)

No.	Author(s)	Title	Journal	Main Perspective / Contribution
1	Sinaga (2025)	“To cleanse our bodies of poison with poison”: The ecological and reproductive paradox of monoculture oil palm plantations’	Sustainability Science, Practice and Policy	Feminist political ecology; links ecological degradation with women's reproductive health and bodily politics
2	Elmhirst (2019)	‘Gender and generation in engagements with oil palm in East Kalimantan, Indonesia: Insights from feminist political ecology’	Gender and Generation	Feminist political ecology; intergenerational and gendered power relations in oil palm livelihoods
3	Retnaningsih, et al. (2022)	‘The persistence of patriarchy in the palm oil sector: Evidence from the Riau Province of Indonesia’	Cogent Social Sciences	Gender studies; patriarchal labor structures and institutional exclusion of women
4	Sinaga, (2024)	‘Intersectional perspectives on land relations of oil palm plantations: A decolonial feminist approach on Indonesia's bioeconomy’	Forest Policy and Economics	Intersectional & decolonial feminism; land relations, bioeconomy, and structural gender injustice

Second, the gender roles and lived experiences cluster highlight how oil palm expansion has constructed everyday social relations, livelihoods, and power dynamics at the local level. From empirical studies, it record show gendered divisions of labour and access to resources are reshaped by plantation economies, often in uneven and unequal relations. [Villamor et al. \(2015\)](#) show that land-use change in Central Sumatra has transformed household labour arrangements and decision-making roles, frequently increasing women's workloads without compensating with decent income and control over land. Similarly, [Toumbourou and Dressler \(2021\)](#) demonstrate that men and women adopt differentiated livelihood strategies within palm oil enclaves in East Kalimantan, reflecting unequal exposure to risk, market

dependence, and precarity. These findings underline that participation in palm oil production does not produce uniform outcomes, but rather intensifies existing social differentiation along gendered lines.

Beyond livelihood adaptation, this cluster also highlights gendered experiences of dispossession, resistance, and political agency. [Julia and White \(2012\)](#) provide an early and influential account of how oil palm expansion in a Dayak Hibun community generates distinct forms of dispossession for women and men, with women often losing access to land-based subsistence while remaining excluded from compensation and formal employment. [Morgan \(2019\)](#) extends this analysis by documenting women's active participation in protest and collective resistance against plantation expansion, challenging portrayals of women as passive victims. Taken together, this cluster reveals that gender inequality in oil palm landscapes is not only structural but experiential, rooted in everyday practices of labor, land access, and contestation that are often overlooked in policy and certification frameworks ([Julia & White, 2012](#); [Villamor et al., 2015](#); [Morgan, 2019](#); [Toumbourou & Dressler, 2021](#)). See [Table 5](#)

Table 5. Key Studies in the *Gender Roles and Lived Experiences*

No.	Author(s)	Title	Journal / Publisher	Main Focus
1	Morgan, (2019)	<i>'Women, gender and protest: Contesting oil palm plantation expansion in Indonesia'</i>	Gender and Generation in Southeast Asian Agrarian Studies	Women's collective action, resistance, and protest against plantation expansion
2	Toumbourou & Dressler (2021)	<i>'Sustaining livelihoods in a palm oil enclave: Differentiated gendered responses in East Kalimantan, Indonesia'</i>	Asia Pacific Viewpoint	Gender-differentiated livelihood strategies and coping mechanisms
3	Villamor et al. (2015)	<i>'Land use change and shifts in gender roles in Central Sumatra, Indonesia'</i>	International Forestry Review	Transformation of gender roles following land-use change
4	Vos et al (2018)	<i>'Spaces for participation and resistance: gendered experiences of oil palm plantation development'</i>	Geoforum	Gendered participation, resistance, and political spaces in plantation development
5	Julia & White, (2012)	<i>'Gendered experiences of dispossession: Oil palm expansion in a Dayak Hibun community in West Kalimantan'</i>	Journal of Peasant Studies	Gendered dispossession, land loss, and social differentiation

Third, the policy and practices cluster examines how gender equality is translated into formal governance mechanisms, institutional frameworks, and legal instruments within the palm oil sector. A central theme across these studies is the role of standard-setting and policy mainstreaming in addressing gender inequality. [Azahari et al. \(2024\)](#), for instance, highlight gender mainstreaming at the village level as a pathway toward achieving the Sustainable Development Goals (SDGs), demonstrating how local policy alignment can create entry points for women's participation in development planning, albeit within tightly bounded institutional contexts.

This cluster also emphasizes initiatives aimed at improving practices that directly address women's labour conditions in plantation settings. [Sisilia et al. \(2025\)](#) examine the implementation of gender-responsive policies at the company level, revealing a persistent gap between formal commitments and everyday practices in plantation management. This implementation gap is further underscored by [PG et al. \(2025\)](#), whose study on legal protection models for women workers in Aceh Utara shows that contractual arrangements often fail to safeguard women's rights despite the existence of labour regulations. Taken together, these studies suggest that policy interventions tend to adopt a technocratic approach to gender equality, prioritizing formal compliance and inclusion over structural transformation. Consequently, the cluster reveals a critical disjuncture between policy design and lived realities, indicating that gender-responsive governance in the palm oil sector remains largely instrumental rather than transformative. See [Table 6](#)

Table 6. Key Studies in the *Policy and Practices* Cluster

No.	Author(s)	Title	Journal / Publisher	Policy / Practice Focus
1	Sisilia, T.; Kansrini, Y.; et al. (Sisilia et al., 2025)	'Implementasi kebijakan responsif gender dalam mendukung perkebunan kelapa sawit berkelanjutan di PT Umada Kebun Pernantian, Kabupaten Labuhanbatu'	Sinergi Jurnal Ilmiah Multidisiplin	Institutional pathways for gender mainstreaming in global palm oil standards
2	Azahari, et al. (2024)	'Mainstreaming gender role in oil palm villages in achieving SDGs'	Earth and Environmental Science Series	Gender mainstreaming at village level aligned with SDGs
3	PG, E. G.; Muksalmina, M.; Tasyukur, T.; Yustisi, N.; et al. (PG et al., 2025)	'Model perlindungan hukum terhadap hak tenaga kerja wanita dalam kontrak kerja perkebunan sawit Aceh Utara'	Jurnal Hukum Pelita	Legal protection models for women workers

Following discussion, this systematic review contributes to the sustainable palm oil literature by synthesizing gender lens across three analytically distinct yet interconnected clusters, critical feminist political economy and political ecology, lived gendered experiences, and policy-practice linkages. This demonstrates that gender in palm oil is not merely a technical or distributive concern but a structural dimension of socio-economic and ecological transformation within sustainability narratives. By foregrounding justice-oriented and intersectional perspectives, this review advances existing debates that have been dominated by technical and certification-focused approaches, and it reveals a persistent gap between gender-inclusive policy narratives and everyday realities faced by women in palm oil plantation and industry. For future research, there is a need for mixed-method and longitudinal studies that link gender lens with macro-level frameworks and micro-level gendered outcomes, particularly in relation to access to resources and participation, labour precarity, and policy settings.

6. CONCLUSION

This systematic literature review has analyse gender related research published in the reputable journal through bibliometric mapping. Drawing from feminist political economy and feminist political ecology, this study findings specifically analyse gender related topics in three main areas; perspectives, gender roles and lived experienced, policy and practices. It is found that while gender-related research in Indonesia's palm oil sector has expanded in recent years, gender remains insufficiently centred within sustainability discourse. The reviewed literature is largely dominated by instrumental and descriptive approaches that frame women primarily as labour or vulnerable groups, rather than as actor with agency embedded within gendered structures of land tenure, labour relations, and value chain. Bibliometric patterns further demonstrate that gender-related concepts still needs to explore and connect with sustainability issues and certification mechanisms, underscoring a persistent separation between environmental performance objectives and gender justice considerations in palm oil sustainability research.

These findings indicate that the marginal positioning of gender is not merely an empirical gap but reflects deeper methodological, conceptual, and epistemic biases within the literature. Addressing these limitations requires a paradigmatic shift toward analytical frameworks that treat gender as a constitutive dimension of power shaping sustainability outcomes. Future research should move beyond localized case studies and women-centered narratives to adopt comparative, intersectional, and political economy approaches capable of linking micro-level gendered experiences to macro-level governance and market dynamics. Centering gender justice within sustainable palm oil research is therefore not supplementary but essential to advancing socially equitable and genuinely sustainable development pathways in Indonesia.

Ethical Approval

Ethical approval was not required for this study.

Informed Consent Statement

This research did not require informed consent.

Authors' Contributions

Conceptualization, MFN., and SA; methodology, MFN, DD., AZ., and PADN; validation, SA., AZ and DD; formal analysis, MFN., SA., and ZA; resources, PADN.; writing – original draft preparation, MFN., DD and SA; writing – review and editing, AZ., and PADN.

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The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to privacy considerations.

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Notes on Contributors

Muh Fardan Ngoyo

<https://orcid.org/0009-0001-3759-7993>

Muh Fardan Ngoyo is currently a lecturer in the Development Economics Study Program at the Faculty of Economics and Business, Makassar State University. His main interests focuses on political economy of sustainable development contributions which embraces multi-disciplinary paradigm are seen from multiple perspectives of social responsibility, economic viability, and environmental sustainability.

Shadry Andriani

<https://orcid.org/0009-0008-2754-1751>

Shadry Andriani is a lecturer in the Development Economics Study Program at the Faculty of Economics and Business, Makassar State University. Her expertise in labour economics has been invaluable to this research, particularly in analysing labour market dynamics, wage structures, and policies.

Dirmansyah Darwin

<https://orcid.org/0000-0002-1153-365X>

Dirmansyah Darwin is currently a lecturer in the Development Economics Study Program at the Faculty of Economics and Business, Makassar State University. His contributions to the human development paradigm are seen from multiple perspectives, not just from a single theory, but also through social phenomena, capital relations, the role of government, and technological development—factors that all play a significant role in shaping human progress.

Putu Ananda Devi Nugraha

<https://orcid.org/0009-0009-6325-6154>

Putu Ananda Devi Nugraha is a lecturer and researcher in the Department of Economics at the Faculty of Economics and Business, State University of Makassar. Her academic interests cover development studies, political economy, international economics, and cultural economics. Her research examines how governance, policy, and cultural dynamics intersect to shape sustainable and inclusive development.

Adi Zulkarnaen

<https://orcid.org/0009-0009-4141-7471>

Adi Zulkarnaen, S.Kel., M.,Si., is a lecturer and researcher in the Department of Economics at the Faculty of Economics and Business, State University of Makassar. His academic interests cover marine economics, fisheries and coastal development. His research examines how governance, policy, and local dynamics intersect to shape sustainable development of marine ecosystem and coastal livelihood.

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