An-Nisa' Journal of Gender Studies

OPEN ACCESS

ISSN 2086-0749 (p) 2654-4784 (e)

https://annisa.uinkhas.ac.id DOI: 10.35719/annisa.v17i2.309 Vol 17, No 2, (2024), pp. 163-180

Women, patriarchy, and environmental degradation: An ecofeminist analysis of women's ecological knowledge and agency

Bilqis Amelia Devi Chinsya[1]*, Zohaib Hassan Sain[2]

[1] Universitas Airlangga Surabaya, Surabaya, East Java, Indonesia

[2] Superior University, Punjab, Pakistan

Article Information

Submitted: 2024-09-10
Revised: 2024-11-27
Published: 2024-12-29

Keywords:
Ecofeminism; Patriarchy; Environmental Degradation; Women's Ecological Agency.

Abstract:

Patriarchal power and environmental degradation intersect in rural communities, where women manage essential resources yet face unequal workloads, limited authority, and insufficient recognition of their ecological knowledge and everyday contributions. This study examines how patriarchal structures shape gendered environmental burdens and how women's ecological knowledge and collective action relate to conservation and influence in environmental governance. Using a qualitative approach, this study combines a critical, integrative literature review with semi-structured interviews with 10 purposively selected rural women in Jember Regency, Indonesia. Braun and Clarke's thematic analysis informed Shiva's non-essentialist ecofeminist interpretation. The findings reveal three interconnected patterns. First, patriarchal domination operates through social construction, gender hierarchy, role division, normalization of inequality, and parallel patterns of control over women and nature. Second, women report increased domestic and economic burdens, unequal impacts of resource exploitation, and restricted decision-making and institutional recognition. Third, women's resource management, conservation, community mobilization, and environmental advocacy demonstrate ecological knowledge and agency despite persistent institutional barriers. This study concludes that women's ecological responsibilities and contributions do not necessarily translate into decision-making authority; gendered vulnerability and ecological agency coexist within unequal power relations, rather than arising from women's biological connection to nature. This study recommends that local governments and development institutions recognize women's ecological knowledge, support community-led conservation, ensure meaningful representation in environmental deliberations, and evaluate women's actual influence over resource decisions and institutional priorities over time.

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To cite this article (APA Style):
Chinsya, B. A. D., & Sain, Z. H. (2024). Women, patriarchy, and environmental degradation: An ecofeminist analysis of women's ecological knowledge and agency. *An-Nisa' Journal of Gender Studies, 17(2)*, 163–180. https://doi.org/10.35719/annisa.v17i2.309

***Corresponding author:** Bilqis Amelia Devi Chinsya, Sociology Study Program, Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya, East Java, Indonesia e-mail: bilqis.amelia.devi-2021@fisip.unair.ac.id

INTRODUCTION

The exploitation of women and nature constitutes an interconnected structural issue in contemporary social systems. Buckingham (2015), Seren (2023), and Wahyono (2024) highlight how the interaction between patriarchy and capitalism can reinforce control over women's bodies and labor, alongside the exploitation of natural resources. Patriarchal structures position women within unequal power relations, while profit-oriented economic practices may reinforce gender inequalities and environmental exploitation (Rowland, 2015; Wieczorek, 2018; Limoudehi & Bakhtvar, 2020). Previous studies also demonstrate that rural women may experience disproportionate consequences of deforestation, water pollution, and climate change, particularly when household livelihoods depend on local natural resources (Workneh, 2020; Filho et al., 2023; Sullivan & Hickel, 2023). Environmental degradation, therefore, needs to be examined in relation to the power structures that shape women's access to resources, domestic and economic responsibilities, and participation in environmental decision-making.

Previous ecofeminist research has addressed three major areas. The first examines women's roles in resource management, energy conservation, and sustainable development (Bangun, 2020; Hosseinnezhad, 2017; Nofrima et al., 2023). The second explores women's leadership and collective mobilization in responding to environmental degradation and advocating for community interests (Singh, 2018; Nguyen & Rydstrom, 2018; Tran, 2021; Riady, 2021). The third highlights the traditional ecological knowledge of Dayak women and its contribution to conservation and community-based resource management (Purwanto et al., 2020; Niko et al., 2023; Niko et al., 2024). Although these studies demonstrate women's ecological contributions and capacities, further integrated examination is needed to understand how patriarchal domination, gendered experiences of environmental degradation, and institutional barriers jointly shape women's ecological agency. In particular, the relationship between women's participation in conservation and their actual influence over environmental decision-making remains an important analytical concern. This study addresses this gap by examining how patriarchal power relations and ecological vulnerability intersect with women's knowledge, collective action, and opportunities to influence environmental governance.

This study examines relationships among patriarchal structures, environmental degradation, and women's ecological knowledge and agency, focusing on gender subordination, differentiated environmental burdens, and participation in conservation and governance. Drawing on interviews with 10 women from rural communities in Jember Regency, Indonesia, this study explores resource management, environmental change, and local decision-making. Three questions guide the analysis: First, how do social constructions, gender hierarchies, and divisions of labor shape women's relationships with nature? Second, how does environmental degradation affect women amid unequal resource access and decision-making power? Third, how do ecological knowledge and collective action support conservation, and what limits women's influence in governance? Theoretically, the study integrates patriarchal domination, gendered ecological vulnerability, and institutional constraints on ecological agency within an ecofeminist framework. Practically, it highlights the need to recognize women's knowledge, strengthen institutional support for conservation, and expand their meaningful participation in environmental decisions and resource governance at the community level.

The central argument of this study is that women's participation in environmental conservation does not necessarily translate into recognition, institutional support, or decision-making authority. Gendered divisions of labor often position women as primary managers of

household water, food, and local resources, enabling them to develop ecological knowledge through everyday experience. However, patriarchal hierarchies, unequal control of resources, and institutional barriers may limit their capacity to influence environmental decisions despite their contributions to conservation and collective advocacy. To examine these relationships, the study integrates a critical, integrative literature review with thematic analysis of interview data, informed by Braun and Clarke (2006), thereby contextualizing and critically examining conceptual patterns through women's lived experiences. Shiva's (1988) ecofeminist perspective provides an interpretive framework for understanding the intersections of gendered power relations, environmental exploitation, and ecological knowledge, while avoiding essentialist assumptions that women's relationships with nature derive from inherent biological characteristics.

METHOD

Research Approach

This study employs a qualitative approach integrating a critical, integrative literature review with semi-structured, in-depth interviews. The literature review examines conceptual patterns, theoretical perspectives, and research gaps concerning patriarchal domination, environmental degradation, women's ecological knowledge, and environmental agency. The interviews contextualize and critically examine these patterns through informants' experiences of gender inequality, resource management, conservation, and environmental advocacy. This approach draws on Bowen's (2009) principles of document analysis and Snyder's (2019) integrative literature review methodology. Shiva's (1988) ecofeminist perspective provides the theoretical framework for interpreting the relationships among patriarchal power, environmental exploitation, and women's ecological agency, emphasizing socially constructed gender relations rather than an inherent biological connection between women and nature.

Data Sources and Literature Selection

The study integrates secondary literature with primary data collected through semi-structured interviews with 10 women from rural communities in Jember Regency, Indonesia. Informants were selected through purposive sampling based on their involvement in local natural resource management, experiences of environmental change or development projects, and willingness to participate. Selection considered variations in age, socioeconomic background, and community roles to capture diverse experiences and enable in-depth exploration toward data saturation.

Secondary sources include peer-reviewed journal articles, academic books, and environmental and development reports addressing ecofeminism, patriarchy, gender inequality, environmental degradation, ecological knowledge, community-based conservation, environmental movements, and sustainable development. Publications from 1988 to 2024 were examined through identification, screening, and relevance assessment. Literature selection considered thematic relevance, academic credibility, conceptual clarity, analytical depth, and contributions to the research objectives (George, 2008; Grewal et al., 2016). Sources lacking sufficient relevance, conceptual substance, or academic credibility were excluded. Diverse theoretical perspectives were also considered to support a critical understanding of gender–environment relationships (Regmi et al., 2016).

Interview Data Collection

Semi-structured, in-depth interviews were conducted with ten informants on 14–15 June 2024, using open-ended questions that addressed patriarchal domination, gendered

divisions of labor, environmental degradation, ecological knowledge, resource management, community-based conservation, collective resistance, decision-making, and institutional support. Interviews were audio-recorded with participants' permission, supplemented by written field notes, and transcribed verbatim for thematic analysis. Transcripts were coded using interview dates and participant identifiers, while identifying information was stored separately to maintain confidentiality. Before the interviews, participants received information about the research objectives, voluntary participation, their right to decline questions or withdraw, and confidentiality protections. Oral and/or written informed consent was obtained, with separate permission requested for audio recording. Participants were anonymized in the research report using codes P1–P10.

Data Analysis

Data were analyzed iteratively using Braun and Clarke's (2006) six phases of thematic analysis: familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The analysis combined conceptual patterns derived from the literature with empirical accounts from interviews. Initial coding focused on recurring concepts, social experiences, power relations, and environmental practices. Related codes were subsequently organized and refined into three interconnected analytical areas corresponding to the research objectives.

The first analytical area examined patriarchal domination through five dimensions: social construction, gender hierarchy, division of roles, normalization of inequality, and environmental parallelism (Table 1). The second examined the relationship between gender inequality and environmental degradation through five dimensions: exclusion from environmental decision-making, gendered work burdens, unequal impacts of resource exploitation, institutional barriers to ecological agency, and marginalization of women's ecological knowledge (Table 2). The third addressed women's ecological knowledge and agency through six dimensions: women as guardians of nature, resistance to environmental exploitation, empowerment through environmental action, integration of gender and ecology, advocacy for sustainable development, and construction of new environmental narratives (Table 3).

Interview accounts were examined alongside the literature-derived conceptual patterns to contextualize, refine, and critically assess the identified dimensions. The resulting themes were interpreted through an ecofeminist perspective, with particular attention to patriarchal power relations, gendered responsibilities, unequal control of resources, and women's participation in environmental governance.

Data Integration and Conceptual Framework

Literature-derived conceptual patterns were compared with interview accounts within an integrated analytical framework to examine the relationships among patriarchal domination, environmental degradation, and women's ecological agency. The framework was organized into three interconnected areas. The first examines how social construction, gender hierarchy, divisions of labor, and the normalization of inequality sustain patriarchal domination and intersect with the exploitation of nature. The second explores how environmental degradation relates to women's increased domestic and economic responsibilities, unequal participation in resource governance, and institutional barriers to ecological agency. The third examines how women's ecological knowledge, resource management practices, collective resistance, and environmental advocacy relate to their participation in environmental governance. Conceptual relationships were organized through pattern mapping informed by Sutton and Austin (2015). Shiva's (1988) ecofeminist perspective guided the interpretation of these relationships, emphasizing socially constructed

responsibilities, power inequalities, and access to resources rather than biological differences between women and men.

Analytical Rigor and Trustworthiness

Analytical rigor was supported by systematic literature selection, repeated examination of the data, thematic coding, thematic review, and comparison of conceptual arguments with interview accounts. Each analytical theme was examined for conceptual coherence, distinctiveness, relevance to the research objectives, and consistency with the available empirical evidence. Verbatim interview transcripts, field notes, and thematic tables supported the traceability of interpretations, while interview quotations provided empirical evidence for the identified patterns. Cross-source comparison was used to identify convergences and differences between the literature and informants' experiences. The analysis distinguished reported experiences from theoretical interpretations and avoided treating perceived relationships as evidence of direct causality. Findings were synthesized contextually, recognizing the limitations of qualitative evidence and the context-specific nature of the informants' accounts.

RESULTS AND DISCUSSION

Results

Patriarchal domination of women and nature

Patriarchy is a social system that shapes and maintains unequal power relations between men and women and may influence how humans understand and manage nature. Based on a literature synthesis and thematic analysis of interviews informed by Braun and Clarke (2006), this study organizes patriarchal domination into five analytical dimensions: social construction, gender hierarchy, division of roles, normalization of inequality, and environmental parallelism. These five dimensions are used to interpret the experiences of informants P6–P10, who were interviewed on 14 June 2024. The integration of the conceptual framework and empirical findings is presented in Table 1.

Table 1

Patriarchal Domination of Women and Nature: Integrated Findings

Thematic dimension	Analytical finding	Mechanism of domination	Interview findings	Implications	Key references
Social construction	Women and nature are constructed as passive, dependent, and controllable through sociocultural processes.	Cultural norms and socialization reproduce gendered expectations and compliance.	P6: Internalization of obedience from an early age and restrictions on women's independence.	Justifies control over women's autonomy, labor, and knowledge.	Ernanda (2023); Ozden (2023)
Gender hierarchy	Patriarchy grants men greater authority, privilege, and access to resources.	Male-dominated authority structures in families and communities.	P7: Male dominance in decisions concerning land, inheritance, family finances, and village deliberations.	Restricts women's access to resources, leadership, and decision-making.	Mosse (2018); Mal and Saikia (2024)
Division of roles	Women are associated	Gendered separation of	P8: Domestic work is regarded	Limits recognition of	Figueroa et al. (2023);

	with domestic and reproductive work, while men are associated with productive roles.	domestic and public responsibilities.	as women's responsibility and is insufficiently recognized as productive work.	women's contributions and reinforces unequal workloads.	Idrus et al. (2023)
Normalization of inequality	Unequal gender relations are presented as natural and necessary for social stability.	Cultural legitimization and reproduction of gender stereotypes.	P9: Gender inequality is considered natural and necessary for maintaining social harmony.	Sustains unequal power relations and constrains social transformation.	Ali and Naylor (2013); Strid and Hearn (2022)
Environmental parallelism	Women and nature are positioned within similar patterns of control and exploitation.	Instrumental treatment of women and natural resources.	P10: Similar patterns of control over women and nature, alongside increasing burdens on women resulting from environmental degradation.	Connects gender inequality with ecological vulnerability through a non-essentialist ecofeminist perspective.	Ottuh (2020); Mascarenhas et al. (2024)

Source: Authors' literature synthesis and thematic organization of interview accounts, informed by Braun and Clarke (2006).

The findings presented in Table 1 demonstrate that patriarchal domination operates through social mechanisms that shape and sustain gender inequality. The experience of P6 shows that social construction instills norms of obedience and dependence among women from an early age, while P7 illustrates gender hierarchy through male dominance in decision-making concerning family resources and public affairs. Meanwhile, P8 reveals that the gendered division of labor limits recognition of women's domestic and economic contributions, whereas P9 demonstrates how inequality is legitimized through the assumption that traditional gender roles constitute a natural social order. These four dimensions indicate that patriarchal domination is reproduced through socialization, the distribution of power, the division of labor, and the normalization of inequality.

From an ecofeminist perspective, these patterns of domination can be linked to human–nature relations through a shared logic of control and exploitation. The experience of P10 illustrates the relationship between control over women and the environment, particularly when ecological degradation is perceived to increase women's domestic burdens. Thus, the five dimensions demonstrate that gender subordination and ecological vulnerability may intersect through unequal power relations, resource distribution, and social responsibilities. These findings support a non-essentialist ecofeminist interpretation that understands the relationship between women and nature as socially and structurally constructed rather than as a consequence of an inherent biological connection.

Women, patriarchy, and environmental degradation

Environmental degradation has different impacts depending on social position and gender roles, particularly in the distribution of responsibilities, access to resources, and

decision-making. Based on a literature synthesis and thematic analysis of interviews informed by Braun and Clarke (2006), this study identifies five analytical dimensions: exclusion from environmental decision-making, increased gendered work burdens, unequal impacts of resource exploitation, institutional barriers to ecological agency, and marginalization of women's ecological knowledge. These five dimensions are contextualized through interviews with informants P-01–P-05, conducted on 15 June 2024, and are presented in Table 2.

Table 2
Gender Inequality and Environmental Degradation: Integrated Research Findings

Thematic dimension	Analytical finding	Mechanism of inequality	Interview findings	Implications	Key references
Exclusion from environmental decision-making	Women's direct involvement in managing household resources is not accompanied by equal participation in environmental governance.	Gendered authority structures limit women's representation and influence in environmental decision-making.	P-01: Women have direct experience managing household water and food resources, but their perspectives are rarely included in environmental deliberations and decision-making.	Restricts women's participation, representation, and authority in environmental governance.	Agarwal (2001, 2009)
Gendered work burdens	Environmental degradation is associated with increased domestic and economic responsibilities for women.	Gendered divisions of labor place greater responsibility for household resource provision and care work on women.	P-02: Declining water availability and agricultural yields increase women's workloads in collecting water, managing household responsibilities, and contributing to the family's economic needs.	Intensifies women's workloads and reinforces unequal distributions of domestic and economic responsibilities.	Sultana (2009); Fortnam et al. (2019)
Unequal impacts of resource exploitation	Profit-oriented resource exploitation is perceived as producing uneven ecological consequences for local communities, particularly women.	Unequal control over natural resources and the distribution of environmental costs.	P-03: Profit-oriented exploitation of nature is perceived as causing environmental degradation whose impacts are experienced by local communities, particularly women who depend on natural resources.	Connects unequal resource control with differentiated environmental vulnerability.	Temper et al. (2015); Sultana (2022)
Institutional barriers to	Women participate in environmental	Inadequate institutional recognition and	P-04: Women participate in tree planting, waste	Constrains the recognition and institutional	Agarwal (2009); Rocheleau

ecological agency	conservation and advocacy but encounter limited institutional support.	support for women's environmental initiatives.	management, and environmental advocacy, but these initiatives often proceed without adequate institutional support.	strengthening of women's ecological initiatives.	et al. (1996)
Marginalization of women's ecological knowledge	Women's environmental knowledge and lived experiences are undervalued in environmental governance.	Domestic gender stereotypes reduce the recognition of women's experiential ecological knowledge.	P-05: Women's perspectives are sometimes considered limited to domestic affairs, even though they directly experience and observe environmental changes.	Limits the recognition of women's ecological knowledge and their influence in environmental decision-making.	Fortnam et al. (2019); Leach (2007)

Source: Authors' literature synthesis and thematic organization of interview accounts, informed by Braun and Clarke (2006).

The findings presented in Table 2 demonstrate that the relationship between patriarchy and environmental degradation is reflected in the unequal distribution of ecological impacts, the division of responsibilities, and women's limited participation in natural resource governance. The experience of P-01 shows that women's involvement in managing household water and food resources is not accompanied by equal authority in environmental decision-making. Meanwhile, P-02 describes increased domestic and economic burdens resulting from declining water availability and agricultural yields, while P-03 highlights the unequal impacts of profit-oriented resource exploitation. These three findings indicate that environmental degradation intersects with gender inequality through unequal divisions of labor, access to resources, and distributions of decision-making authority.

From a non-essentialist ecofeminist perspective, these inequalities are associated with power relations and social structures that shape women's ecological vulnerability. However, women also demonstrate ecological agency through conservation activities and environmental advocacy, as described by P-04, despite facing limited institutional support. The experience of P-05 further illustrates how domestic gender stereotypes restrict recognition of women's ecological knowledge. Overall, these five dimensions reveal a gap between women's responsibilities and contributions to environmental management and the recognition and authority they receive in decision-making. These findings emphasize that women's ecological vulnerability is better understood through gendered divisions of labor, power relations, and inequalities in resource governance than through assumptions of an inherent biological connection between women and nature.

The relationship between women and nature: Traditional roles and ecological knowledge

The environmental crisis is linked to power relations that influence access to and control over natural resources. Based on a literature synthesis and thematic analysis of interviews informed by Braun and Clarke (2006), this study identifies six analytical dimensions: women as guardians of nature, resistance to environmental exploitation, empowerment through environmental action, integration of gender and ecology, advocacy for sustainable development, and construction of new environmental narratives. These six dimensions are

contextualized through informants' experiences and interpreted using Shiva's (1988) ecofeminist perspective, as presented in Table 4.

Table 4

Women's Ecological Roles and Knowledge: Integrated Research Findings

Analytical themes	Initial codes	Interview evidence	Findings and ecofeminist interpretation	Key references
Women as guardians of nature	Water management; food provision; local knowledge; unequal resource ownership.	P1: "In this household, I am the one who manages the water—when to collect it, how much to use, and what to use it for."	Women develop ecological knowledge through their experiences of managing household needs and local resources. However, these responsibilities are not always accompanied by recognition of their ownership or control over resources.	Gough et al. (2024)
Resistance to environmental exploitation	Women's mobilization; opposition to mining; community advocacy; public participation.	P3: "We organized meetings, wrote letters, and went to the village office."	Women demonstrate collective agency in opposing development activities perceived as threatening the environment and community livelihoods.	Mathur et al. (2023)
Empowerment through environmental action	Resource conservation; economic benefits; participation in deliberations; confidence in expressing opinions.	P7: "From that experience, I began to feel confident enough to attend village meetings and speak about the budget."	Participation in conservation can create economic opportunities and strengthen women's involvement in decision-making.	Presbey (2013)
Integration of gender and ecology	Environmental exploitation; women's subordination; unequal resource control; ecological vulnerability.	P10: "Forests are cut down arbitrarily, land is sold without consulting residents, and rivers are polluted—nature is treated as an object."	Women's subordination and environmental exploitation can be understood through similar patterns of domination, with their impacts shaped by gendered divisions of labor and unequal access to resources.	Mondal and Majumder (2019); Liu (2024)
Advocacy for sustainable development	Non-inclusive development; exclusion from deliberations; community needs; participatory justice.	P2: "I believe women should be included in deliberations and participate in determining priorities."	Women advocate for development that recognizes community experiences and needs while providing more equitable opportunities for participation.	Holy et al. (2021); Dong and Kim (2022)
Construction of new environmental narratives	Criticism of objectification; rejection of subordination; intrinsic value of nature; changing perspectives.	P1: "Women and nature have lives of their own; they are not merely tools for other people's interests."	Women articulate alternative perspectives that reject the instrumental treatment of women and nature and emphasize more ethical relationships.	Chircop (2008); Sharnappa (2016)

Source: Authors' literature synthesis and thematic organization of interview quotations, informed by Braun and Clarke (2006) and interpreted through Shiva's (1988) ecofeminist perspective.

The findings presented in Table 4 illustrate six dimensions describing the relationships among women's roles, ecological knowledge, and power relations in natural resource management. The experience of P1 demonstrates that managing water and household needs serves as a source of women's ecological knowledge, while P3 illustrates resistance to environmental exploitation through community mobilization and the communication of concerns to village authorities. Such involvement is associated with the development of women's agency, as reflected in P7's experience of gaining confidence to participate in village deliberations and express opinions on budgetary matters. Meanwhile, P2 emphasizes the importance of women's involvement in determining development priorities, whereas P10 criticizes natural resource exploitation practices that disregard community interests. These findings indicate that women not only undertake domestic responsibilities but also develop knowledge, resistance, and participation in environmental governance.

From the perspective of Shiva's (1988) ecofeminism, these experiences can be understood as expressions of women's ecological agency and critiques of power relations that enable gender subordination and environmental exploitation. P1's statement rejecting the instrumental treatment of women and nature further reflects the emergence of an alternative environmental narrative that emphasizes recognition and respect for both. However, the relationship between women and nature is not understood as an inherent biological connection but as one shaped by social experiences, gendered divisions of labor, and unequal access to and control over resources. Overall, these six dimensions demonstrate that women's ecological agency is expressed through resource management, collective resistance, participation in development, and the articulation of environmental knowledge, while its strengthening remains dependent on recognition, opportunities for participation, and institutional support.

Discussion

This study presents three main findings. First, patriarchal domination is reflected in social construction, gender hierarchy, division of roles, normalization of inequality, and parallel patterns of domination over women and nature. These five dimensions are associated with restrictions on women's authority and recognition of their contributions. Second, environmental degradation is associated with increased domestic and economic burdens on women, unequal impacts of resource exploitation, limited participation in decision-making, and inadequate institutional support and recognition of their ecological knowledge. Third, women engage in water and food management, conservation activities, community mobilization, environmental advocacy, and efforts to promote more participatory development. Interview findings also reveal that these contributions are not always accompanied by equal access to decision-making authority and institutional support. Overall, the findings demonstrate the interconnectedness of gender inequality, experiences of environmental degradation, and various forms of women's ecological agency in natural resource governance at the household and community levels.

These findings are socially relevant amid growing concerns about climate vulnerability, resource-intensive development, and unequal participation in environmental governance (Shiva, 1988; Plumwood, 1993). In rural communities of Jember Regency, women described declining water availability and agricultural yields alongside heavier domestic and economic responsibilities. Although their daily work involves managing water and food, they reported limited opportunities to influence village decisions about local resources. Such experiences illustrate how environmental pressures may intensify gender inequalities rather than affect all community members equally. They also raise broader questions about whose knowledge is

recognized when development priorities and conservation measures are determined. Studies of gendered power relations and women's agency help contextualize these barriers (Ruslin, 2022; Woehrle, 2022), while research on Indonesian women environmental defenders highlights collective responses to ecological threats (Ernanda, 2023). The findings therefore underscore the social importance of inclusive deliberation, recognition of ecological knowledge, and institutional support for women's environmental initiatives.

Ecofeminist theory helps interpret these findings by examining the interconnected yet distinct domination of women and nature (Warren, 1994; Plumwood, 1993). Social construction establishes expectations of female compliance; gender hierarchies concentrate authority; divisions of labor allocate unpaid responsibilities; and normalization makes these arrangements appear natural. Environmental parallelism extends this analysis to the instrumental treatment of land and resources, rather than to the demonstration of an identical mechanism of oppression. Interviews show how these structures are experienced: women manage essential resources yet remain marginal in decisions, confront additional workloads, and struggle to secure recognition for ecological initiatives. The distinction matters theoretically because women's ecological knowledge is produced through socially assigned work and lived experience, not an innate affinity with nature (Salleh, 1991; Merchant, 2006). Thus, ecological participation cannot be equated with empowerment. The findings suggest that agency becomes institutionally consequential only when knowledge, representation, and decision-making authority are connected through inclusive and accountable governance processes.

A central lesson of this research is that participation should not be mistaken for influence. Scholarship warns that development centered on growth and technology may overlook uneven burdens and the voices of affected communities (Morrison et al., 2024; Gonzalez-Grandon et al., 2024). In the interviews, women described managing dwindling water supplies, undertaking household work, and organizing tree planting, waste management, and advocacy. These experiences position women as knowledgeable participants rather than merely vulnerable recipients of environmental interventions (Warren, 2001; Plumwood, 1993). Their resistance also illustrates how everyday encounters with environmental change may generate critical knowledge and collective demands (Shiva, 1988; Clark, 2012). Yet organizing activities alone does not establish that women influence budgets, land use, or environmental policy. The broader insight is therefore epistemic and institutional: environmental knowledge deserves attention, but meaningful change also requires opportunities for women to shape collective decisions.

The findings align with Fortnam et al. (2019), who demonstrate that gendered access, knowledge, and institutions shape experiences of ecosystem services. They also complement Agarwal (2009), whose research links women's participation in community forest governance with conservation outcomes. However, unlike Agarwal's assessment of forest institutions, this study documents how women's environmental responsibilities and initiatives in rural Jember coexist with limited authority over decisions about local natural resources. Presbey (2013) emphasizes empowerment through Wangari Maathai's environmental activism, while Rynbrandt and Deegan (2002) situate ecological reform within a historical ecofeminist tradition. Arun and Subbiah (2020) examine dispossession and extractivism through literary analysis, and Johnson (2022) discusses ecofeminist resistance to climate change. Compared with these approaches, the present study combines literature synthesis and interviews to connect patriarchal norms, gendered ecological burdens, and women's collective agency. Its contribution lies in distinguishing environmental participation from institutional influence, without claiming causal relationships or statistically generalizable outcomes.

The findings suggest five practical priorities for local government and development institutions. First, include women who manage household water, food, and land resources in village deliberations, with accessible information and opportunities to influence priorities. Second, assess how development and resource decisions change women's workloads and access to water, land, and livelihoods before implementing projects. Third, support existing tree-planting, waste-management, and advocacy initiatives through locally appropriate funding, technical assistance, and coordination, rather than replacing community leadership. Fourth, recognize experiential ecological knowledge in planning and monitoring, including perspectives that differ across age, income, and social roles. Fifth, regularly evaluate not only attendance at meetings or participation in activities, but also whether women's proposals affect budgets, rules, and resource decisions. These recommendations follow from participants' accounts; their effectiveness requires collaborative assessment and adaptation to each community's institutional capacity and environmental conditions.

CONCLUSION

Taken together, the findings show that patriarchal domination and environmental degradation intersect through unequal control over resources, gendered responsibilities, and limited decision-making authority. Social construction, gender hierarchy, divisions of labor, normalization of inequality, and environmental parallelism help explain how women's contributions are undervalued. Informants reported that declining water availability and agricultural yields increased domestic and economic burdens, while opportunities to influence environmental decisions remained restricted. At the same time, women demonstrated ecological knowledge and agency through household resource management, tree planting, waste management, community mobilization, and advocacy for inclusive development. Yet these activities did not consistently translate into recognition, institutional support, or authority over environmental governance. The central pattern is therefore a gap between women's everyday environmental responsibilities and their capacity to shape decisions, highlighting how ecological vulnerability and agency coexist within unequal institutional arrangements.

This study contributes to ecofeminist scholarship by bringing three analytical concerns into a single framework: the social reproduction of patriarchal power, gendered experiences of environmental degradation, and the institutional limits of women's ecological agency. Rather than proposing a new theory, it extends a non-essentialist interpretation of ecofeminism by showing that ecological knowledge emerges from lived responsibilities and social relations, not biological affinity with nature. Practically, the findings indicate the importance of recognizing women's experiential knowledge, enabling meaningful participation in village deliberations, and supporting existing conservation initiatives. Institutions should assess women's actual influence on resource decisions at community and institutional levels alike, rather than equating attendance or environmental activity with empowerment.

This study is limited by its qualitative design, its focus on ten purposively selected women in rural Jember Regency, and its reliance on interview accounts and literature synthesis. The findings illuminate participants' experiences but cannot establish the extent or causes of environmental degradation, test causal relationships, or represent all women in the region. The cross-sectional interviews also do not show whether participation leads to lasting institutional change. Future research should include more diverse communities and examine differences by age, livelihood, and socioeconomic position. Longitudinal and participatory studies could track whether women's contributions influence village budgets, resource rules,

and conservation outcomes, alongside regular independent assessments of environmental conditions and institutional support.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to their academic supervisors for their guidance, constructive feedback, valuable insights, and academic support throughout the research process and the preparation of this article. The authors also extend their appreciation to all informants, community leaders, and resource persons for their willingness to participate and for sharing valuable information, contributions, and experiences. Their support and contributions were instrumental in ensuring the systematic conduct of this research, which is expected to advance knowledge and its practical application in society.

CONFLICT OF INTEREST STATEMENT

The authors declare no conflicts of interest related to the research or publication of this article.

DECLARATION OF AI USE

The authors used AI assistance for translation and language editing. The authors reviewed the resulting text and remained fully responsible for the article's content, analysis, and interpretations.

FUNDING STATEMENT

This research received no external funding. All research costs were covered by the authors.

AUTHOR CONTRIBUTION STATEMENT

Bilqis Amelia Devi Chinsya: Conceptualization; Data Curation; Formal Analysis; Investigation; Methodology; Project Administration; Writing Original Draft. **Zohaib Hassan Sain**: Conceptualization; Formal Analysis; Validation; Visualization; Writing Review & Editing.

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