



The Research Frontline - Journal

A Peer-Reviewed Quarterly Journal of Interdisciplinary
Inquiry and Research

Journal homepage: <https://trfjournal.cdfaindia.org/index.php/trfjournal/en/index>


Beyond the Binary: Gender Diversity and the Transformation of Environmental Responsibility

Uttara Das 


To cite this article: Das, U. (2026): Beyond the Binary: Gender Diversity and the Transformation of Environmental Responsibility, The Research Frontline - Journal (Vol 1, Issue 2, January - March 2026)
DOI: <https://doi.org/10.66871/trf-j.v1i2.011>

To link to this article: <https://doi.org/10.66871/trf-j.v1i2.011>

 © 2026 The Author(s). Published by
Allahabad Academic Press,

 Published online: 05 May 2026.

 Submit your article to this journal 

 Vol. 1, Issue 2, January - March 2026



Beyond the Binary: Gender Diversity and the Transformation of Environmental Responsibility

Uttara Das¹ 

¹Student (Department of English Education on PGCTE Course), English and Foreign Languages University (EFLU), Hyderabad

ABSTRACT

The twenty-first century presents pressing challenges in environmental sustainability, with climate change and ecological degradation interacting with social inequalities. This paper explores the role of gender-inclusive perspectives in shaping environmental attitudes and behaviours, extending ecofeminist insights beyond traditional women-centred frameworks (Warren, 1990; Merchant, 1980). Drawing on empirical evidence from Hampel, Boldero, and Holdsworth (1996), which demonstrates that adolescent girls exhibit higher environmental responsibility than boys even when controlling for socio-economic factors, and the United Nations Environment Programme (2025), which highlights gender-differentiated climate impacts, the study examines how socialisation, gender identity, and normative structures influence ecological engagement. Contemporary research on gender egalitarianism (Echavarren, 2023) further indicates that societies with stronger gender equality norms display higher environmental concern, supporting the integration of intersectional and nonbinary perspectives into sustainability discourse. The paper identifies significant gaps in understanding the ecological behaviours of non-binary and transgender populations and proposes avenues for future research, including policy development, environmental education, and participatory governance. By situating environmental responsibility within an inclusive gender framework, this study contributes to theoretical and practical discussions on equitable and effective ecological stewardship, highlighting the potential of new-age feminism to inform sustainable practices and environmental policy.

ARTICLE HISTORY

Received: 28 January 2026

Accepted: 30 March 2026

KEYWORDS

Gender identity, ecofeminism, environmental consciousness, climate action, intersectionality, gender-inclusive policy

I. Introduction

Environmental responsibility is often framed as a universal concern. However, this assumption overlooks how environmental attitudes and vulnerabilities are shaped by social structures, including gender. While research acknowledges gender differences in ecological behaviour, it continues to rely on binary categories that do not reflect contemporary understandings of identity.

In this paper, gender identity refers to an individual's internal understanding of their gender, which may or may not align with the sex assigned at birth. Recognising this distinction is important because environmental research has traditionally relied on fixed categories such as "men" and "women," leaving out a range of lived experiences. Similarly, environmental consciousness refers to the awareness, concern, and behavioural commitment individuals show toward ecological sustainability.

CONTACT: Uttara Das  uttaradnair@zohomail.com

© 2026 the author(s). Published by Allahabad Academic Press, India. This is an Open access article distributed under the terms of the Creative Commons attribution license (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the accepted Manuscript in a repository by the author(s) or with their consent.

Early ecofeminist scholars such as Carolyn Merchant (1980) argue that the Scientific Revolution transformed nature into what she describes as a “passive object,” something to be controlled rather than respected. This shift, according to Merchant, parallels the historical subordination of women within patriarchal systems. In other words, the domination of nature and the domination of women are not separate processes but structurally linked. This insight remains important because it highlights how systems of power shape both ecological and social relations.

Similarly, Karen Warren (1990) introduces the concept of the “logic of domination,” which she defines as a framework that justifies inequality through hierarchical thinking. Warren argues that once difference is framed as inferiority, it becomes easier to legitimise both environmental exploitation and gender oppression. This idea helps explain why environmental degradation is not only a technical issue but also an ethical one rooted in systems of inequality.

However, both Merchant and Warren rely on a relatively stable category of “women,” which does not account for the complexity of gender today. Judith Butler (1990) challenges this assumption by arguing that gender is not fixed but “performatively constituted” through repeated social actions. This means that gender is not something one is, but something one does within a set of social expectations. Applying this to environmental behaviour shifts the focus from identity to the norms that shape it.

Building on these perspectives, this paper argues that environmental responsibility must be analysed beyond binary gender categories. Without this shift, existing frameworks remain limited in their ability to explain how diverse identities engage with ecological issues.

II. Literature Review

Ecofeminism provides a foundational framework for linking gender and environmental thought. Merchant (1980), in *The Death of Nature*, argues that the rise of modern science replaced an organic view of nature with a mechanistic one. She describes this transformation as a shift from seeing nature as “alive” to viewing it as a resource to be exploited. This argument is significant because it connects environmental degradation to broader historical changes in how power operates.

Warren (1990) extends this analysis through her idea of the “logic of domination.” She explains that systems of oppression rely on dualistic thinking, such as man versus woman and culture versus nature. Once these dualisms are established, they create a structure where one side is valued over the other. In the context of environmental responsibility, this helps explain why nature is often treated as inferior and expendable. However, Warren’s framework, while analytically strong, does not fully question the stability of these categories themselves.

This limitation is addressed by Val Plumwood (1993), who critiques what she calls the “mastery of nature” framework. Plumwood argues that simply reversing hierarchies or celebrating women’s connection to nature does not dismantle the underlying structure of domination. Instead, she calls for a rejection of dualistic thinking altogether. This is particularly relevant to this paper, as it supports the need to move beyond binary categories rather than simply redefining them.

From a material perspective, Bina Agarwal (1992) shifts the discussion toward lived realities. She argues that environmental engagement is shaped less by symbolic connections to nature and more by access to resources. For example, in rural contexts, women’s environmental roles are often determined by their responsibility for fuel, water, and food. Agarwal’s work is important because it grounds ecofeminist theory in socio-economic conditions, particularly in the Global South.

Empirical studies further complicate the discussion. Hampel, Boldero, and Holdsworth (1996) find that adolescent girls show higher levels of environmental concern than boys. However, they do not attribute this to inherent differences. Instead, they suggest that these patterns emerge from socialisation proce-

-ses. Similarly, Zelezny, Chua, and Aldrich (2000) argue that gender differences in environmental attitudes are “learned rather than innate.” This reinforces the idea that environmental behaviour is shaped by cultural expectations rather than biology.

More recent research by Echavarren (2023) introduces a structural dimension. He finds that societies with stronger gender egalitarian values tend to show higher environmental concern. This suggests that when social hierarchies are reduced, individuals are more likely to adopt broader ethical perspectives, including concern for the environment. This finding supports the argument that environmental responsibility is not just an individual trait but is embedded in social systems.

Despite these developments, a key gap remains. Most of this literature continues to operate within a binary understanding of gender. Transgender and non-binary identities are largely absent from both theoretical and empirical discussions. This paper addresses this gap by arguing that a more inclusive framework is necessary to fully understand environmental responsibility.

Gender Socialisation and Environmental Behaviour

Empirical research consistently shows that gender influences environmental attitudes, but the reasons behind this require careful interpretation. Hampel, Boldero, and Holdsworth (1996) found that adolescent girls report higher levels of environmental concern than boys, even when socio-economic factors are controlled. The authors suggest that this difference is not accidental but shaped by early socialisation. In their study, environmental responsibility is linked to values such as care and responsibility, traits that are more strongly encouraged in girls during childhood. This means that environmental behaviour is not biologically determined but socially learned.

Zelezny, Chua, and Aldrich (2000) extend this argument by analysing cross-cultural data. They conclude that gender differences in environmental attitudes are “learned rather than innate.” In other words, individuals adopt ecological values based on the expectations placed on them within their social context. This strengthens the claim that environmental responsibility is shaped by cultural norms rather than fixed identity.

However, both studies operate within a binary framework, comparing men and women as stable categories. Judith Butler (1990) challenges this assumption by arguing that gender is “performatively constituted.” By this, she means that gender is produced through repeated actions rather than existing as a fixed trait. Applying Butler’s argument here shifts the focus. It suggests that what we interpret as “gendered environmental behaviour” is actually the result of repeated social practices and expectations.

This perspective allows for a more flexible understanding of environmental responsibility. Instead of asking why women care more about the environment, it becomes more useful to ask how certain behaviours come to be associated with femininity or masculinity. This shift is crucial for this paper because it opens up the possibility of analysing environmental behaviour beyond binary categories.

Gender Equality and Environmental Concern

While individual behaviour is important, broader social structures also shape environmental responsibility. Echavarren (2023) finds that societies with higher levels of gender equality tend to report stronger environmental concern. He argues that gender egalitarian attitudes contribute to a wider culture of social responsibility. This means that when societies reduce hierarchical divisions between men and women, they also tend to develop more inclusive and future-oriented perspectives, including concern for environmental sustainability.

This argument builds on earlier ecofeminist insights but reframes them at a structural level. Instead of suggesting that women are inherently closer to nature, Echavarren’s findings indicate that equality itself creates conditions for environmental awareness. This supports the idea that environmental

responsibility is not tied to identity alone but is shaped by the organisation of society.

The United Nations Environment Programme (2025) provides further context by highlighting the uneven impact of climate change. The report notes that women are disproportionately affected due to limited access to resources, restricted mobility, and lower participation in decision-making. This means that environmental vulnerability is closely tied to structural inequality. The report does not suggest that women are naturally more vulnerable, but rather that social systems place them at greater risk.

Agarwal (1992) makes a similar argument in her analysis of environmental participation in India. She emphasises that access to resources such as land, water, and fuel shapes how individuals engage with environmental issues. According to Agarwal, women's environmental roles are often a result of necessity rather than choice. This shifts the discussion away from symbolic associations and toward material realities.

However, these discussions remain limited by their reliance on binary categories. By focusing only on men and women, they exclude individuals whose experiences do not fit within this framework. This paper argues that without addressing this limitation, both research and policy remain incomplete.

Beyond the Binary: Expanding the Framework

A key limitation in existing environmental research is the absence of transgender and non-binary perspectives. This gap reflects a broader issue in how gender is conceptualised. Most frameworks assume that gender exists as a fixed binary, which does not reflect contemporary understandings of identity.

Kimberlé Crenshaw (1989) introduces the concept of intersectionality to explain how different forms of inequality interact. She argues that individuals experience marginalisation in overlapping ways, shaped by factors such as gender, race, and class. Applying this to environmental contexts helps us understand that vulnerability is not determined by a single identity but by multiple, intersecting structures.

When this framework is extended to gender diversity, it becomes clear that transgender and non-binary individuals may face unique environmental challenges. For example, access to shelter, healthcare, and public services can be more difficult due to social exclusion. During environmental crises such as displacement or natural disasters, these challenges can intensify.

Judith Butler's (1990) argument about gender performativity also becomes relevant here. If gender is not fixed, then policies based on rigid categories fail to account for lived realities. This creates a gap between policy design and actual experience.

For instance, disaster relief systems are often structured around binary gender categories, which can create barriers for gender-diverse individuals. Access to shelters, sanitation facilities, and identification-based services may become difficult during climate-related displacement. This example highlights how environmental policies, when designed without gender diversity in mind, can unintentionally increase vulnerability.

This paper argues that including non-binary perspectives is not simply about representation. It is essential for improving both the accuracy and effectiveness of environmental frameworks.

Policy Implications and Future Directions

A gender-inclusive approach to environmental responsibility requires changes at multiple levels.

First, policy frameworks must move beyond binary classifications. Current systems often rely on limited categories, which results in incomplete data. Without recognising diverse gender identities, policies cannot fully address environmental vulnerability.

Second, environmental education should engage with gender norms. As Hampel et al. (1996) and Zelezny et al. (2000) show, environmental behaviour is shaped by socialisation. This means that education can play a key role in reshaping how individuals relate to environmental issues.

Third, participatory governance needs to be more inclusive. Agarwal(1992) highlights that access to decision-making spaces is shaped by structural inequalities. Expanding participation to include diverse gender identities can lead to more effective and representative environmental policies.

Finally, future research must address existing gaps. Most empirical studies continue to rely on binary frameworks. Expanding research methods to include gender-diverse populations will provide a more comprehensive understanding of environmental responsibility.

Gender-inclusive frameworks are essential not only for understanding environmental attitudes but also for shaping effective climate action strategies, particularly in adaptation and community-level resilience planning, where local knowledge and social inclusion directly influence outcomes.

III. Conclusion

This paper has examined how gender shapes environmental responsibility, moving from ecofeminist theory to empirical research and contemporary debates on gender diversity. While existing literature provides valuable insights, it remains limited by its reliance on binary frameworks.

Merchant (1980) and Warren (1990) establish the connection between domination and environmental exploitation, but their work assumes stable gender categories. Later scholars such as Agarwal (1992) and Echavarren (2023) shift the focus toward material conditions and social structures, showing that environmental concern is shaped by access and equality. However, even these approaches do not fully address gender diversity.

By drawing on Butler (1990) and Crenshaw (1989), this paper argues for a more flexible and inclusive framework. Environmental responsibility is not simply a matter of individual choice but is shaped by social norms and structural inequalities.

Addressing environmental challenges requires frameworks that reflect the complexity of real-world identities. Moving beyond the binary is therefore not an optional extension but a necessary step for both research and policy.

IV. References

1. Agarwal, Bina. 1992. "The Gender and Environment Debate: Lessons from India." *Feminist Studies* 18 (1): 119–158.
2. Butler, Judith. 1990. *Gender Trouble: Feminism and the Subversion of Identity*. New York: Routledge.
3. Crenshaw, Kimberlé. 1989. "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine." *University of Chicago Legal Forum* 1989 (1): 139–167.
4. Echavarren, José M. 2023. "The Gender Gap in Environmental Concern: Support for an Ecofeminist Perspective and the Role of Gender Egalitarian Attitudes." *Sex Roles* 89: 610–623. <https://doi.org/10.1007/s11199-023-01397-3>
5. Hampel, Bill, Jennifer Boldero, and Roger Holdsworth. 1996. "Gender Patterns in Environmental Consciousness among Adolescents." *The Australian and New Zealand Journal of Sociology* 32 (1): 58–71.
6. Merchant, Carolyn. 1980. *The Death of Nature: Women, Ecology, and the Scientific Revolution*. New York: Harper & Row.
7. Plumwood, Val. 1993. *Feminism and the Mastery of Nature*. London: Routledge.
8. United Nations Environment Programme (UNEP). 2025. *Gender and Climate Action*. <https://www.unep.org/resources/gender-and-climate-action>

10. Warren, Karen J. 1990. "The Power and the Promise of Ecological Feminism." *Environmental Ethics* 12 (2): 125–146.
11. Zelezny, Lynnette C., Poh-Pheng Chua, and Christina Aldrich. 2000. "Elaborating on Gender Differences in Environmentalism." *Journal of Social Issues* 56 (3): 443–457.