Author's name: Nuraisyah Ambo, Abd. Hakim, Afriansa A.HB Amboelo, Dira Grasiya Firlianti and Muh. Abdul Karim. "Title: The Dynamics of Gender Relations in Community-Based Environmental Management." *Tadulako Sociology Journal* 2 no. 2 (2026): 3164-4996. DOI: https://jurnal.fisip.untad.ac.id/index.php/tsj

TadulakoSociologyJournal
Volume 2 No 2, 2026
E-ISSN: 3164-4996

# The Dynamics of Gender Relations in Community-Based Environmental Management

**Nuraisyah Ambo[1], Abd. Hakim[2], Afriansa A.HB Amboelo[3], Dira Grasiya Firlianti[4], Muh. Abdul Karim[5]**

[1] *Faculty of Social and Political Sciences, Tadulako University, Indonesia. E-mail: nuraisyaambo@gmail.com*
[2] *Faculty of Social and Political Sciences, Tadulako University, Indonesia. E-mail: fisip.abd.hakim@gmail.com*
[3] *Faculty of Social and Political Sciences, Tadulako University, Indonesia. E-mail: afriansaamb@gmail.com*
[4] *Faculty of Social and Political Sciences, Tadulako University, Indonesia. E-mail: dira25@gmail.com*
[5] *Faculty of Social and Political Sciences, Tadulako University, Indonesia. E-mail: abdulkarim@gmail.com*

**Abstract:** Community-based environmental management is an important strategy for promoting environmental sustainability at the local level. However, environmental management practices are closely intertwined with gender relations that influence the division of roles and responsibilities within communities. This study aims to analyze the dynamics of gender relations in community-based environmental management in Wombo Kalonggo Village, Donggala Regency, Indonesia. A qualitative approach was employed, with data collected through observation, in-depth interviews, and documentation involving eight informants. The findings reveal that environmental management practices are still influenced by traditional gender role divisions; however, these practices have gradually evolved toward more collaborative patterns. Both men and women actively participate in various environmental management activities through increasingly flexible forms of cooperation. These findings indicate that changing gender relations contribute to the development of more inclusive environmental responsibilities and enhance the effectiveness of community-based environmental management. The study highlights the importance of promoting gender-inclusive participation to support sustainable environmental governance at the community level.

**Keywords:** gender relations, environmental management, community-based management, community participation, environmental sustainability.

## 1. Introduction

Environmental issues have become a key priority on the sustainable development agenda because they are closely linked to people's quality of life, the sustainability of natural resources, and the socio-ecological resilience of communities. Various environmental problems—such as pollution, suboptimal waste management, the degradation of natural resources, and the decline in environmental quality—demonstrate that environmental conservation efforts cannot rely solely on government policies but also require the active involvement of local communities (Ostrom, 1990; United Nations, 2015).

In this context, the community-based environmental management approach has emerged as a strategy that positions communities as the primary actors in conserving, managing, and utilizing the environment in a sustainable manner. This approach emphasizes participation, collective responsibility, and cooperation among community

members in addressing shared environmental challenges (Pretty, 2003; Berkes, 2004). Various studies indicate that the success of community-based environmental management is significantly influenced by social structures, cultural values, and the patterns of relationships that develop within the community (Agrawal & Gibson, 1999; Berkes, 2009).

One aspect that has been receiving increasing attention in environmental management studies is the gender dimension. Gender is not only related to biological differences between men and women but also concerns social constructions of roles, responsibilities, rights, and access to resources that are shaped through social and cultural processes (Connell, 2009; Oakley, 2016). In the practice of environmental management, gender relations often influence the division of labor, levels of participation, access to information, and involvement in environmental decision-making (Agarwal, 2001; Rocheleau et al., 1996).

Various studies show that women generally have a closer connection to domestic activities directly related to the management of the everyday environment, such as managing household waste, providing clean water, and maintaining household cleanliness. Meanwhile, men are more frequently involved in environmental activities of a public nature that require greater physical exertion. However, social developments in contemporary society indicate that this division of roles is not always fixed and is beginning to shift toward more flexible and collaborative patterns of interaction (Jackson, 2005; Nightingale, 2006).

The social construction perspective asserts that gender roles are the result of a social process that is continuously produced and reproduced in daily life (Berger & Luckmann, 1966). Gender relations are not natural but are shaped through values, norms, and social practices that evolve within society. In the context of environmental management, changes in gender relations can influence how individuals understand environmental responsibilities, build cooperation, and engage in collective activities to maintain environmental sustainability (West & Zimmerman, 1987; Ridgeway, 2011).

The village of Wombo Kalonggo, in Donggala Regency, is one of several rural communities facing various challenges in environmental management. Variations in environmental cleanliness across different areas, the presence of household waste, and the need for community participation in environmental stewardship make this village an interesting subject for study from a gender perspective. Furthermore, the involvement of men and women in environmental management activities reveals patterns of interaction that not only reflect traditional divisions of labor but also demonstrate processes of adaptation and negotiation of roles in everyday community life.

Although studies on gender and the environment have expanded considerably, most research still focuses on access to natural resources, conservation, or forest and agricultural management (Agarwal, 2001; Rocheleau et al., 1996). Studies that specifically address the dynamics of gender relations in community-based environmental management practices at the village level, particularly in the Central Sulawesi region, remain relatively limited. Therefore, this study is important for understanding how

gender relations are constructed, negotiated, and practiced in everyday environmental management activities at the community level.

Based on the above discussion, this study aims to analyze the dynamics of gender relations in community-based environmental management in Wombo Kalonggo Village, Donggala Regency. This study is expected to contribute to the development of research in environmental sociology and gender studies, while also enriching our understanding of the importance of inclusive gender relations in supporting sustainable environmental management.

## 2. Method

This study employs a qualitative approach using a descriptive research design. A qualitative approach was chosen because it allows researchers to gain a deep understanding of the experiences, perspectives, and social practices of communities regarding gender relations in community-based environmental management (Creswell & Poth, 2018; Denzin & Lincoln, 2018). The research focuses on how men and women construct, interpret, and carry out their roles and responsibilities in environmental management activities at the community level.

The research was conducted in Wombo Kalonggo Village, Tanantovea Subdistrict, Donggala Regency. This location was selected through purposive sampling because it demonstrated the community's active involvement in various environmental management activities, while also revealing variations in practices and gender-based role division in daily life. There were eight research informants, selected using purposive sampling based on their involvement in environmental management activities and their knowledge of the village's social life (Palinkas et al., 2015).

Research data were collected through observation, in-depth interviews, and documentation. Observations were conducted to directly observe environmental management practices and social interactions within the community. In-depth interviews were used to explore the informants' experiences, perspectives, and interpretations regarding the division of gender roles in environmental management activities. Documentation was utilized to supplement field data in the form of photographs, activity logs, and other supporting documents (Yin, 2018).

Data analysis was conducted interactively following the model proposed by Miles, Huberman, and Saldaña (2014), which includes the stages of data condensation, data presentation, and drawing conclusions. To enhance data validity, the study employed source triangulation and methodological triangulation by comparing the results of observations, interviews, and documentation (Patton, 1999).

## 3. The Construction of Gender Roles in Community-Based Environmental Management

The research findings indicate that gender relations in environmental management in Wombo Kalonggo Village are still influenced by traditional divisions of labor that place men and women in distinct spheres of activity. Nevertheless, this division is not entirely rigid, as various forms of adaptation and negotiation were observed depending on

families' socioeconomic conditions, household needs, and the dynamics of village life. These findings demonstrate that community-based environmental management is not merely a technical matter of maintaining cleanliness but is also closely tied to how communities construct, practice, and reproduce gender roles in their daily lives.

Based on the observations, environmental management in Wombo Kalonggo Village takes place in two main spheres: the domestic and public spheres. In the domestic sphere, activities related to household cleanliness, household waste management, water supply, and the upkeep of living spaces are primarily carried out by women. Meanwhile, in the public sphere, men tend to be involved in activities requiring physical labor, such as cleaning drains, maintaining irrigation systems, cleaning large open spaces, and participating in village community service projects. However, the boundary between these two spheres is not entirely clear-cut, as there are instances of men and women helping one another with various environmental activities.

This finding is evident from the experience of Mrs. SNT, who explained: "I do all the household chores, especially when my husband is not at home. The tasks I perform include fetching water, sweeping, cooking, and other household chores" (Informant SNT).

This statement indicates that women still bear the primary responsibility for reproductive labor directly related to the quality of the household environment. Activities such as fetching water, cleaning the house, and maintaining the cleanliness of the area surrounding the home are not merely ordinary domestic chores, but also part of environmental management practices at the family level. From an ecofeminist perspective, women's close involvement in daily life-sustaining activities makes them key actors in maintaining the sustainability of the household environment (Rocheleau, Thomas-Slayter & Wangari, 1996; MacGregor, 2017).

The results of an interview with Mrs. SNT also showed that to meet her daily water needs, she had to fetch water from a pipeline located in Hamlet 3 and carry it back to her home. This finding demonstrates that the management of natural resources, particularly water, is not merely a matter of infrastructure availability but is also closely tied to the division of labor within the household. This aligns with Agarwal's (2001) findings, which show that women are often the primary users of environmental resources and simultaneously bear the heaviest burden when access to those resources is limited.

Women's dominance in domestic work was also observed in Mrs. NLT's family. The informant explained that she handled most of the housework and household cleaning on her own because her husband worked in Kalimantan and only occasionally returned to the village. This situation demonstrates that male labor migration also influences the division of labor within the family. Women not only serve as household managers but also take full responsibility for managing the household environment. A similar phenomenon is commonly found in rural communities across Indonesia, where male labor mobility has led women to take over various activities that were previously performed collectively.

Nevertheless, this study found that the division of tasks between men and women is not always synonymous with women's subordination. Some informants, in fact, described more flexible relationships. Mrs. ILM explained: "There's no division of tasks. They usually

help each other clean the house, and if there's trash in the house, they clean it up right away and burn it" (Informant ILM).

This statement indicates that in some families, a relatively egalitarian pattern of cooperation has developed. Housework is not viewed as a task exclusive to women, but rather as a shared responsibility that can be carried out together as needed. This finding is significant because it points to a shift from a rigid division of labor toward a more adaptive one.

From the perspective of Berger and Luckmann (1966), this change indicates that social constructions of gender are not permanent. Social roles are formed through a continuous process of internalizing social values. Therefore, as society begins to accept men's involvement in domestic work, a process of reconstructing the meanings of what is considered "men's work" and "women's work" is actually taking place. In other words, gender relations are the result of social agreements that can always change in response to shifts in the context of societal life.

Findings regarding the flexibility of gender roles were also evident in an interview with Mrs. AST, who stated: "Men and women can help each other. Husbands also help their wives clean the house." This quote indicates that domestic cooperation is no longer viewed as taboo. In fact, men's involvement in housework is considered a form of responsibility toward the family. This finding contrasts with the gender relations typical of many traditional agrarian societies, where domestic work is almost entirely the responsibility of women.

The research results also show that the community still practices a division of labor based on physical capacity. This is evident from an interview with Mrs. TUN: "Men usually gather firewood when using an emergency stove, sweep the yard, and do heavy work. Women sweep and cook. Women collect trash, while men dispose of it—for example, by burning it" (Informant TUN).

The data indicate that the division of labor is based more on perceptions of physical ability than on strict social norms. Men are associated with activities requiring significant physical exertion, while women are more closely associated with routine tasks within the home environment. This finding aligns with Connell's (2009) argument that the division of gender roles in society is often constructed through cultural interpretations of the body and physical capabilities, rather than solely due to biological differences.

In the context of environmental management, such patterns have significant implications. Women serve as key actors in everyday environmental practices such as household waste management, water use, and home cleaning, while men play a greater role in environmental infrastructure and collective activities. Therefore, the success of environmental management actually depends on the contributions of both groups. These findings support the research by Meinzen-Dick et al. (2014), which states that the sustainability of natural resource management depends on the simultaneous involvement of both men and women.

Gender relations in environmental management are also evident in the management of the home and yard. According to Ms. NZR: "Her husband takes care of the outside—the

yard—while the informant takes care of the inside of the house." She also explained: "She is the one who takes out the trash, while her husband sweeps the yard" (Informant NZR). This statement indicates a gender-based division of labor. Women are primarily responsible for the internal domestic areas, while men handle the external areas of the home. This phenomenon indicates that gender relations in environmental management are still influenced by the symbolic separation between domestic and public spaces.

These findings support the concept of "doing gender" proposed by West and Zimmerman (1987). According to them, gender is not an identity that a person possesses, but rather something that is continually practiced through everyday actions. When women cook, fetch water, or clean the house, and men clean the yard or repair drainage channels, both are reproducing gender identities that have been shaped by society. However, when men help sweep the house or women participate in public environmental activities, these practices become a form of negotiation regarding existing gender constructions.

Field observations further reinforce these findings. In Hamlet 1, it was found that the drainage channels were still clogged with trash, and some residents were still dumping trash near the river. Meanwhile, in Hamlet 2, environmental conditions were relatively better due to community involvement in maintaining the cleanliness of the environment and the drainage channels. As for Hamlet 3, trash was still found along the roadside, even though the residents' homes were relatively well-maintained.

Differences in environmental conditions among hamlets indicate that environmental management is influenced not only by the division of labor within families but also by the collective culture that develops within the community. In this context, gender relations interact with the community's social capital. The stronger the traditions of cooperation and environmental concern, the less likely it is that environmental management will be burdened solely on one gender group.

Interestingly, this study found that some informants still acknowledged the traditional view that cleaning is women's work. Mrs. Ima stated that this perception "still exists." Similarly, Mrs. NZR explained that there is still a view that cleaning the home and the environment is women's work.

However, the existence of these views is not automatically reflected in everyday practice. At the normative level, society still holds gender stereotypes, but in practice, many forms of cross-gender cooperation are found. This phenomenon indicates a gap between traditional cultural values and contemporary social reality. This situation can be understood through social change theory, which explains that the transformation of values typically proceeds more slowly than changes in practice. Society may continue to uphold traditional views symbolically, but in daily life, people are beginning to adopt more egalitarian relationship patterns. It is this process that appears to be taking place in the village of Wombo Kalonggo.

Overall, the research findings indicate that gender relations in community-based environmental management in Wombo Kalonggo Village are in a transitional phase. Traditional divisions of labor are still evident in domestic activities and environmental resource management. Women play a more dominant role in managing household cleanliness, water, and household waste, while men are more involved in physically

demanding work and environmental activities in public spaces. However, instances of mutual assistance between men and women are increasingly common. This suggests that gender relations are no longer rigid but are shifting toward more flexible and collaborative patterns. Thus, community-based environmental management in Wombo Kalonggo Village cannot be understood solely as an environmental issue but also as a social space where gender constructions are maintained, negotiated, and gradually undergoing transformation.

## 4. Negotiation of Gender Roles and the Formation of Collective Environmental Responsibility

The research findings indicate that although the community in Wombo Kalonggo Village still recognizes a gender-based division of labor in environmental management activities, evolving social practices reveal an increasingly robust process of role negotiation. This negotiation is evidenced by the growing opportunities for participation by both men and women in various environmental activities, at both the household and community levels. These findings indicate that gender relations in Wombo Kalonggo Village cannot be understood as a static structure, but rather as social relationships that are constantly evolving in response to community needs, family dynamics, and the demands of environmental management.

Based on interview results, the majority of informants no longer view environmental management tasks as the exclusive responsibility of one gender. Instead, maintaining household cleanliness, managing waste, cleaning waterways, and participating in community service are understood as shared obligations that must be carried out by all family members. This shift in understanding reflects a transition from traditional patterns of division of labor toward the establishment of more collective environmental responsibilities.

This perspective is clearly evident in Mrs. SRT's statement: "Housework isn't just a woman's job; men can do it, too. Husbands and wives should help each other." This statement illustrates a shift in society's perspective on domestic work, which has long been associated exclusively with women. Household cleaning is no longer perceived as the sole responsibility of women, but rather as part of shared responsibilities within family life. In the context of environmental management, this shift is significant because it broadens the base of community participation in maintaining the quality of the environment.

This finding aligns with the concept of "doing gender" proposed by West and Zimmerman (1987), which explains that gender is not a natural identity but rather a social practice that is continuously produced and negotiated in everyday life. When men begin to engage in household chores and environmental cleanup activities, the boundaries of gender roles—which have long been considered fixed—are simultaneously redefined. Thus, the changing gender relations in Wombo Kalonggo Village indicate that the community is beginning to establish social practices that are more flexible than traditional gender constructs. A similar view was expressed by Mr. RHM: "It's a good thing for men to help with household chores because it lightens the workload for women" (Informant RHM).

This statement shows that men's involvement is not viewed as a threat to masculine identity. On the contrary, such involvement is seen as a form of responsibility and solidarity within the family. From Connell's (2009) perspective, this kind of change signals the emergence of a more adaptive form of masculinity, in which men no longer define themselves solely through dominance in the public sphere, but also through their involvement in reproductive labor and family life.

Furthermore, the interview results indicate that some community members no longer take issue with men participating in domestic work. Mrs. NLT explained: "The community doesn't take issue with this because men and women are considered equal and can help each other complete the work" (Informant NLT). This statement reflects a shift in social norms at the community level. While in traditional societies, gender-based division of labor is often enforced through strict social control, in the community of Wombo Kalonggo Village, such control has begun to weaken. Men who help with household chores no longer face negative stigma from their social environment. On the contrary, this practice is viewed as a positive form of cooperation.

This finding aligns with the research by Arora-Jonsson (2011), which shows that gender relations in rural communities undergo changes when the collective needs of the community become more important than traditional divisions of labor. In the context of environmental management, the challenges faced by communities often require the participation of all community members regardless of gender.

This shift in perspective is also evident in Mrs. NRL's statement: "The involvement of men in doing housework and maintaining cleanliness is considered normal by the residents of Wombo Kalonggo Village." This statement shows that gender negotiations have reached a stage of normalization in community life. Activities that were previously considered a deviation from gender norms are now accepted as part of social routines. From the perspective of Berger and Luckmann (1966), this situation indicates the institutionalization of new values. Practices that initially emerged as a form of adaptation to family needs have gradually been accepted by the community as a legitimate social reality.

Another informant, Mrs. TRU, even provided a clearer picture of these social changes: "Views like that only existed in the past. Now both men and women can do it, so the responsibility for cleanliness is a shared one" (informant TRU). This statement indicates a reflective awareness among the community regarding the changes currently taking place. The informant explicitly distinguishes between past patterns of gender relations and the evolving conditions of the present. This indicates that the community is not only experiencing changes in practice but is also aware of these changes.

According to Jackson's (2005) research, changes in gender relations often arise not directly from ideological shifts, but through everyday experiences that demonstrate that traditional divisions of labor are not always effective in meeting the needs of families and communities. Findings from Wombo Kalonggo Village support this argument. Cooperation between men and women has developed primarily due to the practical need to maintain the cleanliness of homes and the environment.

This shift in gender relations is increasingly evident in community collective activities. Based on field observations, community service events have become one of the main arenas where gender roles are negotiated. In these activities, there is no overly rigid division of labor based on gender. Men and women are equally involved in cleaning the environment, collecting trash, repairing public facilities, and maintaining the cleanliness of waterways.

Community-level environmental activities have become a more inclusive space for participation. The absence of strict restrictions on gender participation indicates that the community prioritizes achieving shared goals over maintaining traditional social boundaries. A similar perspective was expressed by Ms. NLT: “Community service is participated in by both men and women. Everyone works together to clean up the environment” (Informant NLT).

These findings indicate that community service serves a broader purpose than simply cleaning up the environment. It also functions as a social mechanism that strengthens community solidarity and fosters a sense of collective responsibility toward the environment. From a social capital perspective, this indicates the presence of strong social networks at the community level. Pretty (2003) explains that the successful management of shared resources is heavily influenced by the level of trust, norms of reciprocity, and cooperation that develop within a community. Community service is a tangible manifestation of this social capital because it enables the community to build a shared commitment to environmental sustainability.

Field observations show that Hamlet 2 has relatively better environmental conditions compared to other areas due to residents’ collective involvement in maintaining environmental cleanliness. The success in maintaining environmental cleanliness is supported not only by individual awareness but also by the community’s collective participation in various environmental activities.

These findings support the theory of collective action proposed by Ostrom (1990). According to Ostrom, the success of managing common-pool resources depends heavily on a community’s ability to establish mutually agreed-upon rules, norms, and mechanisms for cooperation. In the context of Wombo Kalonggo Village, the cooperation between men and women in maintaining environmental cleanliness demonstrates the effective functioning of these collective action mechanisms.

From an environmental sociology perspective, the changes in gender relations identified in this study suggest that ecological awareness can serve as a driving force for the transformation of social relationships within a community. The threats posed by trash, poor drainage conditions, and the need to create a healthy environment have prompted the community to develop more inclusive forms of cooperation. In this context, gender identity is no longer the primary basis for the division of responsibilities; rather, it has been superseded by the shared interest in preserving environmental quality.

These findings are consistent with Berkes’s (2004) research, which shows that the success of community-based environmental management depends heavily on the community’s

capacity to foster collaboration among various social groups. Communities that are able to develop cross-gender cooperation tend to be more successful in maintaining environmental sustainability than those that adhere to a rigid division of labor.

The results of this study also support the findings of Meinzen-Dick et al. (2014), which show that gender inclusivity is a key factor in community-based resource management. When men and women have relatively equal opportunities to participate, the effectiveness of environmental management increases because the community's social resources can be utilized optimally.

Furthermore, research by Buckingham and Kulcur (2009) indicates that women's participation in environmental governance can improve the quality of environmental decisions because women have distinct experiences in interacting with natural resources and the household environment. Meanwhile, men's involvement in domestic environmental tasks facilitates a more balanced distribution of responsibilities. The combination of these two factors results in a more adaptive pattern of environmental management.

From the perspective of feminist political ecology, the changes occurring in Wombo Kalonggo Village demonstrate that the relationship between gender and the environment is dialectical. The environment is not only influenced by gender relations but can also serve as an arena that drives changes in those gender relations themselves (Rocheleau, Thomas-Slayter & Wangari, 1996). The need to maintain environmental cleanliness has proven to be a factor driving the community to develop more flexible forms of cooperation between men and women.

The findings of this study also support Nightingale's (2006) argument that environmental management practices constitute a crucial arena for the formation of social identity. Through their involvement in various environmental activities, individuals not only fulfill ecological functions but also shape and negotiate their gender identities. Therefore, changes in environmental management practices in Wombo Kalonggo Village simultaneously reflect the ongoing shifts in gender identity at the community level.

Overall, the research findings indicate that the community of Wombo Kalonggo Village is undergoing a transformation in gender relations, characterized by an increasingly strong sense of collective environmental responsibility. Although traditional divisions of labor are still evident in some activities, the community is increasingly accepting the joint involvement of men and women in environmental stewardship. This collaboration not only strengthens the effectiveness of community-based environmental management but also demonstrates the development of gender relations that are more inclusive, egalitarian, and adaptive to the community's social needs. Thus, the success of environmental management in Wombo Kalonggo Village is not solely determined by the community's ecological awareness but also by the community's ability to build gender relations that support collective participation in safeguarding environmental sustainability.

## 5. Conclusion

This study shows that community-based environmental management in Wombo Kalonggo Village is still influenced by gender role constructs that distinguish the responsibilities of men and women in daily life. Women tend to play a more dominant role in environmental management activities within the domestic sphere, such as maintaining household cleanliness, managing household waste, and meeting the family's water needs, while men are more involved in activities related to the maintenance of public spaces and physically demanding work. However, this division of labor does not fully reflect a rigid relationship; rather, it is the result of a social construction that is continually reproduced through the community's daily practices.

On the other hand, this study found significant changes in how people perceive gender roles in environmental management. Various empirical findings indicate that men and women are increasingly engaging in more flexible patterns of cooperation, both within the household and in community-level environmental activities. Men's involvement in domestic work and women's participation in public environmental activities are no longer viewed as violations of social norms, but rather as forms of adaptation to the needs of families and communities. These findings indicate that gender relations in Wombo Kalonggo Village are shifting from traditional patterns of division of labor toward more collaborative and inclusive relationships.

Theoretically, this study confirms that community-based environmental management cannot be understood solely as an ecological practice, but also as a social arena where gender construction and negotiation take place dynamically. The formation of collective environmental responsibility involving both men and women demonstrates that the success of environmental management is determined not only by the community's ecological awareness, but also by the community's ability to build more equitable social relationships. Thus, efforts to strengthen environmental participation at the local level should be directed toward developing gender-responsive environmental governance, so that all community members have equal opportunities to contribute to maintaining environmental sustainability and strengthening the community's social resilience.

## Acknowledgments

We would like to express our gratitude to the team that prepared this paper, and especially to the community that welcomed us. Our deepest thanks go to the informants who provided data and to the village government for their warm reception. We would also like to thank the Sociology Laboratory at Tadulako University for publishing this manuscript.

## References

Agarwal, B. (2001) 'Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework', *World Development*, 29(10), pp. 1623–1648. https://doi.org/10.1016/S0305-750X(01)00066-3

Arora-Jonsson, S. (2011) 'Virtue and vulnerability: Discourses on women, gender and climate change', *Gender, Place and Culture*, 18(6), pp. 744–761. https://doi.org/10.1080/0966369X.2011.617907

Berger, P.L. and Luckmann, T. (1966) *The Social Construction of Reality: A Treatise in the Sociology of Knowledge*. New York: Anchor Books.

Berkes, F. (2004) 'Rethinking community-based conservation', *Conservation Biology*, 18(3), pp. 621–630. https://doi.org/10.1111/j.1523-1739.2004.00077.x

Buckingham, S. and Kulcur, R. (2009) 'Gendered geographies of environmental injustice', *Local Environment*, 14(6), pp. 659–670. https://doi.org/10.1080/13549830903089218

Connell, R. (2009) *Gender: In World Perspective*. 2nd edn. Cambridge: Polity Press.

Jackson, C. (2005) 'Strengthening gender analysis of resource management at the local level', *Development and Change*, 36(1), pp. 17–39. https://doi.org/10.1111/j.0012-155X.2005.00401.x

Leach, M. (2016) *Gender Equality and Sustainable Development*. London: Routledge.

MacGregor, S. (2017) *Routledge Handbook of Gender and Environment*. London: Routledge.

Meinzen-Dick, R., Kovarik, C., Quisumbing, A.R., Meinzen-Dick, R.S., Njuki, J. and Buse, K. (2014) 'Gender and sustainability', *Agriculture and Human Values*, 31(3), pp. 371–386. https://doi.org/10.1007/s10460-013-9486-1

Nightingale, A.J. (2006) 'The nature of gender: Work, gender, and environment', *Environment and Planning D: Society and Space*, 24(2), pp. 165–185. https://doi.org/10.1068/d01k

Ostrom, E. (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge: Cambridge University Press.

Pretty, J. (2003) 'Social capital and the collective management of resources', *Science*, 302(5652), pp. 1912–1914. https://doi.org/10.1126/science.1090847

Resurreccion, B.P. (2017) 'Gender and environment from "women, environment and development" to feminist political ecology', *Gender and Development*, 25(2), pp. 287–299. https://doi.org/10.1080/13552074.2017.1335814

Rocheleau, D., Thomas-Slayter, B. and Wangari, E. (1996) *Feminist Political Ecology: Global Issues and Local Experiences*. London: Routledge.

West, C. and Zimmerman, D.H. (1987) 'Doing Gender', *Gender and Society*, 1(2), pp. 125–151. https://doi.org/10.1177/0891243287001002002