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Women in Flames: Gendered Exclusion in Indonesia's Fire Governance

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Abstract

Centring Indigenous Dayak women's experiences during the 2023 conflagrations in Central Kalimantan, this article explicates structural challenges of community participation in fire governance. We argue that fire mitigation practices are male-dominated spaces where women's involvement was neither appreciated nor accommodated. Our findings have been mainly derived from three months of ethnographic engagement with Dayak communities in Central Kalimantan along the Mentaya, Katingan, Kahayan, and Kapuas rivers. Fires and subsequent responses have revealed lingering gender inequality where women are perceived as potential hindrances to fire suppression operations. Accordingly, this article investigates the layered exclusion of women through a feminist political ecology perspective (FPE), focusing on how enviro-development arrangements reproduce gendered norms and hierarchical gender relations in community-driven programs and other fire-related initiatives. By doing so, this article encourages discussion of the interlinkage between gender and community participation in broader climate initiatives in Indonesia and beyond.

Keywords. Gendered Exclusion, Community Participation, Fire Governance, Dayak Women, Indonesia.

Introduction

'Wah repot!' (It's troubling!)—Johan and Kadir,[1] two male members of the community fire brigade, looking into each other's eyes, responded, to the question of whether women should participate in fire patrols. They were in their late thirties, not particularly muscular, and wore black shirts, each with a cigarette in hand. In front of a primary school, near the village head's house in Cempaga sub-district, they explained that involving women would be awkward and risky. Their reasoning was not based solely on the need for a particular level of physical strength to conduct the tasks, but because the patrol units were organised in pairs or groups of three people to manage their limited budget. As such, the brigade members reflected that having a female member would not be seen as 'right' by their families, as the activities often required camping overnight in the forest. 'We would be the subject of people's gossip here in the village,' they murmured. This seemingly harmless explanation reveals much about the

[1] All names of people interviewed are pseudonyms.

reality of community participation, showing the delicate layers alongside direct and structural exclusion of women in fire mitigation and broader climate initiatives.

Since 'the great fire of Borneo' in 1982/3, the Indonesian Government had already blamed traditional fire use as the cause of the conflagration.[2] Such an accusation toward swidden farmers remained strong during the gigantic fire in 1997/8—the worst episode in Indonesia. Rona Dennis and colleagues stated that there have been many national-level reforms to land-use policies in an attempt to mitigate risks of massive land clearing and burning.[3] Many of these reforms 'focus on ways to eliminate all land-clearing fires on peatland and call for site-specific assessments of risks of land-clearing or land-use "conversion," whether or not it involves burning.' [4] However, this time, the scapegoating was complemented by several community development programs aimed at changing fire practices. Following the devastating 2015 fires that burned 2.6 million hectares of land and caused an economic loss of USD 16.1 billion,[5] the Indonesian Government then intensified its efforts. Through Badan Restorasi Gambut—a newly built Peatland Restoration Agency—and existing institutions, the state introduced zero-burning farming, entrepreneurship training, local fire brigades, and various other enviro-developmental programs to encourage and support sustainable fire mitigation at the village level. Through these multifaceted initiatives, the state attempted to mobilise community roles for environmental repair by emphasising local participation and, increasingly, women's inclusion to support the participatory and inclusive claims.

Centring Indigenous Dayak women's experiences during the 2023 conflagrations in Central Kalimantan Province, this article explicates the structural challenges to community participation in fire governance and broader climate change initiatives. We argue that firescapes and fire mitigation programs are male-dominated spaces, in which Dayak women's presence and involvement are neither necessarily welcomed nor accommodated. Thus, despite the claims, current approaches to such a pressing climatic problem might be increasing Indigenous women's exclusion within ongoing environmental restoration programs. Studies of participation in climate initiatives increasingly acknowledge the complex interlinkages between gender and environmental crises. Scholars and policy makers with feminist perspectives have emphasised gendered experiences in relation to environmental decline and its impacts on their sociocultural lives.[6] Building on the growing scholarship on

[2] S. Robert Aiken, 'Runaway Fires, Smoke-Haze Pollution, and Unnatural Disasters in Indonesia,' *Geographical Review* 94, no. 1 (2004): 55–79. http://www.jstor.org/stable/30033953; Rona Dennis, *A Review of Fire Projects in Indonesia, 1982-1998* (CIFOR, 1999).

[3] Rona Dennis et al. 'Fire, People and Pixels: Linking social science and remote sensing to understand underlying causes and impacts of fires in Indonesia.' *Human Ecology* 33, no. 4 (2005), https://doi.org/10.1007/s10745-005-5156-z.

[4] Dennis et al., 'Fire, People and Pixels,' 466.

[5] Ann Jeannette Glauber et al. 'The Cost of Fire: An Economic Analysis of Indonesia's 2015 Fire Crisis,' World Bank, Jakarta, 3 March 2016. https://openknowledge.worldbank.org/entities/publication/391e19f4-18f7-56c2-8c28-bb89cc9e7d6f.

[6] Juanita Sundberg, 'Feminist Political Ecology,' *International Encyclopedia of Geography*, 2017, 1–12. https://doi.org/10.1002/9781118786352.wbieg0804; Bernadette P. Resurreccion, 'The Gender and Climate Debate: More of the Same or New Pathways of Thinking and Doing?' (S. Rajaratnam School of International Studies, 2011), http://www.jstor.org/stable/resrep17153.

gender and fire,[7] this article explores the mechanisms of how women's critical roles, taking into account their ecological knowledge and labour, are underestimated and even discouraged within Indonesia's current fire governance.

In this Pyrocene era when terrestrial fires progressively entangle with our living spaces,[8] we found that blazing forests are far from being gender neutral. Fires and subsequent responses revealed lingering gender inequality, where women were often perceived as potential hindrances to fire patrol and dousing operations. In fiery situations, government officials, conservation workers, plantation administrators, and even community leaders reinforced binary gender stereotypes in which women are associated with weakness, and men with strength; women are unreliable, men are dependable. This illustrates how fire initiatives can be exclusionary and gendered. Thus, instead of promoting meaningful inclusion, current fire mitigation programs positioned women within the 'supporting' domain that mimicked domestic labour, such as preparing meals and washing clothes for their husbands, brothers, or male colleagues. By analysing Dayak women's experiences within fire governance, in this paper we shed light on how enviro-development arrangements reproduce gendered norms and hierarchical gender relations. We seek to push for critical discussions on the interrelation of gender and community participation in broader climate initiatives in Indonesia and beyond.

Following this introduction, we will discuss the methodology we used to examine the sociocultural and political dimensions of current fire governance at the local level. Subsequently, we flesh out FPE framework that helps us to understand and situate the complexity of fire mitigation and community participation before discussing our findings on Indigenous Dayak women's exclusion in relation to firefighting, fire mitigation efforts, and community development initiatives. We conclude by pushing for a more intersectional analysis to advance meaningful women's participation in climate initiatives.

Approaching the gendered flames

Our findings were primarily derived from three months of ethnographic engagement with Dayak communities across four subdistricts in Central Kalimantan along the Mentaya, Katingan, Kahayan, and Kapuas rivers. These sites were selected for their history of burning landscapes, the longevity of Indigenous fire practices, the extent to which this area is a priority for fire mitigation, and existing relationships between research team members and Dayak people in the area. This fieldwork was part of an interdisciplinary project supported by the Australian Indonesian Research Partnership's, 'Fire Play: Understanding and Documenting Indigenous Fire Governance in Indonesia.' Adhering to the fire calendar.[9] We spent our field work within the July to October window, the dry season when the timing for people to use

[7] Marien González-Hidalgo and Ana Cabana Iglesia, 'Trending Discourses and Silences Around the Role of Women in Wildfires: A Systematic Scoping Review and Some Reflections from the Field.' *Journal of Rural Studies* 115 (2025), https://doi.org/10.1016/j.jrurstud.2024.103553; Christine Eriksen, *Gender and Wildfire: Landscapes of Uncertainty* (Routledge, 2013), https://doi.org/10.4324/9781315779508.

[8] Stephen J. Pyne, *The Pyrocene: How We Created an Age of Fire, and What Happens Next* (University of California Press, 2021).

[9] Christian A. Kull, *Isle of fire: the political ecology of landscape burning in Madagascar*. (University of Chicago Press, 2004), 37.

fire for agriculture and other livelihood options[10] overlaps with the state's anti-fire enforcements.[11]

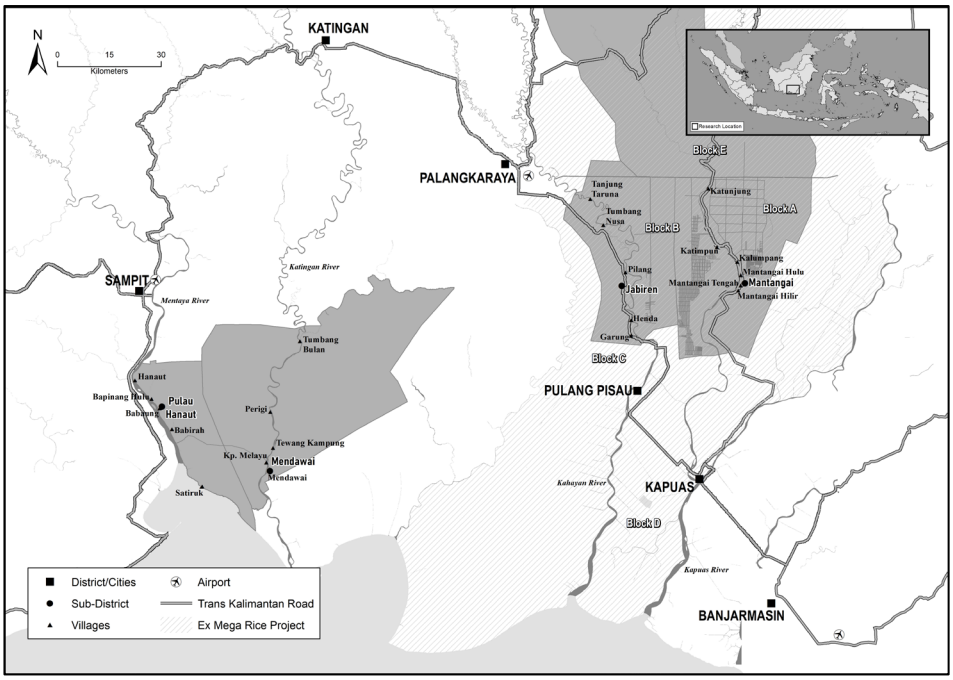

Figure 1. Map showing our research location in Central Kalimantan
Source. Created by Sofyan Ansori and Pamungkas Nurafrizal, 2024. The official basemap was derived by Rupabumi Indonesia of Badan Informasi Geospasial, Authoritative Mapping Agency in Indonesia. The basemap of Central Kalimantan parts can be downloaded for free from https://tanahair.indonesia.go.id/portal-web/ after registering for an online account

Following disastrous fires in 2015, the Indonesian state established restoration and fire mitigation projects that mainly focus on Indigenous Peoples and their fire practices.[12] As such, Indigenous Peoples, like the Dayak people in Central Kalimantan, are now spearheading community-based fire brigades at the village level, organised into groups such as the Masyarakat Peduli Api (Fire-Care Community), Regu Serbu Api (Fire-Attack group), and Regu Pemadam Kebakaran (Fire Suppressing Group). While focusing on these community fire brigades and their self-organising activities at the village level during the fire season of 2023, we closely followed various forms of participation and people's experiences such as fire patrols, village meetings, social gatherings, and other occasional events in 20 villages. We interviewed 473 people in total, including village leaders, women, community fire brigade members, fishers, hunters, NGO workers, and many relevant others. Complementing these

[10] Andrew P. Vayda, 'Causal Explanation of Indonesian Forest Fires: Concepts, Applications, and Research Priorities,' *Human Ecology* 34, no. 5 (2006): 615–35, http://www.jstor.org/stable/27654144; Cynthia Fowler, *Ignition Stories: Indigenous Fire Ecology in the Indo-Australian Monsoon Zone* (Carolina Academic Press Ritual Studies Monograph Series, 2013).

[11] Sofyan Ansori, 'The Fingertips of Government: Forest Fires and the Shifting Allegiance of Indonesia's State Officials,' *Indonesia* 108, no. 1 (2019), https://doi.org/10.1353/ind.2019.0012.

[12] Sofyan Ansori et al. '"Bermain" Api,' *Inside Indonesia: The Peoples and Cultures of Indonesia* 156 (20 May 2024), https://www.insideindonesia.org/editions/edition-156-apr-jun-2024/bermain-api.

observations and interviews, we surveyed 401 households while collecting countless images, videos, documents, and other media sources.

It soon became apparent that both discourse and practice relating to fire and climate initiatives were predominantly conceived and organised by men. We had a preliminary insight into this pattern, which allowed us to devote significant attention to Indigenous women's roles, participation, and experiences, and to design our research to address the issues accordingly. Along with experiencing the blazing forests, we listened to women's stories, documenting their perspectives, and observing how women lived through the fire events within these 'communities in flames.'[13] And, as a result, we were able to rethink fires and community participation.

Fires and women's participation

Centring on women's lived experiences within the context of fire mitigation initiatives in Central Kalimantan, we foreground FPE as our analytical lens to connect and dissect the complex social, political, and economic intricacy of environmental crises and gender relations. Initially coined by Dianne Rocheleau in 1996, FPE is a conceptual framework that brings a feminist perspective to political ecology, highlighting the importance of gender in shaping 'resource access and control, interacting with class, caste, race, culture, and ethnicity to shape processes of ecological change, the struggle of men and women to sustain ecologically viable livelihoods, and the prospects of any community for 'sustainable development.'[14] FPE, thus, offers an intersectional tool with which to approach the ways that various environmental crises and human–nature relations are shaped by power, gender, class, race, and long-established socio-economic as well as cultural relations.[15]

Such a framework is critical to understanding the Central Kalimantan firescape, where both the people and landscape have been subject to fire interventions for decades and where there is an escalating need for community, and especially women's, participation. As FPE focuses on gendered processes and the impacts of the politics of environmental degradation and conservation, it allows us to engage critically with the politics of women's exclusion in wildfire initiatives and the gendered division of labour that exists within fire mitigation practices. Specifically, FPE helps us to think through the ways in which gender norms shape and condition fire governance practices and discourses pertaining to fire-related issues. Dianne Rocheleau and her colleagues posit that gendered norms stem from patriarchal ideologies that define the ways information, knowledge, resources, and livelihood technology might be accessed and by whom.[16] This patriarchal model, they argue, 'situates women in the private sphere, conditions both men's and women's responsibilities, and determines the

[13] Peter Francis Moore, et al., *Communities in Flames: Proceedings of an International Conference on Community Involvement in Fire Management* (Bangkok, 2002).

[14] Dianne Rocheleau et al., 'Gender and Environment: A Feminist Political Ecology Perspective,' in *Feminist Political Ecology: Global Issues and Local Experiences*, ed. Dianne Rocheleau, Barbara Thomas-Slayter, and Esther Wangari (Routledge, 1996), 4.

[15] Dianne Rocheleau et al., 'Feminist Political Ecology: Crosscutting Themes, Theoretical Insights, Policy Implications,' in *Feminist Political Ecology: Global Issues and Local Experiences,* ed. Dianne Rocheleau, Barbara Thomas-Slayter, and Esther Wangari Routledge, 1996 (Routledge, 1996), 287.

[16] Rocheleau, et.al.*,* 'Gender and Environment,' 10.

social value assigned to each.'[17] To understand fire politics means acknowledging the gendered division of labour as it manifests in day-to-day practices in Central Kalimantan's firescape—a crucial step toward instigating climate initiatives that are gender-informed and inclusive.

The exclusion of women from aid projects has long been a widely recognised issue and influenced discourses on Women in Development (WID) and Gender and Development (GAD).[18] In the context of aid projects responding to climate crises, scholarship on gender and climate initiatives has emphasised how women's experiences are often excluded from decision-making processes.[19] In 2004 post-tsunami Sri Lanka, for instance, Madhavi Ariyabandu found that women's participation in recovery planning was scarce.[20] The management of nearly 250,000 displaced people in the camps, he notes, was almost exclusively organised by men.[21] Ariyabandu further elaborated that disaster recovery processes exhibited 'the gender equity biases in participation, access and rights, mirroring the pre-disaster status,'[22] in which women were usually less represented during decision-making processes at formal and public levels due to their assigned roles within the domestic sphere. In a parallel fashion, Pedro Matos and his colleagues scrutinised the role of gender in climate change mitigation in Cape Verde.[23] They posited that there was 'a notable lack of political commitment to incorporate the interests and needs of women into the government's agenda.'[24] This means that many climate initiatives continued to lack the intersectional perspectives that the inclusion of gender brings to social, environmental, and economic issues.

Our findings from women and fire governance studies also show that women's participation is often underestimated. When it comes to involvement in fire management, people tend to idealise masculine traits in determining a firefighter's involvement in decision-making.[25] Precisely because of firefighting's highly masculinised nature, a gendered division

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[17] Rocheleau et al., 'Feminist Political Ecology: Crosscutting Themes,' 297.

[18] Ester Boserup et al., *Woman's Role in Economic Development* (Routledge, 2013), https://doi.org/10.4324/9781315065892.

[19] González-Hidalgo and Iglesia, 'Trending Discourses and Silences'; E. Alonso-Epelde et al., 'Climate Action From a Gender Perspective: A Systematic Review of the Impact of Climate Policies on Inequality,' *Energy Research & Social Science* 112 (March 15, 2024), https://doi.org/10.1016/j.erss.2024.103511; Pedro Andrade Matos et al., 'The Role of Gender in Mitigation and Adaptation to Climate Change in Cape Verde,' *Veredas Do Direito Direito Ambiental E Desenvolvimento Sustentável*, 19 October 2023, https://doi.org/10.18623/rvd.v20.2536-ing; Elaine Enarson and P.G. Chakrabarti, 'PART ONE: Understanding Gender Relations in Disaster,' *Women, Gender and Disaster: Global Issues and Initiatives* (SAGE Publications India eBooks, 2009), https://doi.org/10.4135/9788132108078.

[20] Madhavi Malalgoda Ariyabandu, 'Sex, Gender and Gender Relations in Disasters,' In *Women, Gender and Disaster: Global Issues and Initiatives,* edited by Enarson, Elaine, and P.G. D. Chakrabarti (SAGE Publications India Pvt Ltd, 2009), https://doi.org/10.4135/9788132108078.n1.

[21] Ariyabandu, 'Sex, Gender and Gender Relations in Disasters,' 13.

[22] Ariyabandu, 'Sex, Gender and Gender Relations in Disasters,' 12.

[23] Matos et al., 'The Role of Gender in Mitigation.'

[24] Matos, et al. 'The Role of Gender in Mitigation,' 7.

[25] Ariyabandu, 'Sex, Gender and Gender Relations in Disasters,' 13; Eriksen, *Gender and Wildfire*; Rachel Reimer and Christine Eriksen, 'The Wildfire Within: Gender, Leadership and Wildland Fire Culture,' *International Journal of Wildland Fire* 27, no. 11 (2018), 715, https://doi.org/10.1071/wf17150; Meagan Tyler

of labour persists within fire governance practices. Let us take an example from the global north. In their research on gender and leadership within the British Columbia Wildfire Services (BCWS) in Canada, Rachel Reimer and Christine Eriksen argue that fire management revolves around hypermasculinity.[26] They note that masculine qualities (e.g., being aggressive, physically strong, brave, and risk takers) are perceived as desired traits that are necessary for combating fire-related disasters. In contrast, feminine characteristics are associated with weakness and low tolerance and therefore not sought after in firefighting. This preference, in turn, makes it necessary for female firefighters to exhibit masculine traits to be taken seriously as members and leaders in their communities.[27] Erna Danielsson and Kerstin Eriksson's research on women's work in forest fires in Sweden further explains that women's participation in disaster management tends to go unnoticed.[28] Women's burdens are doubled; they participate in post-disaster initiatives while simultaneously maintaining gendered expectations in the domestic sphere as caregivers. Danielsson and Eriksson argue that, since women's work during a disaster is often unacknowledged in disaster responses, vital care work, such as providing meals, is frequently ignored. This situation prevents women from contributing and sharing their knowledge and experiences during critical moments of fire disasters.[29]

We have found similar cases in Indonesia where women's contributions are formally encouraged but, in practice, are usually unaccommodated or unwanted. Through her research in Central Kalimantan and Riau provinces, Catharina Indirastuti illustrates the challenges for women during peat fire situations where they have to respond without adequate training because 'women are not positioned as a group that must be involved in efforts to prevent and control peatland and forest fires.'[30] The contradiction, dilemma, and exclusion discussed in literature addressing women's involvement in fire governance speaks volumes about the everyday struggle experienced by women who live amid the blazing fires with diminishing opportunities (for them to be trained and prepared), as we observed in our field sites. This is a situation to which we now turn.

Gendered labour of fire mitigation

Women in Central Kalimantan widely participate in farming activities, working in palm oil plantations, and are well-versed in swidden agriculture. Their involvement in the daily harvest and forest-based livelihood activities has equipped them with extensive and sophisticated knowledge of peatland landscapes. Women also have experience working in the broader environment. Despite possessing this knowledge, we suggest that women's work is often

and Peter Fairbrother, 'Gender, Households, and Decision-making for Wildfire Safety,' *Disasters* 42, no. 4 (2018), https://doi.org/10.1111/disa.12285.

[26] Reimer and Eriksen, 'The Wildfire Within,' 722.

[27] Reimer and Eriksen, 'The Wildfire Within,' 716.

[28] Erna Danielsson and Kerstin Eriksson, 'Women's Invisible Work in Disaster Contexts: Gender Norms in Speech on Women's Work after a Forest Fire in Sweden,' *Disasters* 46, no. 1 (2020), https://doi.org/10.1111/disa.12464.

[29] Danielsson and Eriksson, 'Women's Invisible Work in Disaster Contexts,' 143.

[30] Catharina Indirastuti, 'Women Fighting Peatland Fire: Rural Women's Experiences in Central Kalimantan and Riau Provinces.' *Jurnal Perempuan* 25, no. 1 (2020) 13, https://doi.org/10.34309/jp.v25i1.407.

poorly acknowledged. Their contribution and labour have become 'infinitely expandable'[31] but, at the same time, that work goes unacknowledged, and is rendered invisible. This situation informs fire mitigation. In our field sites, such a perspective frequently permeated assumptions, and later, attitudes toward women's inclusion in fire mitigation settings.

Drawing on her close observations in Central Kalimantan, Evi Nurleni illustrates the grim reality faced by today's Indigenous Dayak Ngaju women.[32] Despite their activities and involvement in agriculture, state administrators, NGO workers, and other external entities often overlook their status as farmers because they are assumed to be housewives or unemployed.[33] Nurleni argued that this assumption stems from global agricultural knowledge production and biases from patriarchy capitalism, which views women's work as unproductive or domestic. In other words, patriarchal ideology and capitalism, as assumed by state administrators and foreign aid consultants, have contributed to the diffusion of gender-inequitable ideas among Dayak communities. Global patriarchy capitalism spreads widely, to the extent it informs a gendered perception circulating among the community that palm oil is a 'man's crop' and food crops are 'women's crops.'[34] Nevertheless, the everyday reality we observed during fieldwork suggests that such gendered roles in agriculture have changed. Following fire-ban enforcements, declining forest conditions and diminishing livelihood options, it is common for adult men to migrate from their villages to find more fertile land for cash cropping, take odd jobs, or pursue other opportunities. According to Indirastuti, whose research focused on women and peatland fires in various Central Kalimantan villages, women's domestic burdens increased when their male household members migrated for work.[35] In Paduran Mulya village, for instance, Indirastuti found that adult women who stayed in the village needed to take care of the house, look after the remaining land and livestock, and carry out almost all the roles originally held by men.[36] Fire mitigation was the exception.

'Takutnya nanti malah heboh lihat api. Biasanya lihat api di dapur' (We are afraid they will be hysterical when encountering fires. They only see fire in the kitchen). This judgemental view was expressed by Malik, a male firefighter we met in Mendawai on 23 September 2023, when we asked him about women's minimal participation in fire management. This negative opinion was raised during a conversation about fire management training (including fire extinguishing techniques, firefighting equipment, first aid, etc.) in Mendawai village, a capacity-building event for adult men, including members of the Regu Serbu Api (Fire-Attack Group). One of our researchers asked if women would receive the same training as the men, to which they responded that they were unsure since women are not advised to participate in fire suppression activities. A similar sentiment was revealed during another conversation about the gender composition of fire patrol staff and membership of Regu Pemadam Kebakaran (Fire Brigades) in a restoration project enterprise. During this conversation, we

[31] Rocheleau et al., 'Feminist Political Ecology,' 298.

[32] Evi Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar di Ladang Oloh Ngaju Kalimantan Tengah.' PhD dissertation, Gadjah Mada University, 2025.

[33] Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar.'

[34] Rebecca Elmhirst et al., 'Gender and Generation in Engagements with Oil Palm in East Kalimantan, Indonesia: Insights from Feminist Political Ecology,' *The Journal of Peasant Studies* 44, no. 6 (2017), https://doi.org/10.1080/03066150.2017.1337002.

[35] Indirastuti, 'Women Fighting Peatland Fire,' 17.

[36] Indirastuti, 'Women Fighting Peatland Fire,' 17.

realised that the Protection Division, which is responsible for fire suppression in concession areas, consists entirely of male staff. The reason for opting for an all-male staff is the belief that men are better suited to physical work in the field, and that it is deemed 'inappropriate' for women to join such a male-dominated workspace. A similar sentiment was expressed when one of our researchers asked Fadhli, a staff of Tumbang Bulan village's fire brigade: 'Who gets to be involved in the fire patrols?' He responded, 'Selama masih ada laki-laki, laki-laki saja' (As long as there are men, let men do it).

The utterance, the jokes, and perspectives from Dayak men and women show that although women are never formally prohibited from participating in fire mitigation, they are seen as lacking the physical strength to effectively extinguish fires. Conversations regarding the gendered division of labour in fire governance tended to revolve around the necessity of men's physical strength in the field and women's care work, as suggested by Reimer and Eriksen.[37] It's apparent that women's participation in fire mitigation was generally discouraged in this setting, reflecting broader gendered exclusions that disadvantage women in times of fire-related crisis.[38]

This leads us to another question: if women are discouraged from participating directly in the field, how are women expected to contribute to fire mitigation? Our findings show that women are typically assigned care work roles, such as preparing meals, washing clothes, and performing other domestic activities. For example, a male fire patrol explained that women are expected to participate only in logistical and administrative work during fire mitigation activities, including readying tools for fire suppression, preparing meals for fire brigade members, and recording patrol activities in logbooks. Additionally, women are also assigned work that involves educating or briefing. In Tumbang Bulan village, for instance, the village head explained that women are mostly involved in briefing activities, where they are responsible for informing residents about fire regulations. The village head believes that women have 'greater powers of persuasion' than men, who, according to the village head, are prone to fighting and misunderstanding when delivering information. Another finding suggests that men tend to feel pity for women who are asked to be involved in the field; this subtly reinforces the belief that women are less physically capable, therefore, fire operations are seen as riskier for women's physical wellbeing.

The gendered division of labour in forest and land management has not always been the case. Nurleni, an Indigenous Dayak scholar, contends that in their culture both women and men could equally do all types of work in the farming process.[39] The gender division of labour was adjusted according to the needs of the work or the conditions of the household. Now, more than 70 per cent of those working in the fields are women, while men migrate outside their villages to seek other sources of income.[40] Additionally, due to recent fire-related policies and regulations, women who have dominated the field for generations—tending to land inherited by their families and practicing swidden agriculture for subsistence—are at risk of being blamed for fire conflagrations. As argued by Evi Nurleni, the tradition of swidden agriculture is a risky and illegal practice in all areas of Central Kalimantan:

[37] Reimer and Eriksen, 'The Wildfire Within,' 716.

[38] Danielsson and Eriksson, 'Women's Invisible Work in Disaster Contexts,' 144.

[39] Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar,' 98.

[40] Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar,' 98.

women farmers are caught between various interests during forest fires and are easily scapegoated.[41]

FPE recognises how power relations and decision-making processes in environmental initiatives are interconnected. Furthermore, it highlights how certain ecological and livelihood systems are 'linked into national and global environmental, economic, and political systems which shape, enable, and limit the opportunities and constraints occurring at the local level.'[42] Thus, the formal division of labour in fire management in Dayak communities at the present time reflects the perverse influence of gendered perceptions of more powerful outside actors, both state authorities and foreign fire-management consultants (who see women as primarily belonging to the domestic domain). Over time, these programs–specifically those which address fire governance and swidden agriculture–have reinforced the masculinisation of climate initiatives, privileging men as the legitimate agents of technical expertise, authority, and field-based labour.

Environmental conservation and patriarchal gender ideology

> Sebenernya nih ya, kalau kamu nanya tentang kebakaran ini harusnya sama yang madam seperti Mang Gofar. Kalau nanya ke kami ini, gak ada guna (To be honest, if you want to know about fires, you better ask those who douse it down like Mang Gofar. No use asking us [women] here.)

This is how Kak Yanti, a Dayak woman and kindergarten teacher in Tumbang Bulan, Mendawai subdistrict, responded when we tried to understand women's perspectives on fire and their participation. Her utterance struck us differently as the way she accepted the 'no use' of her perspective epitomises the gender ideology that extends women's marginalisation into fire management and other climate initiatives. Reflecting on gender-fluid Indigenous environmental labour,[43] we suggest that women's acceptance of exclusion from fire governance might stem from their interaction with imposing interventions that required Dayak people to participate in working arrangements that domesticated women's roles. In our field sites, where recurring interventions take place, we observed people embracing the gender biases of women's participation coming from conservation and enviro-development initiatives as well as the state's empowerment programs.

Situated across the Katingan River Basin, the residences of Tumbang Bulan village have been included in environmental conservation efforts due to their proximity to Sebangau National Park. This park's vast and valuable peatland landscape had been degraded for decades by what many conservation bodies call 'unsustainable' logging, fishing, and animal poaching—activities that the surrounding population considered to be their livelihood. In 2009, a German non-profit organisation signed a partnership agreement with Sebangau National Park for the Bulan River Restoration program. In 2007, under the Forest Rehabilitation Movement (Gerakan Rehabilitasi Hutan), the forestry service of Katingan Regency allocated one hectare of arable land to each household for planting rubber trees. One of our interlocutors, Tante Eni, recounted her involvement in the seed nursery process as part of a conservation program. This seed nursery was designed to be implemented inside

[41] Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar,' 98.

[42] Rocheleau et al., 'Feminist Political Ecology,' 296.

[43] See Nurleni, 'Artikulasi dan Negosiasi Tradisi Membakar'; Indirastuti, 'Women Fighting Peatland Fire.'

the village premises, as close as possible to the houses. Meanwhile, her husband, like many other men in the village, was assigned to plant the seed in the forest.

Such conservation programs shared a typical logic that shaped the gendered value: they envisioned an ideal nuclear family member's gendered role be the model for forest management. The state and nonprofit-organisation-led conservation programs often established that their primary beneficiaries were household leaders. These external actors tend to perceive male household leaders as the most adequate to represent the entire family's aspirations, resulting in imbalanced power relations and further exclusion of women in the assigned environmental tasks. The results of our 2023 household survey on livelihoods and empowerment programs imply that this legacy persists. Of 401 households spanning four subdistricts—Mendawai, Pulau Hanaut, Jabiren, and Mantangai—only 27 respondents were women. We did not specify who should represent the household and let our interlocutors decide who might voice their responses. That jarring outcome reflected the continuation of male-preferred leadership norms within the domestic sphere. It further demonstrated that, despite the equal frequency of women and men accessing the forests as the survey suggest, locals perceived male family members to be the household decision-makers for their forest-dependent livelihoods. As highlighted by FPE scholars, in broader contexts, gendered power arrangements potentially alienate not only women, but those in marginalised positions, among others, widows and orphans, or households with various kinship compositions.[44] In such a context, supposedly inclusive programs might eventually exacerbate existing gendered power relations through shaping and narrowing decision-making processes within climate initiatives.

This gendered arrangement implemented in the enviro-development programs disregards the crucial contribution of Dayak women's labour in sustaining collective life. Once, long before the fire-ban regulation was enforced and criminalised, as recalled by Acil Anti, women in Mendawai nurtured the *baras pakat*–a local paddy (rice) variety suitable for their dry *ladang,* or swidden agriculture plot. She vividly remembered how the resulting ashes from the burning process nourished their soils with natural fertilizer at minimal expense. When they were blessed with decent harvests, the yield from their *ladang* fulfilled their staple food needs for a year. Whereas today, her family, as well as other households along the Katingan stream, rely heavily on rice supplies bought with their hard-earned money from Katingan 1 and 2 districts, the Javanese transmigration settlement. The recurring large-scale fires around them eventually exacerbate women's marginalisation. As they can no longer practice traditional fire use for agriculture, women are required input a greater amount of labour to sustain their double burden: managing poor agro-ecological conditions and performing familial care.[45]

This double burden, however, did not come out of a vacuum. It was partly a legacy of the three-decade-long New Order[46] regime's campaign to stipulate *peran ganda wanita*

[44] Nova Scorviana and Setiadi Setiadi, 'Strategi perempuan Dayak Ngaju dalam program Redd+ di Kalimantan Tengah,' *Jurnal Ilmiah Pendidikan Lingkungan dan Pembangunan* 19, no. 1 (2018), 15–16; Tyler and Fairbrother, 'Gender, Households, and Decision-making for Wildfire Safety'; Matos, et al., 'The Role of Gender in Mitigation'; Rocheleau et al., 'Feminist Political Ecology.'

[45] See Indirastuti, 'Women Fighting Peatland Fire.'

[46] The New Order refers to the political tenure of Indonesia's second president, Suharto. Between 1966 and 1998, his leadership was sustained through extractive developmentalism, crony politics, brute corruption, and cultural propaganda. See, for instance, Robert Cribb, 'New Order: Beyond the Colonial Comparison,' in

(women's dual roles*)* through countless government programs up to the village level, such as the Pembinaan Kesejahteraan Keluarga (Family Welfare and Empowerment Program) and the Dharma Wanita (an organisation for the wives of civil servants). Those two programs have narrowed women's political involvement by pressuring them to focus on domestic spheres and be their husbands' servants.[47] This state-sponsored gender ideology defined *kodrat wanita* (women's nature) with the infamous phrase *dapur, sumur, kasur* (kitchen, well, mattress) that is, to be in charge of the domestic and reproductive work.[48] The patriarchal nature of gender ideology led to further subordination of women in 'harmonious families' while glorifying male domination in the process.[49]

Figure 2. Two female casual workers departing for work in the palm oil plantation nearby.
Source: Photograph by Hanina N. Fadhila, 1 October 2023.

Apart from the state and NGOs, people in Central Kalimantan also interact intensively with the expanding palm oil plantations and, recently, with ecosystem restoration companies. Both entities shared a stake in preventing large-scale forest and land fires, in both concession and valuable restoration plots, respectively. Adhering to a community-driven approach, they initiate participatory-based programs to introduce alternative livelihood options and, more importantly, fire mitigation. Nevertheless, as Anne Larsonand her colleagues explain in their research on gender gaps in REDD+ implementation in Central Kalimantan, the supposedly 'participatory' intervention can be exclusionary in practice.[50] Our experience corroborates their findings. Company representatives or third-party operators (usually non-profit

Soeharto's New Order and Its Legacy: Essays in Honour of Harold Crouch, Vol. 2, ed. Edward Aspinall and Greg Fealy (ANU E Press, 2010).

[47] Julia Suryakusuma, *Ibuisme Negara: Konstruksi Sosial Keperempuanan Orde Baru* (Komunitas Bambu, 2011).

[48] Saskia Wieringa, 'Gender Harmony and the Happy Family: Islam, Gender and Sexuality in Post-Reformasi Indonesia,' *South East Asia Research* 23, no. 1 (2015), https://doi.org/10.5367/sear.2015.0244.

[49] Wieringa, 'Gender Harmony and the Happy Family,' 32.

[50] Anne Larson et al., 'Gender Gaps in REDD+: Women's Participation Is Not Enough,' in *Gender and Forests, Climate Change, Tenure, Value Chains and Emerging Issues,* ed. Carol Colfer, Bimbika and Marlène Elias (Routledge, 2016), https://doi.org/10.4324/978131566624.

organisations) commenced their programs through public meetings that, often, involved only village elite officials and male household leaders. Most of the time, public meetings were held at a time of the day when women were expected to be performing their domestic chores such as cooking, child-rearing, and housekeeping. Even when women are present in the room, they might not necessarily be able to voice their concerns as they would need a space that enabled them to speak even if they were shy or inarticulate—something many participatory initiatives did not pay attention to. In so doing, women were prevented from obtaining proper information, articulating their aspirations, and shaping the outcome of the initiatives to which they would be assigned. Ideally, participatory arrangements can be inclusive of women's involvement when done correctly and thoughtfully. However, as we have demonstrated, women are often excluded from such arrangements, whether in environmental conservation, company-led development programs, or broader initiatives.

The shades of hindrances to women's participation

Realising how the state and conservation initiatives reinforce gendered biases by prioritising masculine values is a crucial step in understanding women's exclusion within environmental governance. However, we should also be aware of layered experiences of such exclusion. Midway through our supper, Kak Yanti recounted her anguish over the haze crisis in 2015. Mostly, she regretted that she could not sunbathe Dika, her second-born son. It is something she believed essential for the first 1,000 days of his life. Having experienced fire multiple times, Kak Yanti reflected that as a Dayak woman, she had never had the chance to train herself in fire mitigation. The fact that their village head appointed her father, Haji Dulmajid, to the village disaster mitigation task force made it even more puzzling. While her father became knowledgeable about fire prevention and mitigation procedures, he never imparted such knowledge and skill to his daughter. She expressed her aspiration to participate in the fire operations after seeing a video depicting Hanina, a researcher of Fire Play, the only woman able to participate at the occurrence, albeit with limited access. Hanina's privilege as a university-educated outsider granted her inclusion. Meanwhile, for Kak Yanti and other women from Tumbang Bulan village, it was almost impossible to take part.

Kak Yanti works daily as a teacher in a kindergarten where Bu Eli was the principal. Bu Eli's husband works as a staff member in a non-profit environmental conservation organisation. One day, Bu Eli encountered thick haze near the national park zone on her way home after attending a meeting in Mendawai subdistrict. She then used lessons learnt from her husband to deal with and negotiate through the thick haze. Despite the fire and haze, she arrived home safely and later documented and reported the fire to the national park authority. Bu Eli was also an unofficial treasurer for the village fire brigades. She was particularly adept at fire mitigation. She can even tell the difference between *pembasahan (*peatland rewetting) and *pemadaman* (fire suppression), topics that are usually spoken of among fire brigade members only.

Kak Yanti and Bu Eli shared the same experience of prolonged fire episodes, yet their follow-up responses differed. Their stories show that the hindrance brought about by non-inclusion in fire prevention and mitigation efforts can materialise in varied forms and might be experienced differently.[51] Further, across our field sites, people were embracing the opportunity to take on paid conservation labour, including fire suppression. Within their firescapes where a declining environment is coupled with diminishing livelihood

[51] See González-Hidalgo and Iglesia, 'Trending Discourses and Silences'; Eriksen, *Gender and Wildfire.*

opportunities, being excluded from fire mitigation results in denied economic benefits. This overlap is precisely what Rocheleau and her colleagues envisioned with the intersectionality of gender, resource access, culture, and environmental crisis.[52] As such, we suggest that simply scrutinising masculine values present in conservation and fire mitigation is insufficient to bring about change unless we address the ways in which the exclusion of women contributes to their economic hardship in relation to gendered power relations. By observing state and conservation initiatives, as we discussed in previous sections, we can trace the ways patriarchal gender ideology, which permeates institutions and other external organisations, is reinforced by political actors across these organisations by their exercise of power in formulating development plans, choosing program beneficiaries, and, in the context of fire mitigation initiatives, determining who can and cannot participate and how.

To illustrate it better, let us turn to the story of Mama Rayhan. She was on her veranda, enjoying fried cassava after working long hours in the company-owned palm oil plantation nearby. She knew her husband would not come home that day, extending his working hours for firefighting activities for the same company. Despite familiarity with the peatland landscape through their everyday work in the palm oil plantation, palm oil managers never allowed female casual workers to participate in fire extinguishing operations. Both male and female casual workers received a daily wage of IDR 125,000 (about AUD 11.50). Nevertheless, male casual workers can multiply their daily wages threefold to IDR 375,000 (around AUD 34.50) by assisting palm oil companies to combat fires—a job that can last for days or even weeks. Thus, her male colleagues, and even a corporate pickup driver, were thriving economically when intense fires occurred in the plantation area. Conversely, Mama Rayhan and other female casual workers experiences a daily wage loss whenever an intense fire raged in the plantation, as their usual job that day would be cancelled.

Figure 3. A signpost placed on the top of the door to prohibit women from entering.
Source: Photograph by Hanina N. Fadhila, 1 November 2023.

Even when women are part of a formal conservation initiative, not every door is open for them. In an ecosystem restoration company, just above the door to the Protection Division's room, a paper signpost says just that (see Figure 3). The message was written in uppercase, underlined, and printed in a combination of bold red and black: 'PEREMPUAN!!! DILARANG KERAS MASUK KAMAR' (Women!!! are strictly prohibited from entering the room).

[52] Rocheleau et al., 'Gender and Environment,' 4.

The Protection Division is responsible for conducting weekly fire patrols and other field activities that require travel in and out of the forest. This division consists solely of male staff members. During a lunchtime interview one female staff member revealed that women are considered inappropriate for conducting fieldwork with their male colleagues, as they may spend days and nights in the forest. She was expressing almost exactly the local fire brigade's concerns that we recounted at the beginning of this article. According to observations in internal meetings, female staff members were mainly assigned to administrative work (logistic and inventory counting, program budgeting, financial reporting, and other office work). From such encounters, we can see how masculine values are evidently glorified in the daily implementation of forest conservation programs.

This female staff members' experience marks a different barrier to women's participation, to those discussed earlier. At first, we learned about Kak Yanti's disappointment compared to Ibu Eli's rare privilege of being included in the fire prevention group. Later, we learned that, despite her contributions, Bu Eli's involvement remained largely unrecognised by people around her. Despite her role as treasurer of the local fire brigade, she continued to be identified primarily as an Ibu Ngaji (religious teacher) and 'Pak Ali's wife'—labels that distanced her from her environmental labour. Meanwhile, Mama Rayhan's loss of firefighting and training opportunities reveals that such exclusion has not only been symbolic, but it also impacts negatively on her life chances. The encounters and exclusions faced by these women across various contexts illustrate layered, rather than singular, complex ostracism in relation to the overlapping of gender identity with other socio-political and economic factors.[53] These stories show a complex mix of conflicting external impacts which perpetuate gender ideology that reinforce women's exclusion in spite of increasing efforts to develop inclusive, participatory, community-driven fire mitigation programs, and broader conservation initiatives.[54]

Concluding remarks

As global temperatures rise incrementally, fires have become a constant feature of our world today, and scholars have begun to frame this era as the Pyrocene.[55] Multiple interventions across regions have been devised to tackle increasingly ferocious fires and mitigate future consequences. Indonesian fires have been part of such transnational conservation action-research since the late 1980s.[56] Nonetheless, most of this attention often sees fire-related issues as gender-neutral environmental problems, giving rise to universalising, formulaic, and normative approaches to fire prevention. Thus, even when the top-down repressive approach has shifted to a community-driven initiative, marginalised groups, such as Indigenous women, remain largely excluded.

[53] See Danielsson and Eriksson, 'Women's Invisible Work in Disaster Contexts'; see also Hanina Naura Fadhila, 'Kesesakan yang Gaib: Kisah Perempuan Dayak Ngaju dalam Navigasi Kebakaran Hutan dan Lahan' in *Umbara* 10, no. 2 (2025), 136.

[54] Alonso-Epelde et al., 'Climate Action from a Gender Perspective.'

[55] Pyne, *The Pyrocene.*

[56] Dennis, *A Review of Fire Projects in Indonesia.*

Focusing on women's roles in supposedly inclusive mitigation strategies, our research draws the fire near,[57] and highlights the incontrovertible fact that local fire governance is loaded with multiple dimensions and relational factors. Throughout the article, we have outlined the layered, consequential gendered exclusion experienced by Dayak women in fire mitigation, rendering them almost invisible and hindering their meaningful involvement, despite their environmental knowledge and labour. Even when they were able to take part in either conservation or corporation-led initiatives, often women were sidelined due to the patriarchal binary gender ideology that privileges male labour characterised as strong and more dependable. Such exclusionary practices discounted the fact that Dayak women work longer hours, starting earlier than men, performing domestic and care work before their income-generating labour—an arrangement that remains undervalued in the mainstream discussion of political economy.[58]

The FPE perspective helps us recognise that responses to environmental crises and human-nature relations are shaped by power, gender, class, race, and long-established socio-economic and cultural relations. For too long, fire mitigation and other climate initiatives have relied on so-called participatory mechanisms and women's inclusiveness. By showing the unequal gender relations and exclusionary treatments in fire governance, this article has revealed both the persistence and transformation of such a normative approach in practice and thus urges us to think about what meaningful participation would look like, while furthering equitable and inclusive fire and climate initiatives for the future.

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[57] The inspiration came from the phrase 'to draw the sea near,' characterising the proximate features of reef conservation in Japan that encompass haptic, sensorial, as well as multi-dimensional realities. See C. Anne Claus, *Drawing the Sea Near: Satoumi and Coral Reef Conservation in Okinawa* (University of Minnesota Press, 2020), 11–12.

[58] Christine Bauhardt, 'Nature, care, gender' in *Feminist Political Ecology and the Economics of Care,* ed. Christine Bauhardt and Wendy Hardcourt (Routledge, 2018), 20, https://doi.org/10.4324/9781315648743.

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