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Beyond Victimhood: Gendering Climate Resilience in Indonesia through Feminist Participatory Action Research

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Abstract

This paper examines how gendered power relations shape climate resilience. Universalist approaches have predominantly framed climate change adaptation and resilience as technical issues, neglecting the deeply political and gendered dimensions of environmental decision-making. The discourse of victimhood that portrays women as vulnerable subjects in climate crisis narratives undermines women's agency, obscures the structural inequalities that limit their access to resources, and erases their leadership roles in grassroots climate adaptation. Using feminist participatory action research (FPAR) with three women's climate organisations in Kupang, Poso, and Yogyakarta, our paper moves beyond critiques of dominant approaches and towards the documentation of alternative lived practices of resilience and collective action in responding to environmental precarity. Our findings demonstrate that women-led groups employ diverse, contextually grounded adaptation approaches, reflecting localised resilience in diverse socioecological conditions. Despite varying intensities of climate impacts, from agrarian distress in rural areas to urban resource scarcity, gendered collective solidarity serves as a cohesive force in these initiatives, fostering innovative solutions such as community-based farming, disaster preparedness networks, and advocacy for policy reform.

Keywords. gender, climate justice, Feminist Participatory Action Research, grassroots activism, adaptation strategies

Introduction

Climate change adaptation and resilience have predominantly been framed through universalist and technocentric reductionist approaches.[1] Such approaches prefer one-size-fits-all models and tech-savvy solutions to climate issues, often neglecting to consider their relevance to specific localities, unique needs and diverse knowledges.[2] Greg Bankoff argues that key concepts in climate change, such as 'resilience' and 'adaptation' remain culturally specific to western perspectives.[3] As a result, dominant climate policy interventions and discourses construct climate as something external that can be measured, controlled, and understood rationally[4] rather than embedded within a socio-ecological relationship that is intertwined with power, culture, and lived experiences.[5] For instance, the Food Estate project in Indonesia exemplifies a top-down climate policy intervention by framing food security as an external technical problem that can be solved through large-scale land conversion and monoculture engineering projects managed by the state and military forces.[6] The project demonstrates how power dynamics determine who gets to define 'resilience' and who bears the cost. Such large-scale top-down solutions based on one-size-fits-all models not only ignore the cultural and socio-ecological embeddedness of the land and disregard Indigenous knowledge but also widen the already existing inequalities on the ground. The dominant approach in climate resilience neglects the deeply political and gendered dimensions of environmental impacts and decision making.[7]

Feminist political ecologists have advocated for more diverse and alternative models of climate resilience.[8] These scholars argue that while women are often portrayed as

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[1] Charles Amo-Agyemang, 'Decolonising the discourse on resilience,' *International Journal of African Renaissance Studies - Multi-, Inter- and Transdisciplinarity* 16, no. 1 (2021), https://doi.org/10.1080/18186874.2021.1962725; Eric Chu et al., 'Inclusive approaches to urban climate adaptation planning and implementation in the Global South,' *Climate Policy* 16, no. 3 (2016), https://doi.org/10.1080/14693062.2015.1019822. Sakhiyya et al., "Competing climate imaginaries: the cultural political economy of climate change in Indonesia." *Critical Policy Studies*, 1-22 (2026).

[2] Justin See et al., 'From absences to emergences: foregrounding traditional and Indigenous climate change adaptation knowledges and practices from Fiji, Vietnam and the Philippines,' *World Development* 176 (April 2024), https://doi.org/10.1016/j.worlddev.2023.106503.

[3] Greg Bankoff. 'Remaking the world in our own image: vulnerability, resilience and adaptation as historical discourses.' *Disasters* 43, no. 2 (2019), https://doi.org/10.1111/disa.12312.

[4] Bankoff, 'Remaking the World in Our Own Image'; See et al., 'From Absences to Emergences.'

[5] Christine Bauhardt, 'Solutions to the crisis? The green new deal, degrowth, and the solidarity economy: alternatives to the capitalist growth economy from an ecofeminist economics perspective,' *Ecological Economics* 102 (June 2014), https://doi.org/10.1016/j.ecolecon.2014.03.015; Nitya Rao et al., 'Gendered vulnerabilities to climate change: insights from the semi-arid regions of Africa and Asia,' *Climate and Development* 11, no. 1 (2019), https://doi.org/10.1080/17565529.2017.1372266.

[6] Fuad Abdulgani and Laksmi Adriani Savitri, 'State, capital and coercion in Indonesia's food estates,' *Journal of Agrarian Change* 25, no. 4 (2025), https://doi.org/10.1111/joac.70031; Afiff, Suraya, 'Soeharto's Legacies in Jokowi's Food Security Plans,' *Melbourne Asia Review*, 17 November 2020, https://melbourneasiareview.edu.au/soehartos-legacies-in-jokowis-food-security-plans/.

[7] Sharlene Mollett, 'Environmental struggles are feminist struggles: feminist political ecology as development critique,' in *Feminist Spaces: Gender and Geography in a Global Context*, ed. Ann Oberhauser et al., (Routledge, 2017).

[8] Christine Bauhardt and Wendy Harcourt, *Feminist Political Ecology and the Economics of Care: In Search of Economic Alternatives* (Routledge, 2019), https://doi.org/10.4324/9781315648743.

vulnerable subjects in climate crisis narratives, given their heightened risks of disaster-related mortality, sexual violence, and exploitation, such framings obscure the structural inequalities that limit their access to resources and decision-making power.[9] More critically, the discourse of victimhood undermines the recognition of women's agency, erasing their leadership in grassroots climate adaptation and mitigation efforts.[10]

Indonesia provides a fascinating setting from which to enhance the discussion between climate resilience and gender relations due to its gendered ecological profile, where it is argued women bear disproportionate climate impacts while leading innovative solutions.[11] As the world's largest archipelagic nation with the third-largest tropical forests, Indonesia has seen forest cover plummet from 65 per cent to 49 per cent between 1990 and 2020, destroying ecosystems that rural women depend on for food and medicine while exposing them to climate disasters like floods and crop failures.[12] Yet Indonesian women are pioneering climate resilience.[13] Journalists and scholars have documented much climate activism led by women, from Mama Aleta's weaving protests against marble mining in East Timor[14] to Wadon Wadas, women activists in Wadas Lintang, Central Java leading resistance against massive andesite mining,[15] despite death threats, intimidation and violence against their activism. These examples illustrate that women's environmental activism in Indonesia is neither novel nor incidental but constitutes a sustained tradition of resistance and resilience.

This study draws on data from a larger feminist participatory action research (FPAR) project conducted between October 2023 and August 2024 in partnership with three women's climate organisations: Mosintuwu Institute in Poso (Central Sulawesi), Jaringan Perempuan Indonesia Timur in Kupang (East Nusa Tenggara), and Solidaritas Perempuan Kinasih in Yogyakarta (Central Java). These partner organisations are grassroots activist groups with experience supporting communities in responding to intersecting crises, including gender-based violence, political instability, and climate-related challenges. By documenting how women's climate advocacy networks at the grassroots level in three regions in Indonesia, that is Poso, Kupang, and Yogyakarta, we seek to diversify and enrich

[9] Lucy Jarosz, 'Nourishing women: toward a feminist political ecology of community supported agriculture in the United States,' *Gender, Place & Culture* 18, no. 3 (2011), https://doi.org/10.1080/0966369X.2011.565871; Rao et al., 'Gendered Vulnerabilities to Climate Change.'

[10] Dianne Rocheleau et al., *Feminist Political Ecology: Global Issues and Local Experience* (Routledge, 2013).

[11] Andi Misbahul Pratiwi, 'How Women's Environmental Action Across the Global South Can Create a Better Planet,' *The Conversation*, 19 December 2023, https://theconversation.com/how-womens-environmental-action-across-the-global-south-can-create-a-better-planet-214083; Zulfa Sakhiyya et al., 'Locally grown seeds, natural fertilizer, and *pranata mangsa*: women farmers practicing sustainable agriculture while contesting the green revolution in Indonesia,' *Asian Journal of Women's Studies* 31, no. 1 (2025), https://doi.org/10.1080/12259276.2025.2465003.

[12] Ernoiz Antriyandarti et al., 'The dual role of women in food security and agriculture in responding to climate change: empirical evidence from rural Java,' *Environmental Challenges* 14 (January 2024), https://doi.org/10.1016/j.envc.2024.100852.

[13] Pratiwi, 'How Women's Environmental Action.'

[14] Mohammad Guntur Romli, 'Aleta Baun: Perempuan yang Menyusui Batu dan Mengasuh Tanah,' *Jurnal Perempuan*, January 2008. https://www.jurnalperempuan.org/tokoh-feminis/aleta-baun-perempuan-yang-menyusui-batu-dan-mengasuh-tanah.

[15] Bambang Muryanto, 'Wadon Wadas Menjaga Alam untuk Anak Cucu,' *Project Multatuli*, 15 November 2021. https://projectmultatuli.org/wadon-wadas-menjaga-alam-untuk-anak-cucu/.

the current literature on the diverse interpretations and practices of climate resilience. Indonesia's ecological specificities and gender dynamics have lent nuance to the contemporary ecological struggle. The question guiding this study is: What alternative understandings can be generated from Indonesian contexts to give new meanings to climate resilience, which is locally grounded? Following Sharlene Mollett's argument that 'environmental struggles are feminist struggles,' we centre women's innovative strategies and collective action in responding to environmental precarity.[16] Our study joins contemporary scholarship in feminist political ecology to explore how women-led groups employ diverse, contextually grounded adaptation approaches, reflecting localised resilience and socioecological conditions.[17] In doing so, we respond to calls within feminist political ecology to move beyond critiques of dominant approaches and toward the documentation of alternative, lived practices of resilience that emerge from the margins.

This paper begins with the historical trajectories and landscape of women's ecological movement in Indonesia. We then present an overview of relevant literature and seek to contribute to three areas of research: climate resilience, feminist political ecology and feminist participatory action research. The methodology section describes how we applied feminist participatory action research in our current study. Attempts to consider climate resilience from a gender perspective are important to challenge the highly dominant, universalist, technocentric approaches to climate resilience.

Climate change and women's movements in Indonesia

Women bear a heavier burden than men when dealing with the impacts of climate change.[18] In the Global South, the impacts often lead to violence[19] due to unequal gender relations driven by a patriarchal capitalist economy[20] embedded in daily roles and activities. Climate change is not foreign to women because they interact with and manage the environment on a daily basis, from fetching water to farming.[21] While frequently perceived as victims and excluded from decision-making on climate change, studying women's resilience, strategies, and coping mechanisms is crucial in climate change adaptation and resilience, enabling them to take control of their roles and use their knowledge to develop solutions to climate change.

In the case of Indonesia, climate change adaptation has been linked with inadequate policy coordination among government agencies and inadequate capacity building at the local level.[22] However, we know from histories of environmental struggles that Indigenous

[16] Mollett, 'Environmental Struggles Are Feminist Struggles,' 155.

[17] Bauhardt and Harcourt, *Feminist Political Ecology*.

[18] Pratiwi, 'How Women's Environmental Action.'

[19] Amanda Ross et al., 'A mediation analysis of the linkages between climate variability, water insecurity, and interpersonal violence,' *Climate and Development* 16, no. 2 (2023), https://doi.org/10.1080/17565529.2023.2186746.

[20] Naomi Joy Godden et al., 'Feminist participatory action research as a tool for climate justice,' *Gender & Development* 28, no. 3 (2020), https://doi.org/10.1080/13552074.2020.1842040.

[21] Japhet Ringo and Okey Costantine, 'Women's coping and adaptation strategies to climate change: a case of the Dodoma Region,' *South African Geographical Journal* 107, no. 3 (2025).

[22] Rahayu Yoseph-Paulus and Richard Hindmarsh, 'Addressing inadequacies of sectoral coordination and local capacity building in Indonesia for effective climate change adaptation,' *Climate and Development* 10, no. 1 (2016), https://doi.org/10.1080/17565529.2016.1184609.

communities frequently lead protests against large-scale environmental destruction resulting from the exploitation of natural resources. This is despite the risks of violence they face due to the shared interests between the oligarchs and the state.[23] Women's organisations have been instrumental in challenging the oppressive system that devastated the natural environment upon which local communities depend for their livelihoods.[24]

Historically speaking, women's movement in Indonesia began early, even before the country's independence in 1945. Ideas proposed by Kartini[25] and other female advocates for women's rights, inspired women to be involved in the Indonesian national movement.[26] As Kumari Jayawardena has noted, feminist struggles in the Third World during the late nineteenth and twentieth centuries were rooted in the locally grounded sociocultural environment, rather than in western ideas.[27] Women across the archipelago have played pivotal roles in challenging the systems that destroyed the natural environment which many families and communities relied on. *Wadon Wadas* in Central Java has been protesting quarry mining to build a dam since 2021.[28] Due to constant intimidation and violence from military personnel and authorities,[29] many local people in *Wadas* agreed to sell their lands and receive compensation. Although its membership has been declining, *Wadon Wadas* has remained consistent in its resistance by encouraging and working with young people to develop local livestock farming and agriculture.

In East Nusa Tenggara, Aleta Baun, an Indigenous Mollo woman, organised hundreds of people in her village to peacefully protest against marble mining by weaving at the mine site. She was awarded the Goldman Environmental Prize in 2013 and established the Mama Aleta Fund (MAF) in 2017,[30] using the prize money as the endowment fund. The organisation's work focuses on protecting forests, land, and air by implementing environmentally friendly

[23] Suhadi Cholil and Lyn Parker, 'Environmental Education and Eco-Theology: Insights from Franciscan Schools in Indonesia,' *Environmental Education Research* 27, no. 12 (2021), https://doi.org/10.1080/13504622.2021.1968349.

[24] Pratiwi, 'How Women's Environmental Action.'

[25] Raden Adjeng Kartini (1879–1904) is Indonesia's national icon of women's emancipation and empowerment. Her letters, published as *Habis Gelap Terbitlah Terang*, championed girls' education and challenged Javanese patriarchal norms. Recent scholarship nuances her legacy. Muhammad Yuanda Zara (2025) analyses how Indonesia's early independent commemorations of Kartini Day (1946–1949) mobilised her symbolic figure to promote women's participation in nation-state building, while Indah Pratidina and Rouli Pasaribu (2023) examine the anguished inner struggles and silent suffering behind her public image in biographical films.

[26] Muhammad Yuanda Zara, 'Women, war and nation-state building: the commemorations of Kartini Day in the newly independent Indonesia (1946–1949).' *Women's History Review* 34, no. 3 (2025), https://doi.org/10.1080/09612025.2024.2370703.

[27] Kumari Jayawardena, *Feminism and Nationalism in the Third World* (Zed Books Ltd., 1994).

[28] Muryanto, 'Wadon Wadas Menjaga Alam.'

[29] Toto Sudiarjo, 'Nestapa Setelah Ada Tambang, Generasi Wadas Bertahan dan Berdaya,' *Mongabay*, 18 January 2025. https://mongabay.co.id/2025/01/18/nestapa-setelah-ada-tambang-generasi-wadas-bertahan-dan-berdaya/.

[30] Putri Purnama Sari, 'Mama Aleta Baun, Pejuang Perempuan Penjaga Lingkungan Nan Inspiratif,' *Metro TV*, 13 August 2025, https://www.metrotvnews.com/read/b1oCVpD0-mama-aleta-baun-pejuang-perempuan-penjaga-lingkungan-nan-inspiratif.

agricultural practices and natural weaving.[31] In Yogyakarta, *Kelompok Petani Karisma* (literally translated as Karisma Farmers Group) practised sustainable agriculture by planting local seeds to challenge the top-down agricultural regulations that had made them dependent on hybrid seeds and degraded biodiversity and ecosystems.[32] Most activities conducted by these women's organisations focus on agricultural adaptation and employ a community-based approach.

Climate resilience, feminist political ecology, and feminist participatory action research

In this study we contribute to the literature on three areas of research: climate resilience, feminist political ecology and feminist participatory action research. Climate resilience is not merely the capacity to prepare for, absorb, recover from, and adapt to the impacts of climate change. It is a critical transformative process that questions how societies confront structural vulnerabilities and power imbalances that magnify climate risks.[33] Resilience demands a rethinking of development priorities, infrastructure planning, and social equity to reduce the root causes of climate impacts. This means addressing unequal access to resources, challenging policies that prioritise short-term economic gains over long-term sustainability and integrating justice into adaptation strategies.[34]

The concept of adaptation is frequently paired with efforts to build resilience, yet it carries its own set of theoretical tensions and political implications. Adaptation refers to the adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli, with the aim of moderating harm or exploiting beneficial opportunities.[35] However, adaptation is not a neutral or purely technical process; it is embedded in existing power structures that shape whose knowledge is valued, whose needs are prioritised, and who bears the costs of and benefits from adaptive measures.[36] When adaptation policies emphasise technocratic solutions without addressing underlying inequalities, they risk reproducing or even deepening the very vulnerabilities they mean to alleviate.

Both terms, 'adaptation' and 'resilience,' are rooted in western, modernist, and technocentric frameworks, emphasising the ability of systems to adjust to and recover from environmental changes.[37] These concepts have been largely shaped by ideas of individual and collective self-reliance, promoting technological fixes and state-led interventions as solutions to climate impacts. Such perspectives, however, are often disconnected from the experiences

[31] Sapariah Saturi, 'Mama Aleta: Berjuang Mempertahankan Lingkungan, Melawan Tambang dengan Menenun,' *Mongabay*, 15 April 2013, https://mongabay.co.id/2013/04/15/mama-aleta-berjuang-mempertahankan-lingkungan-melawan-tambang-dengan-menenun/.

[32] Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

[33] W. Neil Adger, 'Social and ecological resilience: are they related?' *Progress in Human Geography* 24, no. 3 (2000), https://doi.org/10.1191/030913200701540465.

[34] Carl Folke, 'Resilience: the emergence of a perspective for social–ecological systems analyses,' *Global Environmental Change* 16, no. 3 (2006), https://doi.org/10.1016/j.gloenvcha.2006.04.002.

[35] Mark Pelling, Karen O'Brien, and David Matyas. 'Adaptation and transformation.' *Climatic Change* 133 (December 2015), https://doi.org/10.1007/s10584-014-1303-0.

[36] Bankoff, 'Remaking the World in Our Own Image'; David Chandler, 'Resilience and the end(s) of the politics of adaptation,' *Resilience* 7, no. 3 (2019), https://doi.org/10.1080/21693293.2019.1605660.

[37] Bankoff, 'Remaking the World in Our Own Image.'

and knowledge systems of communities in the Global South, where resilience is seen as a more collective, community-centred, and ecologically integrated process.

In linking these ideas together, it becomes clear that adaptation and resilience are crucial to addressing climate change, but their conceptualisation within western modernist frameworks can be limiting. These frameworks often reduce climate challenges to problems of technological or infrastructural adaptation, side-lining the diverse, context-specific knowledge systems that have shaped how different cultures approach environmental change.[38] A more holistic and just approach to climate resilience would integrate Indigenous knowledge, local practices, and community-driven solutions with modern scientific and technological innovations.[39] It would also acknowledge the historical and cultural specificities of resilience, moving beyond technocratic solutions to embrace transformative and equitable climate adaptation.

The second area of research is Feminist Political Ecology (FPE), which actively redefines the relationship between gender, power, and the environment. FPE highlights women's agency and attempts to move beyond ideas which essentialise women as naturally closer to nature than men. It builds on an earlier ecofeminism approach which linked women's oppression to patriarchal, capitalist, and colonial systems and exposed women's heightened vulnerability to climate change, particularly in the Global South.[40] Its limitations, however, lie in portraying women as passive victims rather than as active political and ecological agents.[41] FPE, in contrast, asserts women's active roles in shaping environmental outcomes through their labour, skills, and ecological knowledge.[42] Focusing on women's agency, FPE positions women as agents of ecological transformation, engaging critically with gendered division of labour, property rights, and knowledge systems to influence environmental governance and sustainability.[43] It interrogates the material and political dimensions of everyday gender-environment interactions,[44] and exposes how gender, class, and power relations structure access to resources, decision-making, and sustainability

[38] W. Neil Adger, Jon Barnett, Katrina Brown, Nadine Marshall, and Karen O'Brien. 'Cultural dimensions of climate change impacts and adaptation,' *Nature Climate Change* 3, no. 2 (2013), https://doi.org/10.1038/nclimate1666; Emilie S. Cameron, 'Securing Indigenous politics: a critique of the vulnerability and adaptation approach to the human dimensions of climate change in the Canadian Arctic,' *Global Environmental Change* 22, no. 1 (2012), https://doi.org/10.1016/j.gloenvcha.2011.11.004; Petra Tschakert, Bob van Oort, Asuncion Lera St. Clair, and Armando LaMadrid, 'Inequality and transformation analyses: a complementary lens for addressing vulnerability to climate change,' *Climate and Development* 5, no. 4 (2013), https://doi.org/10.1080/17565529.2013.828583.

[39] James D. Ford et al., 'Including Indigenous knowledge and experience in IPCC assessment reports,' *Nature Climate Change* 6 (2016), https://doi.org/10.1038/nclimate2954; Nelson Chanza and Anton de Wit, 'Enhancing climate governance through Indigenous knowledge: case in sustainability science,' *South African Journal of Science* 112, nos 3/4 (2016), https://doi.org/10.17159/sajs.2016/20140286.

[40] Maria Mies and Vandana Shiva. *Ecofeminism* (Bloomsbury Publishing, 2014).

[41] Maria Mies and Vandana Shiva. *Ecofeminism* (Kali for Women, 1993).

[42] Jarosz, 'Nourishing women.'

[43] Elisabeth Frank et al., 'A systematic review of peer-reviewed gender literature in sustainability science,' *Sustainability Science* 19 (June 2024), https://doi.org/10.1007/s11625-024-01514-5; Inayat Ullah Wani et al., 'Ecofeminism or techno-centrism? Analysing the gender-environment concoction in the Anthropocene: a study of OECD countries,' *Environmental Science and Pollution Research* 30 (October 2023), https://doi.org/10.1007/s11356-023-30598-2.

[44] Frank et al., 'A systematic review of peer-reviewed gender literature.'

practices.[45] For example, FPE critiques the Green Revolution policy for advancing capital-intensive technologies that sidelined women's ecological knowledge while simultaneously documenting how women sustain and innovate local farming systems.[46] Andrea Nightingale argues that FPE does not merely analyse inequalities; rather, it actively maps how power relations shift within collective action and natural resource governance.[47] FPE enables researchers to connect the lived experiences of women to broader socio-economic and ecological transformations, showing how socio-political relations, cultural practices, and ecological conditions are co-produced in rapidly changing contexts.[48]

The third area of research is Feminist-Participatory Action Research (FPAR), a methodology that records women's lived experiences and engages with their collective efforts in order to strengthen their activism and advocacy in climate crisis-related issues.[49] FPAR shares with Participatory Action Research (PAR) which aims to work collaboratively with communities throughout the research process, from formulating research questions and designing methods to analysing data and determining dissemination strategies.[50] However, FPAR is distinguished by centring feminist concerns: it attends explicitly to gendered power relations, prioritises the knowledge and leadership of women, particularly those from marginalised communities, and seeks to transform the structural inequalities that shape women's experiences of and responses to crises.[51] FPAR positions women not merely as participants or informants but as co-researchers who participate in setting the research agenda, collecting and analysing data, and making decisions about how to act upon findings.[52] This stands in contrast to research designs that consult communities only at specific moments, such as during data collection, while retaining control over research questions, analysis, and outputs in the hands of academic researchers. In FPAR, the distinction between 'researcher' and 'researched' is blurred; experiential expertise is valued equally with scholarly expertise, and knowledge production is understood as a collective, dialogical process.[53]

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[45]Bauhardt, 'Solutions to the crisis'; Mollett, 'Environmental Struggles Are Feminist Struggles.'

[46] Mies and Shiva, *Ecofeminism*; Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

[47] Andrea J. Nightingale, 'Nature–society and development: social, cultural and ecological change in Nepal,' *Geoforum* 34, no. 4 (2003), https://doi.org/10.1016/S0016-7185(03)00026-5.

[48] Floriane Clement et al., 'Feminist political ecologies of the commons and communing,' *International Journal of the Commons* 13, no. 1 (2019), https://doi.org/10.18352/ijc.972; Stephanie Leder et al., Ambivalences of collective farming: feminist political ecologies from the Eastern Gangetic Plains,' *International Journal of the Commons* 13, no. 1 (2019), https://doi.org/10.18352/ijc.917; Nightingale, 'Nature-society and development'; Farhana Sultana, 'Suffering for water, suffering from water: emotional geographies of resource access, control and conflict,' *Geoforum* 42, no. 2 (2011): 163–72. https://doi.org/10.1016/j.geoforum.2010.12.002.

[49] Irene Dankelman and Kavita Naidu, 'Introduction: gender, development, and the climate crisis,' *Gender & Development* 28, no. 3 (2020), https://doi.org/10.1080/13552074.2020.1843830; Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice.'

[50] Hal A. Lawson et al., *Participatory action research* (Oxford University Press, 2015).

[51] Trimita Chakma, 'Feminist participatory action research (FPAR): an effective framework for empowering grassroots women & strengthening feminist movements in Asia Pacific,' *Asian Journal of Women's Studies* 22, no. 2 (2016), https://doi.org/10.1080/12259276.2016.1168153; Rao et al., 'Gendered Vulnerabilities to Climate Change.'

[52] Asia Pacific Forum on Women, Law and Development (APWLD), 'Feminist Participatory Action Research,' 2020, https://apwld.org/feminist-participatory-action-research-fpar/.

[53] Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice.'

As an action-oriented methodology, FPAR not only contributes to addressing the gendered impacts of social problems such as climate injustice but also generates context-specific knowledge to inform policy.[54] In the context of this study, we draw on FPAR to argue for a conceptualisation of gendered climate resilience that emerges from the lived experiences and collective strategies of women at the grassroots. Our FPAR approach meant that our partner organisations were involved from the outset. They were involved in shaping the research questions, co-designing the workshop methodologies, participating in data generation and analysis, and using the findings for advocacy and movement building. The workshops described in this paper were therefore not sites where participants simply provided data to academic researchers; rather, they were spaces of collective inquiry where women analysed their own experiences, identified shared concerns, and developed strategies for action. In our case, these strategies have since been taken up in ongoing community organising and policy engagement, as documented in our findings below.

FPAR as a research method

This study employs feminist participatory action research (FPAR) with three women's climate organisations: Mosintuwu Institute in Poso (Central Sulawesi), Jaringan Perempuan Indonesia Timur in Kupang (East Nusa Tenggara), and Solidaritas Perempuan Kinasih in Yogyakarta (Central Java). As advocated by feminist theorists,[55] FPAR is 'a useful methodology for grassroots feminist climate justice activists to collectively document lived experiences of climate change and strengthen women's movements to engage in strategic activism and advocacy for rights-based policy change.' [56] In keeping with FPAR's ethos of collaborative and action-oriented research, this study positions our partner organisations not as subjects of research but as co-researchers and knowledge producers whose experiential expertise shapes every stage of the inquiry.[57] During the initial kick-off meeting for this project, it was our partners who proposed the shift from the originally planned participatory action research (PAR) framework to a feminist PAR approach, initiating a collaborative process in which they co-created the research instruments and actively shaped the processes of data collection and analysis.

The three locations (Figure 1) were selected intentionally to capture the diverse ecological and socio-cultural dimensions of climate change across the Indonesian Archipelago. Poso in Central Sulawesi represents a post-conflict region where climate vulnerabilities intersect with questions of food sovereignty and community reconciliation. Kupang in East Nusa Tenggara was chosen for its massive land use changes, where deforestation has paved the way for large-scale food estate projects and mining operations, impacting on the landscape and the livelihoods of local communities. Kulon Progo,

[54] Ellen Johannesen, 'Advancing gender equality in international ocean science: participatory approaches for institutional actions.' *Marine Policy* 171 (January 2025), https://doi.org/10.1016/j.marpol.2024.106421.

[55] Chakma, 'Feminist participatory action research (FPAR)'; Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice'; Colleen Reid et al., 'Finding the "action" in feminist participatory action research,' *Action Research* 4, no. 3 (2006), https://doi.org/10.1177/1476750306066.

[56] Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice', 593.

[57] APWLD, 'Feminist Participatory Action Research'; Clare E.B. Cannon, 'A feminist community-based participatory action research approach to advance climate justice,' *International Journal of Disaster Risk Reduction* 126 (August 2025), https://doi.org/10.1016/j.ijdrr.2025.105631; Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice.'

Yogyakarta, offers insights into the rural agricultural practices and the ways women farmers resisted the Green Revolution policy.[58] Together, these sites enable a comparative understanding of how climate change manifests differently across coastal, agricultural and post-conflict regions, and how women's organisations in each context develop locally specific responses to environmental degradation and land use issues.

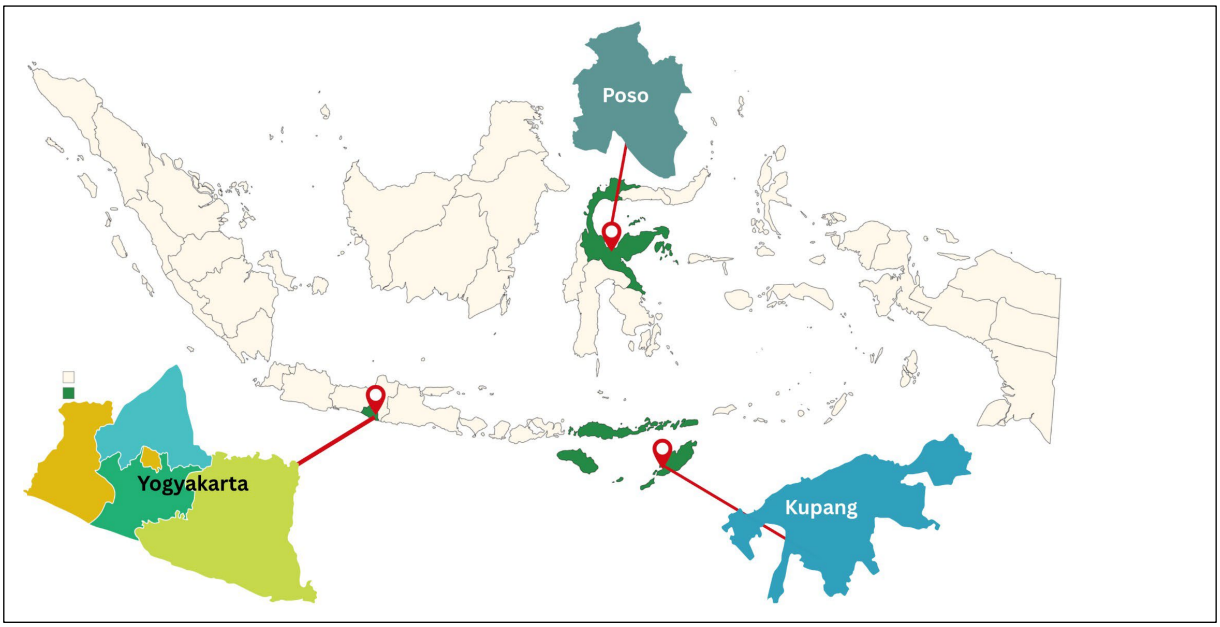

Figure 1. Feminist Participatory Action Research in Kupang, Poso, and Yogyakarta
Source. Google, n.d. 'Google map of Indonesia.' Retrieved 14 July 2024, from https://maps.app.goo.gl/Ep4PdygzTtW6wzMc8
Google, n.d. 'Google map of Kupang, East Nusa Tenggara, Indonesia.' Retrieved July 14, 2024, from https://maps.app.goo.gl/mgzH3Cj5cgVSVJ8CA
Google, n.d. 'Google map of Poso Regency, Central Sulawesi, Indonesia.' Retrieved July 14, 2024, from https://maps.app.goo.gl/32P1YofQHozjmcsr6
Google, n.d. 'Google map of Yogyakarta, Special Region of Yogyakarta, Indonesia.' Retrieved July 14, 2024, from https://maps.app.goo.gl/RW8QvHS2A2yJYshS9.
Maps are combined and edited by the contributors using Canva, 14 July 2024.

Organised by our partner organisations, workshops on climate change and its impacts on women were conducted to deepen understanding of climate change in different localities. Workshop participants were recruited purposely by each partner organisation through their established networks of women activists, farmers, and community leaders. The participants were predominantly women from grassroots communities who have direct, lived experience of the impacts of climate change in their daily lives. In Poso, participants included women smallholder farmers and members of community kitchen collectives; in Kupang, participants comprised local farmers and weavers affected by land conversion for food estates and mining operations, along with both female and male activists from local networks; in Yogyakarta, participants were drawn from the women farmers group called 'Karisma.' A total of 75 women participated across the three workshop locations, with each workshop involving approximately 25 participants. This recruitment strategy ensured that the voices and knowledge generated were firmly grounded in the lived realities of those most affected by

[58] Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

climate change, while also leveraging the trust and access that partner organisations have cultivated over years of community work.

The workshops conducted in each location were not one-off events, but they formed a central component of a larger, multi-phase FPAR project designed to map, document, and strengthen grassroots women's climate activism across Indonesia. Prior to the workshops, our partner organisations collaborated with the research team to conduct a preliminary survey, mapping the landscape of climate activism undertaken by grassroots women's groups in their respective regions. This survey phase aimed to identify existing initiatives, document local knowledge about climate impacts, and assess the specific needs and priorities of communities already engaged in climate-related advocacy and adaptation work that were documented in the microsite, a dedicated digital platform that catalogues local climate initiatives and community knowledge from our survey. The findings from this mapping exercise directly informed the design and focus of each location-specific workshop, ensuring that the discussions and activities were grounded in the actual experiences and struggles of participating communities.

Workshop participants engaged in discussions on various relevant issues, ranging from temperature changes and unpredictable rainfall to gender discrimination and adaptation strategies. Each workshop and instrument was uniquely tailored to its location. For example, Mosintuwu Institute's 2024 workshop in Poso, entitled 'Politik Meja Makan' (The Politics of the Dining Table), focused on local food and food security. It aimed to educate our palates on reviving traditional foods as an alternative to imported and instant options, which generate higher carbon emissions. In Kupang, a direct outcome of the workshop was the establishment of a new climate advocacy network led by Solidaritas Perempuan Flobamoratas. This coalition aims to amplify efforts to address climate change across East Nusa Tenggara. Solidaritas Perempuan Kinasih in Yogyakarta assisted the women farmers group 'Karisma' in sustainable agriculture.[59] These location-specific workshops were designed not merely as data collection sites, but as spaces for collective reflection, knowledge co-production, and movement-building, in keeping with the principles of FPAR.

Following the workshops, the research entered a post-workshop phase where partner organisations continued to collaborate with communities to translate workshop discussions into tangible actions and responses to climate change.[60] This phase included ongoing technical assistance, advocacy support, and the strengthening of local networks. For example, the Mosintuwu Institute continued to support community kitchen collectives in Poso in their efforts to revive traditional food practices; in Kupang, partner organisations assisted communities in advocating against land grabbing and deforestation linked to food estate and mining projects; and Solidaritas Perempuan Kinasih in Yogyakarta provided sustained mentoring to the women farmers' group 'Karisma' in sustainable agricultural techniques. This engagement is central to FPAR's commitment to research that generates meaningful, lasting change for participating communities rather than extractive, one-off data collection.[61]

[59] Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

[60] Godden et al., 'Feminist Participatory Action Research as a Tool for Climate Justice.'

[61] Cannon, 'A feminist community-based participatory action research.'

Findings

Our FPAR reveals three critical insights into alternative constructions of climate resilience as practised and advocated by women's grassroots climate organisations. They are reviving local foods, practising sustainable agriculture, and weaving new networks. These insights highlight the importance of localities and gendered perspectives on climate resilience. It should be noted that the resilience that these women have practised is a result of the need to survive daily on the ground, rather than a choice they make as ultimately, they have no choice. This grounded resilience represents women's strength and agency at the grassroots level, developed through navigating and overcoming the complex challenges embedded in their everyday lives, and magnified by climate change.

These findings resonate strongly with Feminist Political Ecology (FPE), which emphasises how environmental knowledge, resource access, and vulnerability are deeply gendered and shaped by power relations.[62] Rather than treating resilience as a neutral technical capacity, our FPAR shows that resilience is socially differentiated and politically negotiated. Women's everyday practices, like cultivating local food and sustaining ecological knowledge, constitute forms of environmental governance that are often invisible in mainstream climate policy. In this sense, resilience is not merely adaptive capacity, but a gendered political practice embedded in struggles over identity, recognition, and control over sources. It also underscores why a gender-blind approach to climate resilience risks exacerbating vulnerabilities and entrenching gender inequalities.[63]

What emerges from our analysis is what Elinor Ostrom conceptualised as 'resilience-as-commoning' where governing common pool resources is a collective practice through which communities manage shared resources through negotiated rules, mutual trust, and sustained cooperation.[64] She argues that communities are capable of developing durable grassroots arrangements to govern commons without relying solely on state or market mechanisms.[65] Extending this insight, 'resilience-as-commoning' reframes climate resilience not as an individual capacity or externally delivered intervention, but as a collective relational process where communities collectively manage not only resources but also risks, knowledge, and adaptive strategies.

In our study, women's revival of local food, their maintenance of shared local agricultural knowledge, and their weaving of solidarity networks across villages exemplify commoning practices that build resilience from below. These are not isolated individual actions but coordinated and deliberate efforts to sustain both ecological and social fabrics. It is through the collective, cooperative, and often invisible work that enables communities to withstand and respond to climate shocks. These forms of resilience as commoning are explained below.

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[62] Rocheleau et al, *Feminist Political Ecology*; Rebecca Elmhirst, 'Introducing new feminist political ecologies,' *Geoforum* 42, no. 2 (2011), 10.1016/j.geoforum.2011.01.006.

[63] Priyatma Singh et al., 'The Role of Women in Community Resilience to Climate Change: A Case Study of an Indigenous Fijian Community,' *Women's Studies International Forum* 90 (January–February 2022), https://doi.org/10.1016/j.wsif.2021.102550

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

[65] Ostrom, *Governing the Commons.*

Reviving local food

The FPAR in Poso, in collaboration with the Mosintuwu Institute, addresses the theme of local food. In early 2024, the Mosintuwu Institute organised a workshop entitled 'Politik Meja Makan' (The Politics of the Dining Table) that focused on local food and food security. This initiative directly confronted the critical issues of local food sovereignty and food security by reframing daily consumption as a conscious political and environmental act.[66] The workshop's core mission was to re-educate palates and revitalise an appreciation for traditional local foods, positioning them as sustainable and empowering alternatives to imported and instant food products whose production and transportation generate significantly higher carbon emissions. In the workshop (Figure 2), women discussed, shared, and learned about available crops in the area as a way to build a cornerstone for sustainable food systems.

Figure 2. Workshop participants in Poso are learning about the local food system
Source: Photograph by Sri Sumaryani, Dodoha Mosintuwu, Poso, Central Sulawesi, 24 March 2024. Photograph courtesy of the creator. Written consent to use this image was received from each of the women in this photograph.

This initiative is political because it confronts a deep-seated socio-cultural challenge. In Poso, a stigma has developed over time that those who do not cook and consume white rice are poor.[67] This perception is ironic because rice is not a local crop in Poso and must be imported from other regions, making it not only less sustainable but also economically draining for the community. The 'politics of the dining table,' therefore, aims to dismantle this stigma by launching a counter narrative that celebrates local crops like sago, cassava, and various Indigenous tubers and grains. It seeks to redefine wealth and status not by the ability to

[66] Gordon M. Hickey and Nigel Unwin, 'Addressing the triple burden of malnutrition in the time of COVID-19 and climate change in small island developing states: what role for improved local food production?' *Food Security* 12, no. 4 (2020), 10.1007/s12571-020-01066-3.

[67] Interview with CSO, Tentena, Poso, Central Sulawesi, 24 March 2024.

purchase imported goods, but by the wisdom to cultivate and consume local foods that are naturally resilient to the local climate. From an FPE perspective, this reframing of food challenges dominant political economic structures that privilege industrial agriculture and market dependency over locally embedded food systems.[68] Mainstreaming local food to local Poso women reclaimed women's authority over provisioning practices that have historically been devalued, as stated by one of the workshop participants:

> We grow and harvest these pineapples from our own garden. They're just as sweet as pineapples from outside Poso. We also use our fertiliser. If the fertiliser we make is too much, we sell it at 100,000 rupiah per gallon.[69]

The workshop moved beyond discussion and into a sharing space of how to process these local ingredients into nutritious and delicious meals, thus rebuilding a culinary culture that is both a form of resistance and a practical strategy for climate adaptation. This initiative connects the personal act of eating to larger systems of environmental justice and cultural preservation. It further demonstrates how grassroots feminist climate action is often rooted in the lived experiences of women[70] who are at the forefront of both providing food for their families and protecting their local ecosystems.[71]

Practising sustainable agriculture

A series of workshops organised by the women farmers' group, Karisma and Solidaritas Perempuan Kinasih in 2023 and 2024 focused on practising sustainable rice farming and revitalising local knowledge in farming. While the dominant top-down approach to rice farming was part of the Green Revolution that disconnected farmers from their land,[72] it required imported seeds, chemical fertilisers, and foreign pesticides.[73] The women's efforts aimed to challenge this governmental agricultural agenda and sustain what nature has given them. One participant shared her experience:

> After the Green Revolution, farming jobs are all taken by men, but sustainable farming offers more equal opportunities, which interests me. Nature provides everything we need, all available for free. Besides, it is healthy, can save our environment, and should be passed down to the next generations. How can our future be if we depend on inorganic food? This activism is our responsibility.[74]

Their contribution to climate resilience is multifaceted. By using locally grown seeds and natural fertilisers, these women enhance biodiversity and soil health, creating agroecosystems that are more resilient to climate shocks like droughts and flooding. This directly reduces vulnerability to crop failure and food insecurity. This sustainable farming

[68] Leder et al., 'Ambivalences of collective farming.'

[69] Interview with Mama IH from *Aliansi Penjaga Danau Poso*/the Lake Poso Guardian Alliance, Tentana, Poso, Central Sulawesi, 24 March 2024. Quotes from participants have been translated from Bahasa Indonesia to English by the authors.

[70] Mollett, 'Environmental Struggles Are Feminist Struggles.'

[71] Singh, Tabe, and Martin, 'The Role of Women in Community Resilience.'

[72] Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

[73] Rahmi Aulia Hidayat et al., 'Impact of green revolution on rice cultivation practices and production system: a case study in Sindang Hamlet, Rancakalong Village, Sumedang District, West Java, Indonesia,' *Biodiversitas Journal of Biological Diversity* 21, no. 3 (2020), https://doi.org/10.13057/biodiv/d210354.

[74] Interview with a female farmer and Karisma group member, 20 January 2024.

practice allows the women farmers' group to maintain the knowledge about its principles, techniques, and materials. Furthermore, they also pass it on to their members and communities, as shown in Figure 3.

Figure 3. Karisma women farmers and Solidaritas Perempuan Kinasih discussed sustainable farming
Source: Photograph by Sanaullaili, Kulonprogo, Yogyakarta, 19 January 2024. Photograph courtesy of the creator. Written consent to use this image was obtained from the people in this photograph.

Crucially, their work is deeply gendered. Women are often the custodians of traditional agricultural knowledge, such as *pranata mangsa*, the Javanese seasonal calendar based on natural signs.[75] By applying this knowledge, the female farmers make critical time-sensitive decisions regarding planting and harvesting that are precisely attuned to their local microclimates. This role demonstrates women's agency in developing a form of sustainable agriculture that is not only ecologically sound but also rooted in and owned by the community. This stands in stark contrast to many modern approaches, including contemporary organic farming, which remain top-down and overly academic. Such imported methodologies often alienate farmers by devaluing their practical knowledge and disconnecting them from an intuitive understanding of their land and plants.[76] Guided by this local knowledge, women farmers identify some potential and also challenges in practising sustainable agriculture, using the *pranata mangsa* (seasonal calendar) to assist them in determining the start of farming seasons, weather, pests, and suitable crops (Figure 4).

The use of FPAR, here, was critical in bringing these dynamics to the surface. FPAR positions women farmers as co-producers of knowledge rather than beneficiaries. This aligns with feminist methodological commitments to reflexivity, situated knowledge, and epistemic

[75] Sakhiyya et al., 'Locally Grown Seeds, Natural Fertilizer.'

[76] Interview with a participant from Solidaritas Perempuan Kinasih, Kulonprogo, Yogyakarta, 19 January 2024,.

justice.[77] Through participatory reflection, women articulated how resilience must be rooted in lived agricultural practice rather than imposed technical solutions.

Figure 4. Karisma women farmers and Solidaritas Perempuan Kinasih learning about *pranata mangsa* (Javanese local knowledge on reading the seasons)
Source: Photograph by Sanaullaili, Kulonprogo, Yogyakarta, 19 January 2024. Photograph courtesy of the creator. Written consent to use this image was obtained from the people in this photograph.

Furthermore, by working collectively in groups, they build social capital and networks for mutual aid, which enables communities to better withstand climate-related stresses. Ultimately, this model of resilience moves beyond mere technical adaptation. It is a form of strategic activism that addresses the root causes of vulnerability by reclaiming control of production, strengthening local food sovereignty, and valuing women's knowledge. This challenges a gender-blind approach to conventional agriculture and climate policy, demonstrating that true resilience is inseparable from social justice and women's empowerment at the grassroots level.[78]

Weaving new networks

Through FPAR, our partner in Kupang has initiated a new coalition of 25 women's climate advocacy groups in Kupang (the provincial capital of East Nusa Tenggara). Its members come from Kupang, Mollo, Alor, and Maumere, with diverse backgrounds including farmers, weavers, livestock breeders, fishers, activists, religious leaders, and local community members. The weaving of new networks of women's climate activists is a fundamental strategy for building gendered climate resilience. This approach moves beyond viewing

[77] Donna J. Haraway, 'Situated knowledges: the science question in feminism and the privilege of partial perspective,' *Feminist Studies* 14, no. 3 (1988); Sara Kindon et al., *Participatory Action Research Approaches and Methods: Connecting People, Participation and Place* (Routledge, 2007).

[78] Singh et al., 'The Role of Women in Community Resilience.'

women as vulnerable victims and instead recognises and mobilises their unique knowledge and agency as essential resources for adaptation. For example, in discussion with the climate activists, they identified that it is increasingly rare to obtain the local plants used for producing the natural dyes for weaving in Kupang. This collective sense-making and local coalition are major factors in developing a context-specific understanding of resilience, something that national politics always either omits or intentionally passes over, as shared by one of the workshop participants in Kupang below:

> As a female farmer, I feel I'm experiencing an identity crisis because changing consumption patterns aren't just about what you eat and being full. Food is identity. In Mollo, food is closely tied to our identity, clan, and even synonymous with our traditions and culture. When what I ate changed, I felt like something was missing from me and my family. As a woman, I felt like I was losing my food sovereignty.[79]

What the female farmer above shared resonates with what FPE scholars argue, that scale is not neutral but produced through power relations that frequently marginalise local women's knowledge.[80] The formation of this coalition demonstrates how grassroots organising can rescale climate politics from below. By linking dispersed local struggles, women transform private experiences of loss and vulnerability into collective political actions, thereby reshaping the terrain of climate governance.

Discussion sessions among the new coalition of 25 women's climate advocacy groups ignited movements for change, reflecting on crop failure and environmental crisis in their area (Figure 5). Furthermore, the new network may be able to amplify women's voices by transforming isolated individual efforts into a collective force. One powerful example is, as our interview with a female priest in Kupang revealed, the heightened risk for women of human trafficking in Kupang as a direct consequence of climate-driven resource scarcity. When crop failure destroys livelihoods and severs access to natural food sources and forests, families face desperate economic pressures. This desperation, coupled with entrenched gender inequalities, makes women disproportionately vulnerable to exploitation and false promises of work elsewhere. This concern is shared through our in-depth interview with a female priest in Kupang:

> Women, children, and even men are victims of climate change. Transnational migration of women, both legally and illegally, and human trafficking are driven by agricultural failure and household food insecurity, which climate change has exacerbated.[81]

Identification of problems is the first stage in the process of gendering resilience. The network provides a safe space for solidarity, reducing the social risks associated with advocacy and building the collective confidence to challenge patriarchal norms that often exclude women from decision-making forums. The new network is co-created by those who understand the gendered impacts of climate change, making resilience efforts more inclusive and sustainable.

[79] Interview with an activist and farmer from Mollo, East Nusa Tenggara, 24 February 2024.

[80] Rebecca Elmhirst, 'Feminist Political Ecology,' in *The Routledge Handbook of Political Ecology*, ed. Tom Perreault et al. (Routledge, 2015).

[81] Interview with a female priest in Kupang, East Nusa Tenggara, 17 January 2024.

Figure 5. Forming a new climate advocacy group in Kupang
Source: Photograph by Linda Tagie, Kupang, East Nusa Tenggara, 24 February 2024. Photograph courtesy of the creator. Written consent to use this image was obtained from the people in this photograph.

Discussion

The three practices documented in our FPAR, reviving local foods, practising sustainable agriculture, and weaving new networks, are not merely isolated adaptation strategies. They collectively translate 'resilience-as-commoning' as a relational process through which women collectively govern shared resources, knowledge, and social infrastructures in response to climate precarity. Building on Ostrom's insight that communities can craft durable arrangements for managing common pool resources,[82] the concept of resilience-as-commoning reframes resilience as neither an individual attribute nor a top-down technical intervention, but as a situated, negotiated, and inherently political practice of collective care.[83] In the communities we engaged with, resilience is not enacted through externally designed adaptation projects; it is produced through the everyday labour of cultivating local seeds, sharing culinary knowledge, reviving seasonal calendars, and forming coalitions that span villages. These commoning practices sustain not only ecological systems but also the social fabric that enables communities to absorb, respond to, and transform the conditions of climate uncertainty.

Resilience-as-commoning is context-specific.[84] The three cases we analysed illustrate how resilience takes different forms depending on local ecologies, cultural meanings, and gendered power relations.[85] In Poso, resilience is performed through the politics of the dining table to demystify sago and tubers and to reclaim food sovereignty from a rice-dependent

[82] Ostrom, *Governing the Commons.*

[83] See et al., 'From Absences to Emergences.'

[84] Clement et al., 'Feminist political ecologies of the commons and commoning.'

[85] Clement et al., 'Feminist political ecologies of the commons and commoning'; Ostrom, *Governing the Commons.*

high-carbon food system. In Central Java, resilience is practised through the revitalisation of *pranata mangsa*, local knowledge that attunes farming decisions to microclimatic rhythms, challenging the homogenising legacy of the Green Revolution. In Kupang, resilience is woven through the formation of a multi-community coalition that transforms private experiences of crop failure, identity loss, and human trafficking risk into a collective political platform. These context-specific commonings reveal why universalising resilience frameworks do not always work on the ground. Climate resilience is inseparable from local food cultures, spiritual relationships to land, and gendered divisions of labour.[86] It emerges from embedded place-based practices of resource sharing, intergenerational knowledge transmission, and solidarity building.

By highlighting the issue of gender, our analysis further demonstrates that resilience-as-commoning is a feminist political practice.[87] Women's work in reviving local food, sustaining agroecological knowledge, and weaving advocacy networks constitutes a form of environmental governance that challenges both patriarchal norms and neoliberal climate agendas. Yet, as these women emphasised, climate resilience is a survival imperative. They come together in common because they have no other choice. This tension between necessity and agency defines the character of resilience-as-commoning on the margins. Recognising resilience-as-commoning demands that policy and research move beyond a narrow focus on individual adaptive capacity and instead invests in the collective infrastructures, such as local seed banks, women's knowledge networks, and community coalitions that enable communities to govern their own resilience.

Conclusion

Universalist climate adaptation frameworks tend to neglect the political and gendered nature of resilience. This paper addressed the question: How do women's grassroots organisations construct climate resilience through their everyday practices? Through feminist participatory action research in three sites in Indonesia, we identified at least three ways: reviving local foods, practising sustainable agriculture, and weaving cross-community networks. These findings constitute resilience-as-commoning, a collective process of governing shared resources, knowledge, and solidarity, embedded in local ecologies and survival imperatives. Our findings demonstrate that resilience is not a universal capacity but a context-specific, gendered political practice. Policy must therefore shift from technical fixes to supporting the communal infrastructures, such as women's seed banks, knowledge networks, and community coalitions, that sustain both ecosystems and social fabrics under climate stress.

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[86] Cannon, 'A feminist community-based participatory action research.'

[87] Bauhardt and Harcourt, *Feminist Political Ecology*.

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