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How Control Shapes Gender Inequality in Social Forestry: Implications for Access, Participation, and Benefits in South Sulawesi, Indonesia

Nurul Auliya Amin, Universitas Hasanuddin, Makassar, auliyaamin11@gmail.com

Abstract

The Government of Indonesia's Social Forestry initiative, grants local communities rights to manage forest areas, grounded in environmental conservation principles. Despite several decades of social forestry in Indonesia, women have had little success in obtaining forest management rights. This article analyses how gender relations shape access, participation, and benefits in social forestry in Sarolupadang Village, Enrekang Regency, South Sulawesi—exploring the differential experiences of women and men in obtaining permits for the management rights of Community Forests (HKm). This study employs an ethnographic approach using participant observation, in-depth interviews, focus-group discussions (FGDs) and document analysis. Data analysis deployed a modified Gender Analysis Pathway (GAP) framework that defines control as power relationships that affect access, participation, and benefits simultaneously.

Three principal factors were identified as contributing to gender inequality in social forestry programs. First, social forestry management rights are granted to members of Forest Farmer Groups known locally as *Kelompok Tani Hutan* (KTH), and only heads of households (legally designated for men) and those formally identified as farmers on their identity cards (KTP) are eligible to become members of KTH. Second, decision-making authority in land management, including social forestry, remains concentrated with men. Third, the benefits of social forestry are unequally distributed. As members of KTH, men receive long-term management rights, assistance with livestock, seeds and other high-value commodities, and women are mainly involved in less remunerating household-based production through Social Forestry Business Groups (KUPS). Women remain underrepresented in forest management institutions even though they have an important role in everyday forest management through their knowledge of the use, processing, and sustainability of forest products.

Keywords. Social Forestry, Gender Dynamics, Community Empowerment, Indonesia

Introduction

Tati and Suti are women farmers in the village of Salupadang, Enrekang. Two or three days a week, they visit the source of a spring in the forest. They leave before dawn because the water source is far away, and it takes about three hours to get there. They take provisions such as mineral water and snacks with them, not forgetting the machete they use to clear around the water source. The spring water emerges from sandy soil, and Tati and Suti use simple materials obtained from the forest to maintain it. The water source is a seep spring with a relatively small output and not enough pressure to gush to the surface. The women dig around the source to enable the water to flow to the surface. The water then passes through two stages of filtration. The water emerging from the spring is channelled along half bamboo

pipes to the first filtration site, a receptacle of stone and cement to filter out stones and leaves. The filtered water then flows through a large PVC pipe towards a large tank. Here, the water is filtered for a second time through a metal strainer, and from there it is distributed to each household through small pipes. The community lives close to and coexists with the forest and hence has a historical attachment to it. Women, like Suti and Tati, are on the front line protecting the forest area from illegal logging, especially around spring sources and cultivating agroforestry crops such as turmeric and galangal beneath existing tree cover. This agroforestry system maintains forest cover while providing livelihood benefits, thereby helping to protect the forest ecosystem and local water sources. Although Tati and Suti play an important role in the conservation of forests and water resources, they do not have adequate access to the institutions in their village where decisions about forests are made. Deforestation is the greatest threat to the water sources they rely on and increases the risk of landslides that could destroy settlements.[1]

Forest sustainability is essential for the survival of communities. If the forest is damaged, community livelihoods will be affected. This was one of the factors prompting the Indonesian government to launch the Social Forestry Program that addresses the sustainability of the ecosystem and the economy of communities in forest areas: that is, to provide forest management rights and legal access for communities while being guided by environmental conservation principles.[2] Data at the end of 2023 showed that access to social forestry management nationally reached 6,371,773.42 hectares out of the target of 12.7 million hectares by 2030, involving 9,642 permits granted to individuals and groups.[3] However, the implementation of the governing of Social Forestry program faces problems, such as achieving women's participation in forest management, an important reason for the failure to fully realise program goals to date. Pursuing gender equity in forest programs would accelerate the success of social forestry as women play critical roles in managing and marketing forest products and maintaining the balance of nature. For example, women have extensive knowledge of biodiversity (including the use of medicinal plants).

Studies of social forestry in Indonesia have tended to focus on tenure reform, institutional governance, and community participation, rather than on gender-based power relations in forest resource management. From a feminist political ecology perspective, access to natural resources, division of labour, environmental knowledge, and decision-making processes are shaped by gender relations that operate within social, cultural, and political structures.[4] In the context of social forestry, women's involvement is shaped by cultural norms, social relations, and local institutional structures[5] as well as by formal

[1] Field notes by the author, Salupadang Village (pseudonym), Enrekang Regency, South Sulawesi, 23 December 2023.

[2] Ministry of Environment and Forestry of the Republic of Indonesia,'By the End of 2023, the Social Forestry Program Has Achieved Access to Manage 6.37 million hectares,' *Kontan*, 29 December 2023.

[3] Ministry of Environment and Forestry of the Republic of Indonesia, 'Social Forestry,' *Ministry of Forestry of the Republic of Indonesia*.

[4] Dianne Rocheleau, Barbara Thomas-Slayter and Esther Wangari, eds, *Feminist Political Ecology: Global Issues and Local Experiences* (Routledge, 1996).

[5] Bina Agarwal, 'Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework,' *World Development* 29, no. 10 (2001), https://doi.org/10.1016/S0305-750X(01)00066-3.

program requirements (Figure 1). This study seeks to broaden the discussion on gender equity in social forestry by examining how everyday gender relations shape access, participation, and distribution of benefits within community-based forest governance. A national survey conducted by the Katadata Insight Center in 2020 revealed that 94 per cent of the 103 social forestry groups surveyed consisted only of male members, indicating persistent gender imbalance despite Indonesia's commitment to the UN Sustainable Development Goals, in this case, Gender Equality (Goal 5).[6]

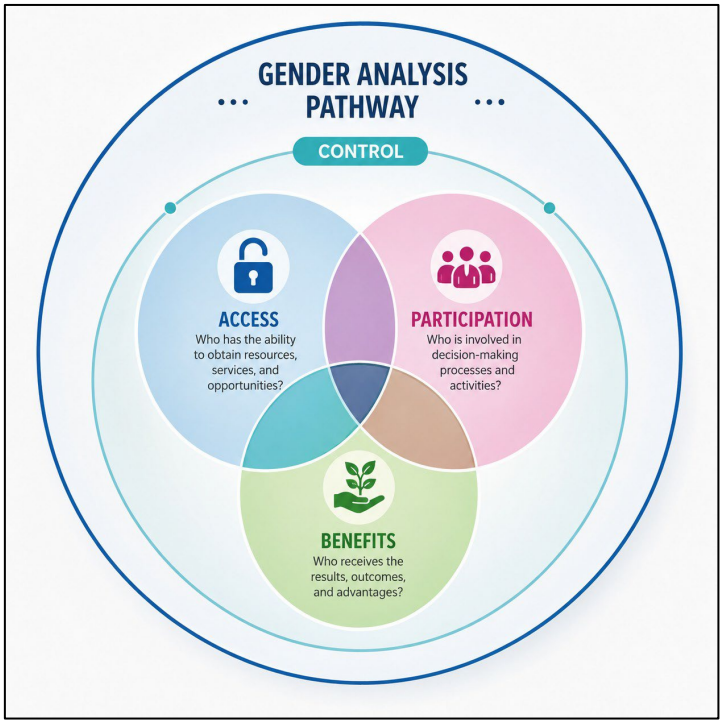

Figure 1. Modified Gender Analysis Pathway (GAP) Framework Used in This Study
Source. Developed by the authors based on the Gender Analysis Pathway (GAP) framework (BAPPENAS, 2007) and ethnographic fieldwork.

To analyse gender dynamics in social forestry management, this study adopts the Gender Analysis Pathway (GAP) framework developed originally by the Ministry of National Development Planning and modified by BAPPENAS, which examines gender through four interrelated dimensions: access, participation, control, and benefits. However, the original framework was adapted to better capture the relational and context-specific nature of qualitative ethnographic research on social forestry. This adaptation emerged from our empirical findings that relations of control underpin women's access to forest resources, women's participation in institutional decision-making, and their ability to benefit from social forestry programmes. Rather than treating control as a parallel analytical dimension, this study conceptualises it as an overarching mechanism through which institutional arrangements, socio-cultural norms, and gendered power relations shape access, participation, and benefits.

[6] Katadata Insight Center, *Women in Social Forestry: Challenges and Opportunities Towards Gender Equality*, (Katadata Insight Center, 2020).

Social forestry

Conceptualising social forestry in Indonesia

Social forestry in Indonesia is a state-led approach to address the inequality of access to forests and also the history of protracted conflicts between local communities and the state over forest governance. This scheme was established through Regulation Number 83/ 2016 of the Minister of Environment and Forestry. It defines Social Forestry as a sustainable forest management system managed by local communities or Indigenous peoples within state forest areas.[7] In its implementation, social forestry is carried out through several schemes including Community Forests (HKm), Village Forests, People's Plantation Forests (HTR), and forestry partnerships that aim to provide legal access to communities to manage forest resources while maintaining ecological sustainability.[8] Social forestry represents a shift from centralised government control of forests to community-based management, in which local communities are not only forest users but also environmental guardians.[9] Social Forestry programs are implemented through the establishment of Forest Farmer Groups (KTH)[10] that organise agroforestry practices, management of non-timber forest products, and conservation activities under state supervision.[11] However, the implementation of Social Forestry is heavily influenced by top-down governance structures,[12] uneven participation,[13] and limited gender inclusion in forest management at the local level.[14]

Gender dynamics in social forestry management

Understanding social forestry in Indonesia requires attention not only to its policies and regulations, but also to the social relations of its implementation. The program shapes patterns of participation, access, and decision-making at a community level, and gender dynamics affect how women and men experience and engage in forest management differently. From a feminist perspective, Kathryn Robinson emphasises that rural development and governance programs in Indonesia often reproduce a gender-based division

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[7] Ministry of Environment and Forestry of the Republic of Indonesia, *Regulation of the Minister of Environment and Forestry No. P.83/MENLHK/SETJEN/KUM.1/10/2016 concerning Social Forestry* (2016). Article 1; Ari Rakatama and Ram Pandit, 'Reviewing Social Forestry Schemes in Indonesia: Opportunities and Challenges,' *Forest Policy and Economics* 111 (2020), 5, https://doi.org/10.1016/j.forpol.2019.102052.

[8] Moira Moeliono, Thuy Pham Thu, Herry Purnomo et al., *Social Forestry—Why and for Whom? A Comparison of Policies in Vietnam and Indonesia* (CIFOR, 2017), 3–6, https://doi.org/10.24259/fs.v1i2.2484.

[9] Micah R. Fisher et al., 'The Politics, Economies, and Ecologies of Indonesia's Third Generation of Social Forestry: An Introduction to the Special Section,' *Forest and Society* 2, no. 1 (2018), https://doi.org/10.24259/fs.v3i1.6348.

[10] KTH Tuomera is a community organisation formed through the Social Forestry scheme to manage forest areas legally and sustainably in Salupadang and Tanete Villages, Enrekang Regency

[11] Ahmad Maryudi et al., 'Social Forestry in Indonesia: A Review of Policies, Livelihood Impacts, and Future Challenges,' *Forest and Society* 6, no. 1 (2022), https://doi.org/10.24259/fs.v6i1.20920.

[12] Ida Aju Pradnja Resosudarmo et al., 'Indonesia's Land Reform: Implications for Local Livelihoods and Climate Change,' *Forest Policy and Economics* 108 (2019): 6–7.

[13] Resosudarmo et al., 'Indonesia's Land Reform,' 8–9.

[14] Agarwal, 'Participatory Exclusions, Community Forestry, and Gender.'

of labour and inequality of access to decision-making, so women's participation is often symbolic rather than substantive.[15]

Gender dynamics in Indonesia are widely discussed, especially the aspiration for equal participation of men and women in development. Advocates for gender equality argue that it promotes economic growth and is part of sustainable development.[16] Climate change is a threat to sustainable development because it causes social inequality, negatively affecting women and other vulnerable groups.[17] Gender injustice is evident in the limited access women have to resources and authority in climate crisis decision-making.[18] This limited access leads to unequal exposure and vulnerability to environmental risks for men and women.[19] Vulnerability occurs due to structural inequalities in three main domains: economically, women face asset gaps;[20] politically, their representation in climate decision-making remains minimal;[21] and socially, cultural norms limit mobility, access, education, and participation in public spaces.[22] The lack of women's involvement in decision-making can result in policies and solutions that do not meet their needs and interests effectively.[23] Women's exclusion from decision-making affects working conditions and inhibits any significant improvement in gender equality.[24] Addressing gender-based inequality requires gender mainstreaming in Social Forestry management to ensure effective and sustainable implementation and

[15] Kathryn Robinson, *Gender, Islam and Democracy in Indonesia* (Routledge, 2009), 10–14, https://doi.org/10.4324/9780203891759.

[16] Eri Istiqomah, 'An Attempt to Gain Gender Equality and Women's Empowerment in Social Media,' *Perspektif* 13, no. 1 (2024), https://doi.org/10.31289/perspektif.v13i1.10606.

[17] Marina Romanello et al., 'The 2021 Report of the Lancet Countdown on Health and Climate Change: Code Red for a Healthy Future,' *The Lancet* 398, no. 10311 (2021), https://doi.org/10.1016/S0140-6736(21)01787-6; Connie Cai Ru Gan et al., 'Women and Planetary Health in Asia-Pacific,' *Frontiers in Climate* 5 (2023):1058432, https://doi.org/10.3389/fclim.2023.1058432; Dominic Amoak and Dalia Najjar, 'Governing Agrifood Systems for Climate Resilience and Gender Inclusivity: A Strategic Review of the Evidence,' *Environmental Development* 57 (2026): 101308, https://doi.org/10.1016/j.envdev.2025.101308.

[18] Neelam Singh, Prasanta Moharaj, and Dibakar Sahoo, 'Exploring Gender Dynamics of Social Vulnerability for Sustainable Resilience in a Changing Climate in Asia: A Systematic Literature Review,' *Environmental Development* 58 (2026): 101445, https://doi.org/10.1016/j.envdev.2026.101445.

[19] Alice O. Awiti, 'Climate Change and Gender in Africa: A Review of Impact and Gender-Responsive Solutions,' *Frontiers in Climate* 4 (2022): 895950, https://doi.org/10.3389/fclim.2022.895950.

[20] Food and Agriculture Organization of the United Nations (FAO), *The Status of Women in Agrifood Systems* (FAO, 2023); World Bank, *Women, Business and the Law 2023* (World Bank, 2023), https://doi.org/10.1596/978-1-4648-1944-5.

[21] Shandana Habib, 'Gender and Climate Governance,' in *Routledge Handbook of Climate Change and Society*, ed. Constance Lever-Tracy (Routledge, 2021); Women's Environment and Development Organization (WEDO), *Gender Climate Tracker Annual Report 2022* (WEDO, 2022); Fernanda Alcobé and Elaine Harty, *Understanding the Gender Imbalance at the International Climate Negotiations* (International Institute for Environment and Development, 2023).

[22] Margaret Alston, *Gender, Climate Change and Livelihoods* (Edward Elgar Publishing, 2021).

[23] Amoak and Najjar, 'Governing Agrifood Systems,' 7.

[24] Elias Andersson and Maria Johansson, 'Revisiting the Gendered Division of Labour in Swedish Forestry: What Has Changed the Last Decade?' *Forest Policy and Economics* 174 (2025): 103477, https://doi.org/10.1016/j.forpol.2025.103477.

management. The Gender Analysis Pathway (GAP) is a mechanism for analysis that can reveal gender dynamics on the ground.[25]

Gender gap in social forestry in Indonesia

In Indonesia, men and women in forest areas do not have equal access to land use rights or equal opportunities to earn income.[26] Women's labour is undervalued and contributes less visibly to household income than the work of men.[27] Women's responsibilities in households and communities are closely attached to sex-specific tasks, such as providing food, caring for children, cooking, washing clothes, and cleaning the house.

Several factors drive the gender gap in forest management. Apart from the social and cultural factors discussed above, there is inadequate outreach to women and a lack of information from data systems disaggregated by gender.[28] Furthermore, the requirement that members of social forestry groups be registered as 'heads of households' on their identity cards contributes to the absence of women members and also their lack of involvement in bodies such as Social Forestry Business Groups (KUPS) that operate under the auspices of these groups.

There are 26 women[29] who have ancestral lands within this forest area, but they are not members of the KTH, even though historical ties to the land and ownership through inheritance are the criteria for social forestry group membership. This points to gender inequality in community forest management, which has had an impact on the achievements of the social forestry program during its initial phase (2015–19).

The Indonesian government has responded to these challenges with a series of regulations to 'mainstream gender' in forest governance. The Minister of Environment and Forestry Regulation 9 /2021 (Article 21) provides for possible women's involvement in HKm management by stating that one family is represented by one person, formally providing equal opportunities for both men and women to participate in social forestry management; that is, women formally have the same rights and opportunities as men. The Minister of Environment and Forestry Regulation 31/2017 (Guidelines for the Implementation of Gender Mainstreaming) also supports the acceleration of gender mainstreaming in the fields of Environment and Forestry, based on Presidential Instruction 9/2000 concerning Gender Mainstreaming in National Development. In 2013, the Ministry of Environment and Forestry created 'Guidelines for Monitoring and Evaluation of Gender-Responsive Activities' and 'Guidelines for the Preparation of Disaggregated Data in the Forestry Sector,' which address

[25] GAP has been widely used in the study of rural development, community empowerment, and natural resource governance to see how men and women experience differences in opportunities, roles, and power relations in development interventions.

[26] Bina Agarwal, 'Rural Women, Poverty and Natural Resources: Sustenance, Sustainability and Struggle for Change,' *Economic and Political Weekly* 24, no. 43 (1989).

[27] Liz Ota et al., 'Reviewing Gender Roles, Relations, and Perspectives in Small-Scale and Community Forestry Implications for Policy and Practice,' *Forest Policy and Economics* 161 (2024): 3–4, https://doi.org/10.1016/j.forpol.2024.103167.

[28] Meilani, 'Gender Analysis in Land Management Policy in Supporting the Revitalization of the Bengawan Solo Watershed,' Master's thesis, Universitas Sebelas Maret, 2012.

[29] Field notes by the author, Salupadang Village (pseudonym), Enrekang Regency, South Sulawesi, 15 February 2024.

gender participation as an important indicator of the success of forest development in Social Forestry areas.

These regulations are examples of government initiatives to realise gender equality in forest management. Empowering women and other vulnerable groups opens doors to diverse perspectives, promotes sustainability, creates an inclusive environment,[30] and acknowledges contributions rarely formally recognised in the governance structure of social forestry. This study investigates the gap between the policy commitment to gender equality and the reality on the ground, as experienced in Saropodang Village.

History of forest use in Enrekang

The Enrekang region, in South Sulawesi, has a long history of ownership and use of forests, dating back to pre-colonial times under the rule of the Massenrumpulu kingdom. Forests are not only ecological spaces, but also an important part of the social, cultural, and economic life of the surrounding communities. The community's closeness to forests has been formed since the pre-colonial period through agricultural practices, the use of forest products, cultural rituals, and the function of forests as a refuge during times of conflict.

The historic pre-Islamic belief system of the South Sulawesi Bugis-Makassar peoples is described in the epic poem *La Galigo,* which concerns the origins of human social order in the descent of divine beings, the *To Manurung*, from heaven. *To Manurung* beliefs (which co-exist with Muslim beliefs)[31] are associated with social order, fertility, and sustainability of people's lives. This cosmological view expresses the close relationship between women, land, and forests in the ecological imagination of the Bugis-Makassar people (to which the people of Enrekang belong). In *La Galigo*, forests and land are symbolised as the womb of a woman who gives birth, and the presence of a female figure is associated with the end of famine, the restoration of forest fertility, and the abundance of springs. Nature is more than an economic space; it is part of the cosmological order and is tied to the reproduction of life, ecological sustainability, and the social balance of community.

Enrekang has been a sociopolitical entity since at least the fourteenth century, when it was known as *Massenrempulu,* a federation of seven regions, namely Endekan, Kassa, Batu Lappa, Duri, Maiwa, Letta and Baringin (the *Pitue Masssenrempulu*).[32] These later merged to form three realms: Duri, Enrekang and Maiwa.[33]

The close relationship that the Enrekang people have had with the land and forests in the past forms the basis of their local knowledge. The forests have been a source of materials for houses, including teak and bamboo. They were engaged in farming and hunting in the forests, moving from one place to another. Gardens were created from forest lands and planted with a range of crops, such as sweet potatoes, bananas and hill rice, and fenced to

[30] R. K. Pokharel and M. Suvedi, 'Indicators to Measure the Success of Nepal's Community Forestry Programs: A Local Perspective,' *Human Ecology Review* 14, no. 1 (2007).

[31] Kathryn Robinson, 'Sawerigading vs. Sharia: Identities and Political Contestation in Decentralised Indonesia,' *Asian Journal of Social Science* 39, no. 2 (2011), https://doi.org/10.1163/156853111X565896.

[32] Djuir Palisuri and Andi Muhammad Said, *Sepenggal Kisah dari Kabupaten Enrekang: Rekaman Data Arkeologi yang Mengungkapkan Jati Diri Massenrempulu* (Jakarta: Balai Pelestarian Cagar Budaya Sulawesi Selatan, 2006).

[33] Zulkarnain A.S., 'The Architecture of the Kaluppini Traditional House and the Communal Open Space in Enrekang, South Sulawesi as an Expression of the Concept of Mapping,' PhD diss., Hasanuddin University, 2023.

protect them from animals. Many rituals associated with agriculture and life events rely on bamboo and wooden artefacts collected in the forests. For example, they believe that the deceased sail to another realm and never return, so they prepare *erong* (burial containers)[34] made of *bitti* wood[35] found in the forest to help them in their journey.

Up until the Dutch colonial period (in the early twentieth century), land tenure in the Enrekang highlands was governed primarily by customary norms. Rights to land were recognised through ancestral occupation and natural markers, such as old trees, stones, rivers, and other landscape features, rather than surveyed boundaries or formal land certificates. Although the Dutch colonial administration gradually introduced cadastral surveys and formal land administration, these practices were only partially implemented in the mountainous interior. In many communities, including the study area, land boundaries continued to be identified and recognised through customary knowledge and natural markers passed down across generations rather than through formal cadastral records or land titles. The mountains around Enrekang were planted with valuable crops, including cotton, pepper[36] and coffee, which were sought after by the colonial power. The Dutch monopolised these products by buying directly, at very low prices, from coffee farmers or traders in Enrekang thus disadvantaging them.[37] Beyond their economic importance, the forests of Enrekang also played an important strategic role during the Dutch colonial expansion. Historical records describe the forests as places of defence and retreat for the people of Massenrempulu when they came under pressure from Dutch military expeditions[38] and later the Japanese (1942–45).[39]

During the Japanese occupation, agricultural production was redirected to support the war effort, with many men conscripted to build military fortifications while food crops were requisitioned to supply the Japanese military.[40] After Indonesian independence (declared in 1945), the forests in Enrekang,[41] functioned as a refuge amid political and military instability. The Dutch forces conducted military operations in the name of the Civil Administration of the Dutch East Indies (NICA)[42] against the independence fighters (the Indonesian People's

[34] Traditional coffin-shaped burial containers used by local people in the past, often placed on cliffs or caves.

[35] *Vitex cofassus* wood, also known as *Gofasa*, is endemic to Sulawesi and known to be very hard, waterproof, and durable, often used as the main material for Pinisi boat making, building construction (roof/floor frame), and furniture.

[36] Author's life history interviews with Tati, Hasna, and Sunan(pseudonyms), Salupadang Village, Cendana District, Enrekang Regency, 4 March 2024.

[37] Sritimuryati, *Sejarah Enrekang* (The History of Enrekang), ed. Sahajuddin, De Lamacca, 2013, 35.

[38] Sritimuryati, *Sejarah Enrekang,* 36.

[39] Sahajuddin, 'Propaganda and Its Consequences during the Japanese Occupation of Enrekang (1942–1945),' *Walasuji: Jurnal Sejarah dan Budaya* 10, no. 2 (2019), 192, https://doi.org/10.36869/wjsb.v10i2.10.

[40] Sritimuryati, *Sejarah Enrekang,* 46.

[41] Parang and Tanete (pseudonyms) are places where social forestry is carried out.

[42] Civil Administration of the Dutch East Indies (NICA) was a civil administrative body established by the Dutch in April 1944 in Australia, with the main purpose of reclaiming colonial rule in Indonesia after the defeat of Japan.

Rebellion Front, BPRI),[43] around Parang and Tanete. Resistance groups retreated to Mount Parang and Tanete, an area that is currently part of the social forestry landscape.[44] During the *Darul Islam/Tentara Islam Indonesia* (DI/TII) (Indonesian Islamic Army)[45] conflict, when rural South Sulawesi was under the control of Kahar Muzakkar's army seeking to establish independent Indonesia as an Islamic state, people from the mountainous area of Enrekang continued to access the forest gardening activities, gathering forest products, and clearing land for subsistence farming. During the New Order period (1965–98), the state began regulating forest areas through the Forest Use Agreement (TGHK) policy and protected area management. This was later reinforced by Presidential Decree Number 32/1990 concerning Protected Area Management. State regulation of forests in Enrekang increased in the 1990s following this decree, when areas previously used by local communities as places to live, cultivate crops, and survive were designated as protected forests. This transformation changed the relationship between the community and the forest from relatively open access to the forest to access limited by state regulations.

Implementation of social forestry programs in Enrekang

The Social Forestry scheme began in the 2000s and was instituted nationally through the Minister of Environment and Forestry Regulation 83/2016 to provide limited legal access to the community to manage forest areas. In the process, gender roles have also been transformed, with only men being associated with land ownership, forest management authority, and decision-making, while women tend to be associated with domestic activities and the use of non-timber forest products. Although in the past women held positions as leaders and had other important economic and symbolic roles, there is no state recognition of these roles and hence no access for women to formal authority and decision-making in forest governance.

This research was conducted in Salupadang Village, Cendana District, Enrekang Regency from the end of October 2023 to April 2024. The village has a population of 1,672: consisting of 379 households, with 830 women and 342 men (Figure 2).[46] Salupadang Village has four hamlets with different geographical conditions, and several are far from the village centre. The village is one of the areas covered by Social Forestry policy since the 2000s, with 1,329.46 hectares of protected forest exposure in Cendana District.[47]

[43] Indonesian People's Rebellion Front (BPRI) in this context refers to the nationalist paramilitary army formed during the Indonesian National Revolution. In the Enrekang (Massenrempulu) area, the local factions of the BPRI, which were later integrated into the Massenrempulu Battalion under Abu Bakar Lambogo, made extensive use of the mountainous forest landscape to maintain their resistance to the returning Dutch forces.

[44] Sritimuryati, *Sejarah Enrekang*, 73.

[45] DI/TII is a rebel and militia movement formed in 1949 by S.M. Kartosoewirjo in West Java, its main objective is to establish independent Indonesia as an Islamic State. From 1950 (until 1965) it was supported in South Sulawesi by a rebel army led by Kahar Muzakkar.

[46] Draft narrative of the Village Medium-Term Development Plan. Salupadang Village, Cendana District, Enrekang Regency for the 2018–23 period .

[47] Enrekang Regency Government, *Peraturan Bupati Enrekang Nomor 10 Tahun 2023 tentang Rencana Pembangunan Daerah Kabupaten Enrekang Tahun 2024–2026* (Enrekang: Pemerintah Kabupaten Enrekang, 2023), 37.

Research location

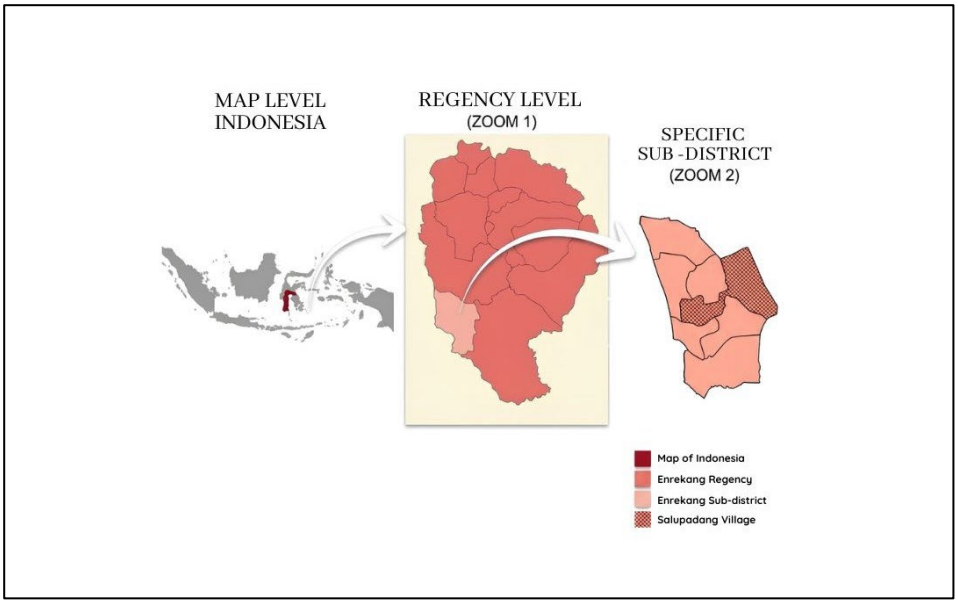

Figure 2. Geographic location of the study area in Salupadang Village, Cendana District, Enrekang Regency. Source. Pertama, Component 1 (Map Level Indonesia). The spatial boundary data for the base map of Indonesia is based on the official country boundaries managed by the Indonesian Geospatial Information Agency, accessible through the Ina-Geoportal Data Download (https://tanahair.indonesia.go.id/portal-web/unduh); Kedua, Component 2 (Regency Level - Enrekang). The administrative map showcasing the sub-districts of Enrekang Regency is retrieved from Wikimedia Commons, accessible via the official media repository link at Wikipedia Bahasa Indonesia File: Kab. Enrekang (https://id.wikipedia.org/wiki/Berkas:Kab._Enrekang.jpg); and Ketiga, Component 3 (Specific Sub-District - Cendana). The detailed spatial and statistical reference data for Cendana Sub-district are sourced from the official governmental publication titled *Kecamatan Cendana Dalam Angka* by the Central Bureau of Statistics (BPS), which can be verified through the BPS Indonesia Document Web-API Portal or accessed via the BPS-Statistics of Enrekang Regency Publication Page.

The research identified issues in social forestry management, especially those related to gender dynamics. The research was carried out through observation, interviews, and literature studies to explore forms of gender inequality in forest management, using the Gender Analysis Pathway (GAP) to observe gender relations in social forestry management.

Two hamlets, Parang and Tanete, are in highland areas where there is a community forest management group (HKm). Most members are garden and field farmers who grow corn, chilli peppers and tree crops such as avocados, *langsat* and *rambutan;* and they raise livestock (Balinese cows and poultry). The other two hamlets, Salu and Padang, are on flat land in the lowlands, with most of the population working as rice farmers and caring for poultry and cattle (Balinese and milk) breeders. In addition to being the location of HKm management, these two hamlets are also the centre for the development of KUPS.

In the past, economic factors have limited access to education, especially for women. In the 1980s, women did not often complete their primary level education, while men were more likely to continue until high school. However, in recent years, women have had better access to education. Despite these advances, the education gap between current and previous generations continues to influence the male-dominated character of the KTH. Historical inequalities persist in shaping the capacity, participation, and decision-making that occurs today.

Participation in land management

Salupadang Village has three land tenure systems: ownership, pawning and rotation. This pattern of land ownership has been passed down from generation to generation. Land allotments are based on long-standing boundaries or previous inheritances, with no boundaries that conform to the rules in social forestry policy.

Sunan, a 56-year-old man, said: 'Since there was a grandmother who lived in the area, there has been a boundary in the form of a small river, a stone fence, and a stone wall.'[48] His comment illustrates the use of customary land boundaries by members of his group. While it is known that many women inherit forest and other land, it is the husband who gets permission to manage it. The women 'help their husbands' to manage the land. This is reflected in the quote from Masna, a 42-year-old woman. 'I actually own a lot of land in some locations but let my husband hold it, because I don't know what to do with it. I only help my husband if he wants to plant and at harvest.'[49] With limited ability to manage land and a lack of knowledge women are kept separate from their own land.

Pawning is a system of exchanging land for money for a period agreed on by the lender and the owner. The rotation system is a way of managing land owned by large families: members take turns cultivating it for a prescribed period, with the right to farm moving to another family member after a planting season or two years.

Apart from those who cultivate land for themselves, some people work as farm labourers, plantation workers, or harvest employees. Farm labourers are either sharecroppers who work and manage land by a profit-sharing system with landowners or by earning wages from landowners. Plantation workers receive a wage based on the number of seedlings planted. Harvest workers are paid according to how much of the crop they harvest.

Division of roles in land management

Land management by the agrarian community involves cooperation. Farmers accept the role of the *Dulung,*[50] a traditional male community leader who makes decisions about the management of natural resources and sustainability. A quote from Sunan, a 56-year-old woman, illustrates how customary norms and values determine the role of gender in land management in the village: 'The Dulung is male and he has authority equivalent to the village chief and the village imam. All three men must be involved from the beginning of the agricultural season. Currently there are no female Dulung: but a Dulung's wife will assist him in his duties.'[51] As the representative of customary authority, the *Dulung* is tasked with:

[48] In-depth interview with Sunan (pseudonym) male, 56 years old, Salupadang Village, Enrekang Regency, 8 April 2024.

[49] In-depth interview with Masna (pseudonym) female, 42 years old, Salupadang Village, Enrekang Regency, 15 January 2024.

[50] *Dulung* is a traditional figure who is trusted to start *mappamula* (the initial stage before planting). This important role relates to the sustainability of agricultural activities and the management of natural resources that support people's lives.

[51] Sunan (pseudonym), interview, 9 June 2024.

1. determining the right time and date for farmers to start preparing the fields, planting *mappamula* and harvesting;[52]
2. leading the traditional ritual, *mappeong,* to start these activities;[53]
3. leading the harvest celebrations, *mappadendang,* to express gratitude to the Creator for the harvest.[54]

The survival of the community is at the heart of the *Dulung*'s activities managing the agricultural calendar and natural resources. His position exemplifies how cultural norms function as a control mechanism in land management and illustrates the customary exclusion of women from the decision-making in agriculture.

Because men hold most of the land ownership, they cultivate the rice fields or clear land and determine which crops to cultivate. Men also manage forest products (mainly wood but also honey and local edible plants like *pangi* and *gadung* and long-term tree crops such as cacao, avocado, nutmeg and oil palm; and manage rice fields. Women collect forest products in the form of candlenuts, and plant gardens with galangal, turmeric, chilli, corn and manage rice crops. Suti, a 47-year-old woman, comments: 'I always go to the rice fields to harvest rice to help my husband and to the garden to pick chilli.' [55] That is, a woman's role in land management is to help her husband.

Women born and raised in villages express pleasure in their forest-based activities. Women's happiness is inseparable from planting, caring for, and harvesting plants. This is an inherent part of their lives and is always remembered and missed when they leave the village to migrate or live in the city. Tani, a 26-year-old woman expressed this pleasure: 'If I am in the garden, I feel happy to be around chilli plants, especially in the chilli and corn harvest season: we can also increase our income.'[56] Women are more closely identified with plants with low market value such as corn, chilli, turmeric and galangal, which provide household food needs.

I asked focus-group participants to identify an object that made them happy. Sende, a 46-year-old woman stated: 'I chose a machete as an object that shows a good life because it can be used to cultivate the garden and the farm. This is important: if there is no machete, how can I fill the kitchen with food.'[57] Women have their own distinct interests in caring for agricultural land. Women consider how land is managed and can benefit others.

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[52] *Mappamula* is a local term that means, 'to start,' or 'to begin.' In the context of agriculture, the term refers to the processes before planting, including land preparation and various activities that mark the start of farming activities.

[53] *Mappeong* refers to the early phase of the planting season when land is ready to be planted after it has been cleared, prepared, and symbolically 'started,' by the *mappamula* process. This stage marks the start of cultivation activities by farmers.

[54] *Mappadendang* is a community harvest thanksgiving celebration that takes place after the harvest period as an expression of gratitude to God for the abundance of agricultural products.

[55] In-depth interview with Suti (pseudonym) female, 47 years old, Salupadang Village, Enrekang Regency, 9 March 2024.

[56] WhatsApp Focus Group Discussion (FGD), Tani (pseudonym) female, 26 years old, Salupadang Village, Enrekang Regency, 9 December 2023.

[57] In-depth interview with Sende (pseudonym) female, 46 years old, Salupadang Village, Enrekang Regency, 3 December 2023.

Men express different views about what makes them happy. They feel happy when they acquire something with high economic value from the forest. In a typical comment in an interview, Landu said: 'I am happier and feel good if I can get forest products in the form of wood.'[58] As heads of households, men want to earn more income to meet daily needs. They feel happy when they cut down a large tree for timber that can be sold at a high price. Other male speakers conveyed the same opinion. Sunan said in an interview: 'Most of them became members of Forest Farmer Groups because the program targeted forest products such as wood.'[59]

However, for daily needs, families rely more on the sale of chilli and corn—activities managed by women—especially when these products are processed as discussed below. Women cultivate plants such as corn, galangal and turmeric. These plants have abundant harvests so that they contribute more to daily needs. Men manage crops such as cacao and collect wood and other forest products whose sale value tends to be more stable. Women tend to engage in activities that do not require full-time labour such as seasonal harvest work; while men engage in land management activities that require heavy labour such as clearing and cultivating land.

These findings are in accord with other gender and agrarian studies that show that the sexual division of labour often confines women to subsistence production and post-harvest processing activities, while men tend to dominate land tenure, commercial commodity management, and decision-making.[60] However, the Social Forestry programmes in Salupadang show that these patterns, the result of customary gender norms, are reinforced by institutional mechanisms that determine who are recognised as farmers, group members, and programme beneficiaries.

Case study of a farmers' group

The Tuomera Forest Farmer Group (KTH Tuomera) in Enrekang Regency is an example of community empowerment through a Social Forestry program with a community forest scheme (HKm).[61] This group was formed through the initiation of KPH Mata Allo and social forestry awareness dissemination (*socialisasi*) carried out by the South Sulawesi Social Forestry and Environmental Partnership Center in 2019. KTH Tuomera has had a 52-hectare protected forest management permit for 35 years and currently has 27 members.[62]

Unequal access to social forestry management between women and men is common in social forestry groups in South Sulawesi: women have limited access to land management,

[58] In-depth interview with Landu (pseudonym) male, 44 years old, Salupadang Village, Enrekang Regency, 15 November 2023. A similar view was expressed in an in-depth interview with Salun (pseudonym) (male, 55 years old), Salupadang Village, Enrekang Regency, 15 November 2023.

[59] Sunan, interview, 9 April 2024.

[60] Catherine S. Dolan, 'The Good Wife: Struggles over Resources in the Kenyan Horticultural Sector,' *The Journal of Development Studies* 37, no. 3 (2001), https://doi.org/10.1080/713600071; Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (Harper & Row, 1980).

[61] Community Forest (HKm) is a Social Forestry scheme that provides management access rights to community groups around state forest areas. This scheme allows communities to legally utilise and manage forest resources while still paying attention to the principles of environmental sustainability.

[62] Ministry of Environment and Forestry, Decree No. SK.3009/MENLHK-PSKL/PKPS/PSL.0/3/2019.

participation in formal activities, and decision-making.[63] In Enrekang Regency, women's participation in social forestry groups is much lower than that of men. This inequality is evident in the formal membership structure of KTH Tuomera, where the 27 members are male representatives because they are the heads of households, while women are mainly involved through the KUPS,[64] a collective business unit under the umbrella of KTH.

KUPS are established to develop livelihood activities and enhance community benefits from forest resources. In Salupadang Village, four KUPS have been established: KUPS Agroforestry Tuomera, KUPS Madu Macanning, KUPS Aren Tuomera (later changed to KUPS Gollamalea) and KUPS Pariwisata Smullung. KUPS Gollamalea is engaged in processing palm sugar crystals into bottled liquid sugar, a food processing activity closely related to women's domestic work. The other three KUPS are engaged in forest area management, forest product utilisation, and decision-making related to forest management. Women's participation in social forestry continues to be concentrated in sectors aligned with domestic roles, while access to strategic forest resource management and decision-making is male dominated.

Results and discussion

One of the barriers women face to obtain social forestry management rights can be observed in the recruitment process for the Forest Farmer Group (KTH Tuomera). To become a member, individuals are required to own land within a designated area and have their occupation officially listed as 'farmer' on their Identity Card (KTP).[65] In practice, this requirement is not easily met by many women, especially female-headed households, single women, or women who manage land independently but are not officially recognised as landowners or farmers in legal or administrative documents.

The findings of the study show that control in social forestry does not work alone, but rather through state patriarchal social norms and institutional mechanisms. Social norms place men as heads of families and key actors in forest management. At the same time, community consultation and information sessions, and recruitment processes carried out by Forest Management Units and related agencies strengthen these social norms with administrative requirements, including status of heads of families and occupations as farmers. In this context, control not only determines who can access social forestry groups, but it also shapes the division of labour, participation space, and distribution of benefits between men and women.

Access to social forestry management rights

In the context of social forestry, access is defined as the ability to obtain benefits or advantages for both men and women in forest management. In Salupadang Village, the process of establishing KTH did not include vulnerable groups: women, marginalised groups or non-land-owning communities. Access to forest land management is focused on male

[63] RECOFTC, *Encouraging Women's Participation in Social Forestry in South Sulawesi* (RECOFTC, 2023).

[64] The Social Forestry Business Group (KUPS) is a business unit formed under the Social Forestry scheme to develop the management and marketing of forest products and improve the welfare of forest management communities.

[65] National Identity Card *(KTP)* is Indonesia's official national identity card. Among other personal details, it records an individual's occupation, which is often used by government programs and community-based organisations as an administrative reference.

farmers. In rural communities in Salupadang, the position of head of the family is socially and administratively attached to men, so women are likely to be excluded from obtaining formal recognition as forest management rights holders and from participating in institutional decision-making processes. These administrative requirements, which work through a formal definition of who is recognised as a farmer and head of household, control who has access to social forestry. Gender inequality arises at several stages in the process of obtaining social forestry management rights. The recruitment process for members of KTH Tuomera[66] makes it difficult for women to become members because members must own land in the area and their occupation must be listed as a 'farmer' on their Identity Card (KTP). Although the Regulation of the Minister of Environment and Forestry No. 4 of 2023 formally provides equal opportunities for women and men to participate in social forestry groups, these provisions are not always reflected in local membership recruitment.[67] In rural Indonesia, control over land, agricultural decision making and formal recognition as farmers are usually registered under male heads of households, indirectly limiting women's eligibility to membership of KTH Tuomera.

Assigning the occupation of 'farmer' solely to men discriminates against women who also work as farmers. Women's agricultural work is considered by state programs and the local community as family assistance rather than formal farming, while government policy states that only farmers have access to the group. Also, KTH membership requires the status of head of the family, indirectly reinforcing exclusion of women and youth, and people with disabilities- in social forestry (Table 1).

Policy dissemination process (Sosialisasi) *and gender norms*

Sosialisasi is the term used for the initial dissemination stage when government representatives from the Ministry of Forestry gather with local communities, to explain the social forestry policies that will involve communities. Those who attend these meetings should represent all those who will use the forests, but women, young people and households who do not own land in the forest are excluded. Women who attend come to prepare food, or to represent their husbands who are working in the fields, or simply to meet the required number of participants. Tati, a 58-year-old woman from Parang Hamlet commented: 'What is social forestry? We don't know (*apa ramo tu'u?, apana jo na kami di issen i*). At that meeting, we didn't listen much to what was discussed, only about the protected forest. Since we were mothers, when we knew there was going to be a meeting, we went straight to the kitchen, busy cooking dishes for the guests.'[68]

This is a form of symbolic participation: women are present at community meetings but have limited influence in decision-making. Control over social forestry management operates through the distribution of information and decision-making space that is more

[66] Tuomera (pseudonym) is the name of the Forest Farmer Group (KTH) formed in Salupadang Village and is the focus of this research.

[67] Ministry of Environment and Forestry of the Republic of Indonesia, *Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 4 of 2023 concerning Social Forestry Management* (2023), art. 10(8)(a).

[68] In-depth interview with Tati (pseudonym), female, 58 years old, Salupadang Village, Enrekang Regency, 8 December 2023.

accessible to men. The presence of women functions symbolically rather than substantively.[69] However, women's presence in support activities is often considered evidence of inclusion, although women are excluded from the actual decision-making processes, any control over resources, and access to benefits of higher economic value. Gender equality is based on the standards set by male-dominated institutions, rather than on the experiences and aspirations of women themselves.

Exclusion is not only experienced by women but also by other social groups. Young people and people with disabilities have never attended or received any information about these community information meetings. These meetings are to provide information about the proposed social forestry areas (forests that were previously protected), which they also use to earn a living by collecting forest products such as palm and bamboo. The control of the information and decisions taken about their living space are limited to men with strategic positions in society.[70]

Achieving gender equity in social forestry requires more than just increasing the number of women in meetings. Gender equity also requires a change in who determines how participation, representation, and benefits are defined and distributed. Without changes to these control relationships, women's involvement is only symbolic.

KTH member recruitment process

Initially, a series of *sosialisasi* were held by the Enrekang Regency Government to inform the community, about the mechanism for managing the proposed social forestry areas and technical details of what would happen next. The government handed over the recruitment process for KTH members, to encourage the independence of communities around protected forest areas. Recruitment of KTH members is managed independently by the communities from the two hamlets closest to the protected forest area which will later be managed, maintained and utilised through the HKm scheme.

In the recruitment process led by the Heads of Tanete and Parang Hamlets, criteria were set for prospective members of KTH. They must be the head of a household; have 'farmer' as occupation on their ID cards; and own land in a protected forest area. Men consider themselves the main decision-makers in the household and are legally entitled to become members when they have the status of 'farmer' on their identity card (KTP). But members also needed to meet the third criterion, owning land in a forest area. This criterion excludes women who are heads of households, women, young people and people with disabilities who also contribute to maintaining forests sustainably and utilising forest products. In this context, institutional control shapes who are legally recognised as those who can manage forests.

'Because at that time it was considered that there was already representation in one household, a man was recruited because he was the head of the household and his status was that of a farmer.'[71] This quote from Sunan, a 56-year-old man suggests that this assumption reinforces men's role as decision-makers and excludes women in the household.

[69] Emanuela Lombardo and Petra Meier, *The Symbolic Representation of Gender: A Discursive Approach* (Ashgate, 2014), 3–4.

[70] Author's field notes from community discussions on social forestry management, Salupadang Village, Enrekang Regency, 22 April 2024.

[71] Informal conversation with Sunan (pseudonym), 8 April 2024.

In fact, widows who are heads of their households were not recruited, because all 27 members of the Forest Farmer Group finally recruited were men. Besides women heads of households, these criteria also exclude others such as young people, and landless communities in social forestry sites. In addition, KTH membership is open only to those who have a history of land ownership in the village, determined through lineage and knowledge of origin and descent.

'Those who were not included among the 27 members were excluded because their claims to ancestral land within the forest area could not be verified. By contrast, those whose names appeared on the membership list were recognised as having well-established ancestral claims to land in the forest.[72] A quote from Salun, a 55-year-old man, shows that in addition to gender factors, heredity is also important. Only descendants of families or relatives who have previously settled and cultivated land in protected forest areas can become members of KTH. In addition, the lack of involvement of young people and other communities who also live around the HKm area of Salupadang Village is because they are not informed about forestry management permits. Because they do not own a household and have no dependents, it is assumed that they do not have the right to manage land. So, only men as heads of households can be members of Forest Farmer Groups.

'I went to the garden at that time with my son and wife, so we didn't know any information about the protected forest. All I knew was that people had already taken their ID cards (to register). If I had known that was the reason I would have joined too.'[73] Zinud, a 54-year-old man, recalls how he was not told about the KTH member recruitment process. This is because he spends a lot of time in his small plot. 'Actually, many people in this hamlet want to join; it's just that when the ID cards were collected, they were in the garden or field. The appeal to bring the ID was made in the mosque, so they didn't know.'[74]

Oda, a 57-year-old farmer, explains how he became involved in the membership registration process without being informed of its purpose or how members would be selected. 'At first, I was only told that our identity cards were being collected. I wasn't told what they were for. Later, I heard that the ID Card was an administrative requirement for membership, but I still didn't actually know who would become members. As far as I can remember, only about five or six people from Tanete hamlet were selected.'[75]

KUPS formation

Within the social forestry scheme, local communities organise economic activities through Forest Farmer Group Business Units (*Kelompok Usaha Perhutanan Sosial*/KUPS). The establishment of a KUPS is one of the stages that must be carried out after the collection of the names of prospective KTH members. In Salupadang, the KUPS were formed through deliberations that have been conducted regularly since 2019. KTH Tuomera manages four units, namely KUPS Gollamalea, KUPS Macanning, KUPS Smullung, and KUPS Agroforestri.

[72] Salun (pseudonym), interview, 3 December 2023.

[73] In-depth interview with Zinud (pseudonym) (male, 35 years old), Salupadang Village, Enrekang Regency, 27 March 2024.

[74] Zinud (pseudonym), interview, 27 March 2024.

[75] In-depth interview with Oda (pseudonym) (male, 57 years old), Salupadang Village, Enrekang Regency, 3 December 2023.

Among the four KUPs, only the KUPS Gollamalea has a membership of all women, 10 in total, while the other three KUPS are all male members (Tables 1 and 2).

Table 1. Social Forestry Business Groups (KUPS) Before Organisational Restructuring

Social Forestry Business Group (KUPS)	Main Activities	Male Members	Female Members	Youth Members (Young People)	Members with Disabilities	Total Members
Agroforestri Tuomera	Management of agroforestry commodities, including fruit trees, coffee, and candlenut	22	0	0	0	**22**
Madu Macanning	Production & marketing of forest honey	11	1	0	0	**12**
Aren Tuomera	Management and processing of sugar palm products	12	0	0	0	**12**
Pariwisata Smullung	Development of forest-based ecotourism, including waterfall and cave attractions	12	1	0	0	**13**

Source: Authors' fieldwork (2023).

Source. Author's adaptation based on the internal meeting minutes (*berita acara*) of the Tuomera Forest Farmer Group (KTH Tuomera Pseudonym).

Table 2. Social Forestry Business Groups (KUPS) After Organisational Restructuring

Social Forestry Business Group (KUPS)	Main Activities	Male Members	Female Members	Young Members (Youth)	Members with Disabilities	Total Members
Agroforestri Tuomera	Management of agroforestry commodities, including fruit trees, coffee, and candlenut	22	0	0	0	**22**
Madu Macanning	Production & marketing of forest honey	11	1	0	0	**12**
Gollamalea	Manage palm sugar production and process value-added products, such as liquid palm sugar	0	8	3	0	**11**
Pariwisata Smullung	Development of forest-based ecotourism, including waterfall and cave attractions	12	1	0	0	**13**

Source: Authors' fieldwork (2023).

Source. Author's adaptation based on the internal meeting minutes (*berita acara*) of the Tuomera Forest Farmer Group (KTH Tuomera Pseudonym) and Field Notes.

Although KUPS were established to increase community participation and expand the economic benefits of social forestry, their membership composition reveals persistent gender inequalities. Among the 37 members involved in the four KUPS, only two are women. See Table 1 above, while youth and women heads of households are not represented. This pattern suggests that opportunities created through social forestry institutions are not equally accessible to all community members. As KUPS function as an important mechanism for accessing livelihood opportunities, program support, and economic benefits, the exclusion of women from membership limits their ability to participate in decision-making processes and benefit from social forestry initiatives. These findings indicate that gender inequality in social forestry is not confined to access to management rights but also extends to institutions such as KUPS through which benefits and opportunities are distributed.

Those who are not members are also unable to access aid from the government. Members of associated business entities (KUPS) must come from the families of KTH members. KUPS members get capital and production inputs, as well as training; women are excluded from receiving these benefits, unless they are family members of KTH members.

To increase women's participation, the non-governmental organisation KAPABEL conducted a community adaptation program in the Saddang watershed. This involved a change in the structure of one of the business entities (KUPS) to involve more women—a decisionthat was made with the approval of the male group members. Men were also involved in decisions about the choice of activities for the female members of the KUPS. For example, Sunan, a 56-year-old male member of KTH Sipatao commented about the formation of KUPS Gollamalea: 'Actually, KUPS can process products from palm sugar (such as liquid sugar), and this is fitting for women members (*Ibu*) as it resembles their domestic tasks.'[76]

The establishment of Gollamalea KUPS reflects the dynamics of women's involvement in implementing social forestry programs in Salupadang Village. KUPS Gollamalea was formed two years after KTH Tuomera obtained a social forestry management permit. In 2021, the associated business entity, KUPS Aren Tuomera, then became a female-based business entity, KUPS Gollamalea. The formation of this KUPS emerged after a discussion between the community and local non-governmental organisations regarding the importance of women's involvement in social forestry programs. Before the change, men dominated the organisational structure of KTH Tuomera and all KUPS under its auspices, including the previous KUPS, both in membership and management structures.

Female membership of social forestry enterprises (KUPS) is limited to the wives or daughters of members of forest farmer groups or their relatives. There is no opportunity for women whose husbands are not members of KTH or women heads of households to be involved in KUPS Gollamalea. Women's involvement in KUPS Gollamalea shows that control over resources and production decisions remains male-dominated; a form of inclusion that is limited in its transformative capacity.

For women formally involved as members of KUPS, the roles assigned to them are related to activities attached to women's domestic responsibilities, such as food processing and household-based production activities, including the production of liquid palm sugar. The raw material for palm sugar is tapped by male sap tappers, and as such control of resources and the production chain is dominated by men. The formation of KUPS Gollamalea does not challenge existing gender norms, the sexual division of labour emphasises women's domestic roles in comparison to male public roles.

[76] Oda (pseudonym), interview, 8 April 2024.

Women's involvement in social forestry can increase women's economic and public participation while simultaneously reproducing and strengthening existing unequal gender relations rather than fundamentally transforming them. This study suggests that women's limited access to the benefits of social forestry is not only due to the absence of formal opportunities, but also to control mechanisms that work through membership rules, kinship relationships, and institutional structures that determine who is entitled to be involved in social forestry. Women's access to KUPS cannot be understood separately from the control relations that shape and limit such access.

Benefits of social forestry

Individual and group positions strongly influence the distribution of social forestry benefits in the institutional structure. Benefits received are inseparable from the ways in which access to management rights and participation in decision-making are initially established. Women face difficulties strengthening their role in social forestry management because they are repeatedly excluded from the positions that shape access, participation, benefits, and control. One woman commented on how the value of what she and other women receive differs from what male members receive.

> My husband received assistance of seeds and cattle through KTH. He heard information about the program from someone who came to his house. Thanks to this assistance, some of those seedlings are ready to be planted in the forest, and many of them are gone for the day to do this. We women are in the palm sugar production section at KUPS Gollamalea and we received only cooking utensils for production.[77]

Although the establishment of KUPS creates opportunities for women's involvement in economic activities, the benefits received by women tend to be related to household-scale forest product processing activities, such as the production of liquid palm sugar and activities related to food processing. These activities do provide additional income for women, but it is relatively small compared to the benefits received by KTH members who have direct access to land and various forms of program assistance.

Men who are registered as members of Forest Farmer Groups (KTH) as well as holders of Community Forest (HKm) management rights have greater opportunities than women and other non-members to obtain benefits provided through social forestry programs. In addition to having certainty around access to land in the long term, members most often receive program benefits such as forestry plant seed assistance, plantation seedlings, and livestock in the form of cows and goats. These benefits have relatively high economic value and the potential to generate profits long-term. Ownership of commodity-producing trees such as teak, mahogany, and other perennials also provides opportunities for the accumulation of assets that can be inherited or utilised in the future. As Sunan explained,

> During the five years that KTH Tuomera has been running, we have received seeds, trees and cows. This is the third cow. So each member of KTH will get a cow, but the system is we take turns, so the cow given is raised and then mated and then later if there are any calves they are cared for until they are ready for breeding and then handed over to the members next in line to get a cow; this is the cow that I got; it has grown up and the calf has been handed over to another member.[78]

[77] Field notes, interaction with Suti (pseudonym), 20 January 2024

[78] Field notes, interaction with Sunan (pseudonym), 20 March 2024.

Table 3. Relative benefits flowing to male and female participants in KTH Tuomera

Benefits Obtained	
Men	**Women**
Forest Area Management Rights for 35 Years	Production Rights of Palm Sugar into Liquid Palm
Cow	Medicinal plants
Teak Seeds	Corn Crop
Mahogany Seedlings	Chili
Machinery/Tools	Production tools

Source. RKPS document KTH Social Forestry Management Plan Tuomera and Field Notes

Table 3 shows the difference in opportunities for men and women. Men are more likely to grow commodities that have high economic value and a strong market orientation, such as timber, plantation crops, and they raise livestock. Meanwhile, women are more involved in managing household plants, medicinal plants, vegetables, and post-harvest activities that function to meet daily household needs. Although women's contributions are critical to household food security and the sustainability of daily life, these types of activities do not have economic returns on a par with male-managed commodities.

These findings suggest that the flow of benefits of social forestry is strongly influenced by social and institutional mechanisms that determine who is recognised as the holder of management rights, who has access to productive resources, and who is involved in the decision-making process. In Salupadang Village, men are more likely to have positions that allow them to obtain long-term economic benefits because they are recognised as key members of KTH and holders of management rights. Alternatively, women are placed in supporting positions through KUPS and household-based production activities.

Conclusion

I explored how gender relations shape women's access to land management, participation in social forestry institutions, and their ability to obtain benefits from social forestry programs in Salupadang Village. The findings demonstrate that gender inequality in social forestry is shaped through control relations that operate across multiple stages of social forestry governance. From the dissemination process (community information meetings), recruitment of Forest Farmer Group (KTH) members, and institutional formation, women face barriers to becoming recognised rights holders and decision-makers within social forestry.

Administrative requirements such as head-of-household status, land ownership, and formal recognition as farmers, together with gender norms that position men as primary decision-makers, have restricted women's access to forest management and participation in social forestry institutions. As a result, women are more frequently positioned as supporters of social forestry activities rather than as equal actors with authority over decision-making

and resource management. Gender inequality is also reflected in the distribution of benefits. Men, as formal KTH members, gain legal management rights, assistance with livestock and higher-value crop seedlings, and access to a range of program benefits. In contrast, women are largely involved in household-based production activities through KUPS and they receive benefits that generate lower economic returns. These unequal outcomes are not merely the result of differences in participation, but stem from broader control relations that determine who is formally recognised, who gains access to resources, and who is entitled to receive benefits.

Based on these findings, our study has contributed to feminist political ecology and gender studies in social forestry by demonstrating that gender inequality is produced through the interaction of local patriarchal norms and institutional mechanisms of state-led social forestry governance. My findings show that formally inclusive policies can continue to reproduce gender inequality when implementation mechanisms are embedded within existing gendered power relations. I have contributed to the development of the Gender Analysis Pathway (GAP) framework by moving beyond the treatment of control, access, participation, and benefits as separate analytical indicators. Instead, we demonstrate that control relations simultaneously shape access, participation, and the distribution of benefits. These findings suggest that increasing women's numerical participation alone is insufficient to achieve inclusive social forestry programs without addressing the institutional arrangements and decision-making structures that continue to reproduce gender inequality.

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