

WOMEN BEHIND RUBBER SAP: GENDER STRUGGLE IN PLANTATIONS EAST SUMATRA DURING THE COLONIAL PERIOD

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Abstract

The development of rubber plantations in East Sumatra during the colonial period absorbed a lot of workers, including women. In an unequal work structure, women occupy the most vulnerable positions. This study aims to analyze the experience, gender inequality, and survival strategies of women workers in rubber plantations during the colonial period. The methods used are historical methods, including heuristics, source criticism, interpretation, and historiography. Data sources come from colonial archives such as *Memorie van Overgave*, *Staatsblad van Nederlandsch-Indie*, *Algemeene Secretarie*, *Koloniale Verslag*, and newspapers. The study highlights the injustices experienced by women workers, such as low wages, long working hours, separation from family, sexual exploitation, and harsh punishment. Gender inequality is not only evident in the division of labor, but also from the systemic exploitative practices hidden behind the productivity narrative. These findings show that gender-based power relations formed the face of injustice in East Sumatra rubber plantations during the colonial period. Through the Women Behind Rubber case study, this research offers a new perspective on gender dynamics in an exploitative economic and political context. The main contribution of this research is its ability to connect past history with contemporary issues related to gender equality and workers rights. Its implications are highly relevant to our current efforts in addressing gender inequality in modern industrial sector, as well as promoting more inclusive and pro-women policies.

Keywords: Gender, women workers, rubber plantations, colonial, East Sumatra

Background

The colonial exploitation of Indonesia's natural resources fundamentally transformed both economic structures and social hierarchies, with women bearing disproportionate burdens within these systems of domination. The establishment of rubber plantations in East Sumatra, initiated by

Deli Maatschappij in 1906 and commercially developed across the afdeling of Deli, Langkat, and Serdang, exemplifies how colonial capitalism relied heavily on gendered labor exploitation¹. Behind every drop of rubber sap that fueled the colonial economy stood women workers whose contributions remained systematically undervalued and largely invisible in historical narratives.

¹ Lukitaningsih and Soegianto Padmo, 'Women Workers in East Sumatra Rubber Plantations 1900-1940', *Journal of Humanika*, 17.1 (2004), p. 43.

The surge in international rubber demand during the early twentieth century prompted extensive plantation expansion throughout East Sumatra, creating an industrial agricultural system that strategically incorporated women as essential yet expendable labor. The gendered dimensions of this exploitation became particularly evident following the implementation of the Koeli Ordonnantie in 1880, when large plantations on Sumatra's east coast began systematically recruiting female workers, primarily from Javanese and Chinese communities. These women found themselves trapped within intersecting systems of colonial domination, capitalist exploitation, and patriarchal control that rendered them simultaneously indispensable to production and vulnerable to abuse².

Within the intricate labor hierarchy of rubber plantations, women occupied positions that colonial administrators and plantation owners characterized as "light work" – a designation that masked the physically demanding and skillful nature of tasks such as rubber tapping, latex collection, seedling cultivation, and plantation maintenance. This gendered division of labor reflected broader colonial ideologies that justified paying women approximately 25 percent less than male workers while subjecting them to more stringent behavioral controls. The seemingly technical process of rubber extraction thus became a site of profound gender struggle, where women's bodies and labor were commodified within colonial economic structures³.

International scholars on plantation labor systems has revealed similar patterns of gendered exploitation across Southeast Asian colonies. Claire's groundbreaking analysis of Chinese

indenture on rubber estates in interwar British Malaya demonstrates how colonial administrators maintained exploitative labor systems despite official abolition policies, while studies of Vietnamese rubber plantations reveal systematic family separation strategies designed to prevent worker flight⁴. Cross-regional comparative research by Martinez on Pacific cocoa plantations illuminates how colonial powers utilized racialized and gendered hierarchies to maximize labor extraction across diverse geographical contexts⁵. These studies collectively demonstrate that women's experiences in East Sumatran rubber plantations were part of broader colonial strategies of labor control and exploitation that extended throughout the Asian colonial world. However, in some types of work, such as tapping, rubber tree nursery work, tobacco leaf sorting, and other light but high-precision work, women are considered to be more meticulous and suitable for these tasks. This has led plantation owners to specifically recruit women to fill these positions, despite the low wages and minimal protection⁶.

Women are generally assigned to jobs that are considered light, but in reality require endurance and physical strength. In the rubber plantation work structure, the division of labor is heavily influenced by hierarchical and discriminatory colonial power relations. Women are generally assigned to jobs that are considered light, but in fact require high physical endurance, such as tapping, planting, transporting latex, cleaning the plantation, and performing maintenance work. They receive wages that are much lower than male workers and have almost no access to social protection or decision-making positions. These conditions reflect how colonialism not only

² Chiara Formichi, 'The Modernity of Tradition: Women and "Healthy Progress" in Late Colonial Java and Sumatra', *Modern Asian Studies*, 56.6 (2022), pp. 1983–2017, doi:10.1017/S0026749X21000627.

³ Danielle Teeuwen, 'Recruitment Policies, Wages and Working Conditions of Javanese Contract Labourers in Sumatera 1870-1940', *The Low Countries Journal of Social and Economic History*, 19.1 (2022), pp. 1–35.

⁴ Claire Lowrie, 'Exceptions to the Abolition of Chinese Indenture: Chinese Workers on Rubber Estates in

Interwar British Malaya', *Slavery & Abolition*, 45.3 (2024), pp. 541–61, doi:10.1080/0144039X.2024.2344393.

⁵ Julia T Martínez, 'Cultivating Pacific Cocoa: Chinese Plantation Labor in Colonial Era Samoa and Vanuatu', *Journal of Social History*, 58.4 (2025), pp. 622–45, doi:10.1093/jsh/shae027.

⁶ Teeuwen, 'Recruitment Policies, Wages and Working Conditions of Javanese Contract Labourers in Sumatera 1870-1940'.

exploits natural resources, but also reinforces gender and class inequalities in the plantation economic system⁷.

Contemporary scholarship has begun to illuminate the complex dynamics of women's plantation labor, yet significant gaps remain in understanding the specific mechanisms through which gender inequality was constructed and contested within East Sumatra's rubber industry. Recent comparative studies by Sinaga examining Indonesia's colonial and contemporary plantation labor regimes demonstrate remarkable continuities in exploitative practices, while feminist analyses of oil palm plantations reveal how female workers, termed "buruh siluman" (ghost workers), remain central to maintaining cheap and disciplined labor relations⁸. And so Morgan's research on women's participation in protests against oil palm expansion highlights how contemporary Indonesian women continue to contest plantation encroachment, suggesting persistent patterns of resistance that echo colonial-era struggles⁹. Recent theoretical developments in postcolonial gender studies emphasize the complex intersections between gender identity, colonial power, and resistance, providing new analytical frameworks for understanding historical women's experiences.

Historical evidence reveals that women's experiences of colonial plantation life were far from uniform or passive¹⁰. Archival documents from the *Memorie van Overgave* reports, Colonial *Verslag* records, and contemporary newspapers such as *Pewarta Deli* and *Sinar Deli* demonstrate

diverse forms of resistance employed by female workers¹¹. Some engaged in overt forms of protest including work stoppages, contract refusals, and collective action, while others developed subtle strategies of resistance such as work slowdowns, mutual aid networks, and informal labor organizing¹². These acts of defiance, though often overlooked in official colonial records, represent crucial forms of agency that challenge narratives of women as merely passive victims of exploitation¹³.

Even though women have played an important role in the production process on rubber plantations in East Sumatra since colonial times, their position has often been marginalized in the prevailing work structure and power relations. Insufficient recognition of their contributions, exploitative working conditions, and the dominance of patriarchal and colonial systems are the main obstacles preventing women from obtaining rights, fair wages, and social protection.

These concerns raise the following questions: How are women's positions and roles shaped within the rubber plantation labor system? How do they experience and respond to gender inequality in the context of colonialism? And what survival strategies do female rubber workers in East Sumatra employ?

The theoretical framework for understanding women's struggles within colonial rubber plantations requires interdisciplinary approaches that integrate gender theory, Marxist labor analysis, and postcolonial studies. Judith Butler's conceptualization of gender as performative social

⁷ Lukitaningsih and Padmo, 'Women Workers in East Sumatra Rubber Plantations 1900-1940'; Iyos Rosidah, 'The Exploitation of Women Workers in the Deli Plantation of East Sumatra 1870-1930', preprint, 2012.

⁸ Hariati Sinaga, 'Buruh Siluman: The Making and Maintaining of Cheap and Disciplined Labour on Oil Palm Plantations in Indonesia', in *Bioeconomy and Global Inequalities* (Springer International Publishing, 2021), pp. 175-93, doi:10.1007/978-3-030-68944-5_9.

⁹ Miranda Morgan, 'Women, Gender and Protest: Contesting Oil Palm Plantation Expansion in Indonesia', *The Journal of Peasant Studies*, 44.6 (2017), pp. 1177-96, doi:10.1080/03066150.2017.1300579.

¹⁰ Junaidi, 'Weaving Hope in Tanah Deli: Life and Healthcare of Plantation Workers in the East Sumatra's

Plantation Belt, 1870-1940', *Journal of Historical Medicine*, 7.2 (2023), pp. 1-10.

¹¹ Budi Agustono, Kiki Maulana Affandi, and Junaidi, 'Benih Mardeka and Plantation Workers in East Sumatra, 1916-1923', *Kasetsart Journal of Social Sciences*, 45.1 (2024), pp. 225-34, doi:10.34044/j.kjss.2024.45.1.23.

¹² Maiza Elvira, Fatima Gay J. Molina, and Anne Van der Veer, 'Women in the Middle of the Wild Life in the East Sumatra Plantation 1880-1940', *HUMANISMA: Journal of Gender Studies*, 7.1 (2023), p. 91, doi:10.30983/humanisme.v7i1.6276.

¹³ Elsbeth Locher Scholten, 'The Nyai in Colonial Deli', in *Women and Mediation in Indonesia* (BRILL, 1992), pp. 265-80, doi:10.1163/9789004487765_017.

construction proves particularly relevant for analyzing how colonial authorities and plantation managers reinforced specific gender roles through institutional practices and cultural norms. Within the context of colonial society, these gender constructions operated alongside imperial power relations and capitalist exploitation to create multiple layers of subordination that women workers were forced to navigate daily.

Feminist scholars, particularly those following Abeyasekere's analytical framework, emphasize the importance of examining women's agency within structures of domination¹⁴. This perspective recognizes that women's responses to exploitation – whether through direct resistance, survival strategies, or community building – represent forms of political action that challenge dominant power relations. Such analysis moves beyond victimization narratives to explore the complex ways women carved out spaces of autonomy and resistance within seemingly totalizing systems of control¹⁵.

Marxist labor theory provides additional analytical tools for understanding how colonial rubber plantations operated as sites of capitalist accumulation built upon exploited labor. The gendered dimensions of this exploitation reveal how capitalist systems strategically utilize existing social hierarchies to maximize profit extraction while minimizing labor costs. Women workers in rubber plantations thus experienced what can be understood as compound exploitation – simultaneously oppressed as workers within capitalist relations and as women within patriarchal structures¹⁶.

This research addresses critical lacunae in historical scholarship by centering women's experiences and agency within East Sumatra's colonial rubber industry. Through systematic analysis of primary sources including plantation records, government correspondence, colonial newspapers, and administrative reports, this study reconstructs the complex realities of women's plantation labor. The methodology employs qualitative case study approaches that prioritize women's voices and experiences while situating individual stories within broader patterns of colonial exploitation and resistance.

Result and Discussion

The Construction of Women's Roles in Rubber Plantation Labor Systems

The position and role of women workers in East Sumatra's rubber plantations were socially constructed within a hierarchical colonial capitalist system. The expansion of industrial capitalism in plantation areas during the late 19th century attracted significant foreign investment, particularly from the United Kingdom, Belgium, and the United States. The East Coast of Sumatra, known as *Cultuurgebied*, transformed from vast jungle territories in the 1860s into the world's premier plantation region, encompassing more than 300 separate plantations employing over 500,000 workers producing export commodities including tobacco, rubber, tea, palm oil, and pineapple fiber¹⁷.

Plantation owners strategically identified female labor to reduce operational costs through lower wage payments¹⁸. Beyond economic considerations, the increasing global demand for rubber necessitated recruiting workers perceived

¹⁴ S Abeyasekere, 'Women as Cultural Intermediaries in Nineteenth Century Java', in *Women Work and Women Roles: Economics and Everyday Life in Indonesia, Malaysia and Singapore*, ed. by L Maderson (Australia National University, 1983), p. 35.

¹⁵ Sam Harrell and others, 'Feminist Research and Practice: Reorienting a Politic for Social Work', in *Rethinking Feminist Theories for Social Work Practice*, ed. by Christine Cocker and Trish Hafford Letchfield (Palgrave Macmillan Cham, 2022), pp. 59–76.

¹⁶ Frederick Engels and others, *Capital A Critique of Political Economy Volume I Book One: The Process of Production of Capital* (1995).

¹⁷ Thee Kian Wie, *Plantation Agriculture and Export Growth: An Economic History of East Sumatra 1863-1942* (National Institute of Economic and Social Research, 1977).

¹⁸ Arif Budiman, *Sexual Division of Labor: A Sociological Discussion of the Role of Women in Society* (Gramedia, 1985); Danielle Teeuwen, 'Plantation Women and Children', *TSEG - The Low Countries Journal of Social and Economic History*, 19.1 (2022), pp. 7–36, doi:10.52024/tseg.8431.

as diligent, meticulous, and obedient—characteristics colonial administrators stereotypically attributed to women¹⁹. Initially, plantations recruited Chinese women who were spouses of male workers. However, as rubber cultivation expanded, systematic recruitment of women as full-time laborers commenced, with women hired under the same contractual status as male workers through three primary channels: commercial and non-commercial agents, direct plantation recruitment, and free recruitment²⁰.

Table 1. Number of Workers Departed from 3 Ports on the Island of Java 1916-1917

Gender & Exs	Port and number of workers dispatched			
	Batavia	Semarang	Surabaya	Jmlh
Man	7.415	3.828	5.786	17.029
Woman	4.021	2.702	6032	12.755
Family	347	655	158	1.160

Source: Vincent.J.H.Houbben, p 42

Table 1 demonstrates that male workers constituted the majority of recruited labor (17,029 individuals), compared to female workers (12,755) and family units (1,160). Batavia served as the primary embarkation port, followed by Surabaya and Semarang.

The recruitment of Javanese women workers is carried out by commercial agents who are sought directly to Java, especially in the countryside through *werek* intermediaries using the influence of the village head²¹, by providing *voorschot* as an attraction so that Javanese women are willing and willing to work in rubber plantations. They do not realize that *the voorschot* must be returned after working and earning wages, if it is not returned it will be subject to criminal sanctions²².

The recruitment of women workers carried out by *the werék*, and the labor mobilization network uses many methods of violence, coercion

and fraud, many women are tempted to sign contracts because they are consumed by promises of great profits in the form of money and *voorschot*, with which they can pay their debts and family living expenses. Recruitment in this way is quite effective because it can recruit many women. In 1900 the number of female workers was 5000 people working in rubber plantations, in 1905 it increased to 7500, and in 1910 it increased to 15,315 people²³. In 1930 the number of female workers reached 64,471 people. Comparison of the number of male and female contract workers in East Sumatra rubber plantations.

Table 2. Comparison of the number of male contract workers-Men and Women 1908-1940

Year	Number of contract workers		Bandage % ratio
	Man	Woman	
1908	102,119 people	10,315 people	1: 9,90
1915	246,023 people	35,134 people	1:7,00
1920	250,822 people	86,470 people	1: 2,90
1925	270,120 people	89,120 people	1: 3,03
1930	123,597 people	64,471 people	1: 1,91
1935	157,230 people	71,230 people	1: 2,20
1940	222,567 people	68,235 people	1: 3,26
Stuttgart	1,372,478 org	424,975 org	1: 3,22

Source: *Verslag Arbeidsinspectie* 1908-1940

The gender ratio analysis reveals significant temporal patterns. In 1908, extreme inequality existed with only one female worker per ten male workers. The ratio reached its most equitable point in 1930 (1:1.91), nearly achieving one woman for every two men. Post-1930, the ratio widened again, indicating declining female labor participation relative to males.

During 1908-1920, while male worker numbers increased dramatically, female workers grew more sharply in percentage terms (from

¹⁹ 'Jaar Verslag Avros', preprint, 1914, p. 5.

²⁰ V J Houben and J Thomas Lindblad, *Coolie Labour in Colonial Indonesia: A Study of Labour Relations in Outer Island, 1900-1940* (Harrassowitz Verlag, 1999).

²¹ R Broersma, *East Coast of Sumatra, Vol II: De Développement van Het Geregion* (Charles Dixon, 1922).

²² 'Koloniaal Verslag', preprint, 1921, p. 75.

²³ 'Koloniaal Verslag', preprint, 1920, p. 85.

10,315 to 86,470), significantly narrowing the gender ratio. The period 1920-1930 witnessed peak female worker involvement (approaching 1:2 ratio), driven by post-World War I labor demands and expanding tire manufacturing industries requiring increased rubber production. The 1930-1940 period saw male worker numbers recover following the 1930 decline caused by the 1928 global economic crisis, while female workers began declining after peaking in 1935, with the ratio widening due to shifting colonial policies and economic pressures.

Widespread violations in recruitment practices prompted government intervention through the 1914 *Wervings Ordonnantie* (Labor Recruitment Law)²⁴, which mandated recruitment agency permits, formal employment contracts, and prohibited employment agreements with women under 16 years²⁵. These legal provisions simultaneously shaped women's structural positions within plantation hierarchies, reinforcing gendered labor divisions.

Gendered Division of Labor in Plantation Systems

Gender-based labor division refers to task allocation based on perceived gender appropriateness rather than individual capability. Within plantation systems, men received assignments in technical and physically demanding work, while women predominantly filled support positions in activities such as crop maintenance, yield collection, and rubber tapping work characterized as "light" yet requiring significant endurance and precision.

The colonial-era plantation work structure divided labor hierarchically based on race, class, and gender. Women occupied the lowest

hierarchical positions, performing menial tasks under low wages and strict supervision²⁶. Though often characterized as complementary to male labor, women functioned as production backbones, particularly in fertilization, tapping, and nursery work. These roles emerged not naturally but through social, economic, and cultural constructions embedded within hierarchical patriarchal labor relations²⁷.

According to Beckford's classification, plantation workers were rigidly stratified by race, skin color, and gender. The highest tier comprised Dutch, British, and American employees occupying administrative and staff positions, predominantly male. Lower tiers included Chinese, Indian, and Javanese workers serving as foremen, manual laborers, and clerks—both male and female²⁸. The lowest stratum consisted of plantation field workers and rubber factory laborers.

Plantation management determined work assignments and placements for female workers, wielding power derived from employment contracts. Employers differentiated and grouped women by ethnicity and work characteristics²⁹. For example, Chinese women traditionally transported rubber storage containers using two baskets suspended from shoulder poles, while Javanese women carried containers on their heads. Plantation managers favored Chinese workers' efficiency but preferred Javanese laborers for their lower tendency to complain and significantly reduced contract costs, particularly transportation expenses³⁰.

According to Lulofs, Javanese women in early 20th-century East Sumatran rubber plantations worked as rubber tappers, nursery workers, and fertilizer applicators from morning

²⁴ 'Koloniaal Verslag Arbeidsinspectie', preprint, 1940.

²⁵ Lukitaningsih and Padmo, 'Women Workers in East Sumatra Rubber Plantations 1900-1940'.

²⁶ 'Koloniaal Studien', preprint, 1922.

²⁷ Ann Laura Stoler, *Capitalism and Confrontation in the Sumatran Plantation Belt 1870-1979* (Yale University Press, 1985).

²⁸ George L Beckford, *Persistent Poverty* (Oxford University Press, 1972).

²⁹ Vereeniging Voor Den Rubber Handel, 'Nipa's Koloniaal Archief III', preprint, 1918.

³⁰ Jan Breman, *Taming the Coolie Beast: Plantation Society and the Colonial Order in South East Asia* (Oxford University Press, 1989).

to evening, paid based on tapping quantities, and frequently subjected to physical and sexual exploitation³¹. While men could access positions in transportation, forest clearing, and rubber factories, women rarely advanced to strategic positions. Female workers performed tasks including tapping, land preparation, nursery work, maintenance, and domestic service for plantation managers.

Organizational Structure and Labor Hierarchy

The plantation organizational structure featured clear task divisions with labor placement according to social class. Each rubber plantation unit operated under an administrator's leadership, assisted by controllers (staff employees supervising plantation activities)³². Controllers oversaw multiple division heads including rubber planting, engineering, factory operations, and administrative staff sections. Section heads supervised assistants with direct field authority, who in turn managed ethnic-specific foremen (Javanese and Chinese male workers) according to work type: nursery foremen, maintenance foremen, tapping foremen, processing foremen, and factory foremen. The lowest hierarchy consisted of plantation laborers and factory workers³³.

Plantation managers divided work groups ethnically to maintain optimal efficiency through labor heterogeneity, which simultaneously facilitated cooperation while preventing solidarity formation among workers³⁴. Women workers found employment in nurseries, rubber plant care, tapping, factory work, warehouses, and domestic service. Female workers were perceived as possessing greater perseverance and precision compared to male workers, though assigned work

characterized as light frequently proved more laborious and lower-paid³⁵.

Gender Inequality in Colonial Rubber Plantations

Gender inequality within rubber plantations manifested across multiple dimensions including resource access, economic opportunities, and social-cultural roles³⁶. This inequality profoundly impacted women's lives, contributing to poverty, economic dependence, and limited health access.

Wage Discrimination and Economic Injustice

The wage payment system in East Sumatran rubber plantations operated according to standards approved by AVROS (*Algemene Vereeniging van Rubberplanters ter Oostkust van Sumatra*) and DPV (*Deli Plantersvereniging*)³⁷. Female workers received substantially lower wages than male counterparts despite performing equivalent or more demanding work, with the contract labor system restricting women's wage advancement opportunities³⁸.

Table 3. Wages of male workers, Chinese women, Javanese women based on the work of the Avros group 1919-1929 (in cents)

Job Type	Man		Woman		Woman Chinese
	Contract	Extension	Contract	Extension	
Field	35	45	30	35	40
Factory	41	50	36	40	45
R.Stairs	40	45	32	38	-

Source: Jaar Verrapport AVROS 1919-1929

This data reveals significant wage disparities. Contract female workers earned approximately 5

³¹ M H Szekely-Lulofs, *Kuli* (Grafitti, 1985).

³² H Blink, *Sumatra's Oostkust in Hare Opkomst En Ont* (1978).

³³ Stoler, *Capitalism and Confrontation in the Sumatran Plantation Belt 1870-1979*.

³⁴ Beckford, *Persistent Poverty*.

³⁵ Vereeniging Voor Den Rubber Handel, 'Nipa's Koloniaal Archief III'; 'Nipa's Koloniaal Archief IV', preprint, 1920.

³⁶ J Saltzman Chafetz, 'The Gender Division of Labour and The Reproduction of Disadvantage: Toward an Integrated Theory', in *Gender, Family and Economy*, ed. by L. Rea (Sage Publication, 1991), p. 34.

³⁷ 'Jaar Verslag Avros', preprint, 1912.

³⁸ Teeuwen, 'Recruitment Policies, Wages and Working Conditions of Javanese Contract Labourers in Sumatera 1870-1940'.

cents less daily than contract male workers in identical field positions, while extension workers experienced 10-cent daily wage differences. Factory work showed 9-cent wage gaps for contract workers and 10-cent differences for extension workers, illustrating systematic inequality experienced by Javanese women across all sectors.

Table 4. Minimum Wage of Javanese, Chinese and Male Workers in East Sumatra Rubber Plantations 1905-1940 in cents, 5-year period

Year	BP China	Labour Prm Java		Male workers	
		contract	Extend	contract	perp
1905	25	20	25	25	30
1910	35	30	35	35	40
1915	35	30	35	35	40
1920	40	35	40	40	45
1925	45	35	45	45	50
1930	45	40	45	43	50
1935	35	30	40	38	40
1940	42	40	45	45	47

Source: wages of Chinese, Javanese women and Javanese male workers in 1905-1915³⁹. Labor wages in 1920-1930, labor wages in 1930-1940⁴⁰

Analysis demonstrates that while minimum wages generally increased over time, reflecting rubber demand growth and worker pressure, significant gender wage gaps persisted throughout the period. Male workers consistently received higher minimum wages than Chinese and Javanese female workers. Wage differentials between Chinese and Javanese women reflected plantation perceptions of limited Javanese worker skills⁴¹. In some years, Chinese women earned higher wages than contract Javanese women. Contract workers typically received lower wages than those who extended contracts, indicating wage hierarchy systems and potential worker exploitation,

particularly for new contract holders. The 1935 wage decline reflected compensation adjustments following the 1928 global economic crisis.

In 1920, some plantations implemented new wage systems replacing coupon systems by allocating small land plots to workers with families during contract periods, addressing foodstuff shortages, particularly rice. Unmarried workers continued receiving rice coupons⁴².

Working Conditions and Health Concerns

The influx of Javanese women workers created increasing facility shortages, characterized by unsanitary living conditions, overcrowded housing mixing unmarried and married workers, inadequate sanitation facilities, declining health services, widespread skin diseases, venereal diseases, cholera infections, and insufficient reproductive health attention⁴³.

Low living standards resulted from inadequate wages, heavy workloads, unnutritious food, poor health conditions, and harsh treatment, causing many workers to die or flee plantations⁴⁴. Working conditions were heavily determined by plantation policies encompassing work atmosphere and activity environments⁴⁵.

Unfair labor divisions frequently limited women to tasks deemed "feminine" compared to "masculine" work such as logging and rubber tree care, creating significant income gaps. Women were often assigned supposedly "unskilled" or "lighter" work such as rubber sap processing (coagulation, drying) rather than "heavier" specialized tasks like grafting or tree care, resulting in substantially lower wages despite equivalent or greater work hours and difficulty levels.

³⁹ 'Koloniaal Verslag van Gedrukt Ter Algemeene', preprint, 1915.

⁴⁰ 'Koloniaal Verslag Arbeidsinspectie'.

⁴¹ J H R B.C.C.M.M. van Suchtelen, 'Memorie van Overgave Den Aftreden Gouverneur Der Oostkust van Sumatra', preprint, 1926.

⁴² D F Pronk, 'Memorie van Overgave, Controleur van Beneden Deli, Oostkust Sumatra', preprint, 1923.

⁴³ H Benjamin, *Labour and Skills in Indonesia Economic Development: A Symposium*, Series No.1 (Yale University South East Asia Studies, 1980).

⁴⁴ Mededeeling van de Vereeniging van Huisvrouwen, 'Mededeeling van de Vereeniging van Huisvrouwen', preprint, 1928.

⁴⁵ J Thomas Lindblad, 'Coolies in Deli: Labour Condition in Western Enterprises in East Sumatra, 1910-1938', in *Coolie Labour in Colonial Indonesia: A Study of Labour Relations in the Outer Island 1900-1940* (Harrassowitz Verlag, 1999), pp. 67-69.

Women typically worked extended hours from 4:30 AM to 5:00 PM with 30-minute breaks. Heavy workloads characterized factory and warehouse work, while rubber tappers carried smoke to prevent insect bites. Female workers received no sick leave; absences resulted in 3-cent daily wage deductions by foremen. Childbirth granted only three working days leave or required finding temporary replacements⁴⁶.

Exploitation of female workers

The legal structure of business outside Java emerged starting in 1880, 1884 and 1893 with the application of the Coolie regulation (*koelieordonnantie*), a labor relations regulation from the point of view of the scarcity of workers which was very felt and considered necessary. *The successive proclamations* became the basis of labor law in the colonial period, which guaranteed plantation employers enormous legal power in relation to immigrant laborers⁴⁷.

The Koelieordonnantie in it states that there should be no labor and employer relationship without a written agreement. The first contract for a worker is valid for 3 years and is renewed every eighteen months. In the contract with the name, the duration of the work and the length of work is 10 hours/day, this regulation is also known as *Poenale Santie*, which gives freedom to plantation entrepreneurs to file criminal charges and punish workers who fail to fulfill their contractual obligations

Poenale Santie and *Koelieordonnantie* are used as tools by plantation entrepreneurs to exploit female workers, forms of exploitation include working hours that exceed 10 hours/day, namely 13 hours of labor work/day with details of tapping sap for 5 hours, taking care of young rubber trees for 3 hours, processing latex into raw caterpillar for 3 hours⁴⁸, short rest hours should be 1-2 hours,

heavy workload there is no difference in the type of work between male and female workers, heavy field work is usually done by male workers and female workers work in factories, but in the field female and male workers there is no difference they are forced to work together like men, because work in the field really needs workers, The time of maternity leave is very short (3 days), there is no sick leave, the wages are low or small far below the wage standard and often insufficient for the needs of daily life, lack of health services, if they are late for work in law by foremen and plantation assistants. The housing situation is also very poor, does not meet health standards, the hospitals provided are very inadequate, so many workers die from untreated diseases.

In harsh living conditions, workers are physically exploited to the maximum, the minimum wage level has implications for a very low standard of living, in which people tend to entertain themselves by gambling, smoking opium, prostitution, all of which plunge them into loans, deteriorating health and welfare.

Double Burden of Female Workers

Female workers bore dual responsibilities as mothers and wives while fulfilling household duties and plantation labor obligations. Women frequently experienced double workloads combining plantation labor with household management, reducing time and energy for productivity enhancement or alternative opportunities. They managed time and energy between plantation work and housework: completing cooking and household tasks before plantation work, then continuing laundry, dishwashing, and cooking after work, with holidays spent planting and livestock care.

⁴⁶ Wasino Wasino and others, 'A Historical Analysis of Health Services in Medan and the Tobacco Plantation Areas of East Sumatra during the Dutch Colonial Period', *Cogent Arts & Humanities*, 12.1 (2025), doi:10.1080/23311983.2025.2482399.

⁴⁷ J Thomas Lindblad, 'Economic Growth Outside Java 1910-1940', in *History of Indonesia's Modern Economy: Various New Challenges*, ed. by J Thomas Lindblad (LP3ES, 2000), p. 336.

⁴⁸ M Blankenstein, *The Poenale Sanctie in Practijk* (Nunijk & Van Ditmar Uitg Mij, 1929).

Husbands sometimes assisted with household tasks before or after work⁴⁹.

In daily life, female workers received spousal assistance in household management, with duty divisions adjusted and conditioned by work schedules. During rubber tapping intervals, women continued cooking and childcare, while husbands typically assisted with garden cleaning or childcare during women's field work, demonstrating mutual understanding and role division based on available time and remaining energy from shared plantation labor demands⁵⁰.

Social Control and Isolation

Plantation geographical isolation limited community interaction beyond plantation boundaries. Communities living and working within plantation environments formed exclusive separate communities entirely based on plantation systems. Production systems and plantations maintained social structures where interpersonal relationship patterns followed and reflected economic organization types.

Consequently, plantation communities constituted social stratification systems positioning capital owners and managers at highest stratification levels. Colonial-period policies toward women and men tended to strengthen patriarchy, establishing social control in plantation social relations⁵¹.

Gender-Based Violence

The *Koelie ordonnantie* specified obligations and labor rights that plantation entrepreneurs must fulfill including wages, housing facilities, health insurance, and leave. Three parties—plantation entrepreneurs, supervisory officials, and laborers/coolies—were required to comply with these regulations. However, limited worker knowledge regarding regulation meanings and contents prevented proper implementation, resulting in violations and violence committed by

white foremen and employees (assistants, administrators) when workers committed violations specified in the *Koelie ordonnantie*⁵².

Violations (*poenale sanctie*) committed by workers expressed disappointment with various pressures from foremen and *onderneming* (plantation enterprises) where they worked. Punishment provisions favoring employers in the 1880 *Koelie ordonnantie* included salary reductions if workers became sick or failed to work due to desertion exceeding one month. Articles 9 and 10 stated that contract workers or coolies who fled, repeatedly refused work, or demonstrated laziness faced fines or imprisonment. To ensure smooth operations, employers voluntarily offered catch wages of f.2.50 per head to anyone capturing workers fleeing plantations.

Female workers faced easy punishment and imprisonment not only for work refusal, desertion, and willful contract breaches, but also for all violation acts threatening people's security, peace, and plantation regulations. Employer insults warranted maximum 12-day imprisonment; threats with words or physical gestures incurred 1–3-year imprisonment; resistance faced maximum 3-month imprisonment.

Sexual Exploitation and the Nyai System

Additional violence not written in the *Koelieordonnantie* included sexual harassment experienced by female workers, who proved particularly vulnerable to physical and psychological violence forms limiting their freedom and wellbeing. Although in oppressed conditions, female workers often engaged in passive resistance forms (work slowdowns, feigning illness) and negotiated with foremen, frequently using non-confrontational means to bargain regarding work or avoid violence.

Psychological violence forms, particularly affecting married and unmarried female workers

⁴⁹ Mimi Abramovitz, *Regulating the Lives of Women* (Routledge, 2017), doi:10.4324/9781315228150.

⁵⁰ Rosidah, 'The Exploitation of Women Workers in the Deli Plantation of East Sumatra 1870–1930'.

⁵¹ Beckford, *Persistent Poverty*.

⁵² Mhd. Said, *Suatu Zaman Gelap Di Deli, Koeli Kontrak Tempo Doeloe Dengan Derita Dan Kemarahannya* (Waspada, 1987).

with attractive physiques, were perpetrated by some European staff (unmarried or married without accompanying wives). The punishment form implemented by European staff involved separating workers from family life, though the actual motive constituted attempts to claim or seize workers' wives or female workers considered beautiful, young, and attractively figured, subsequently made *nyai* (concubines) in European staff homes⁵³.

Most *nyai* were Javanese female workers, with some Japanese women whose positions held greater value. Japanese women were recruited from Singapore brothels in limited numbers compared to Javanese women. Female workers becoming *nyai* no longer worked as garden or factory laborers; *nyai* functions encompassed European staff household management, employer care, household problem management, care provision, entertainment, and sexual service provision. Without *nyai*, European men frequented brothels⁵⁴.

By occupying *nyai* positions, these women transmitted European culture knowledge to indigenous populations, mediating between societal levels. Mediator roles in East Sumatran rubber plantation communities were determined by European staff interests, with *nyai* executing employer orders. Mediators acted as intermediaries between cultures, conveying or transferring labor culture knowledge to master's by providing messages incapable of direct communication.

Women experiencing sexual harassment, physical violence forms, and psychological pressure from foremen or plantation officials faced violations when contravening plantation regulations including frequent work absences, resistance, laziness, tardiness, and refusing *nyai* status due to unmarried status (sexual harassment form). European staff avoided marrying Javanese

female workers made *nyai*, citing vastly different racial and social status origins⁵⁵.

Survival Strategies of Women Rubber Workers

Survival represents maintaining life during urgent situations—uncertain conditions requiring action for emergency persistence. As survivors, knowledge management during emergencies regarding bodily conditions and needs, plus understanding environmental reactions or impacts, proved essential. Understanding need types constituted beneficial priorities in survival situations, with survival needs arising from human efforts escaping faced difficulties.

Women workers' survival strategies in rubber plantations generally involved various efforts increasing income and reducing expenses through seeking side jobs or additional employment, optimizing yard land use for farming, and implementing frugal lifestyles. Social networks and family member cooperation additionally proved key to maintaining survival.

Economic Strategies

Women workers' economic survival strategies on plantations involved regulating received wages as income and bearing living expense costs. Women working fields and factories received wages based on working days, paid mid-month (15th) and beginning of subsequent month (1st). Wage calculations occurred monthly, receiving remaining wage payment balances from small salary periods, plus rice coupon distributions twice weekly on Wednesdays⁵⁶.

Field or factory female workers' economic conditions involved wages ranging from 30-45 cents daily, yielding monthly wages of 840-1,260 cents for 28-day work periods, with monthly deductions for *voorschot* (190 cents), taxes (40 cents), and rice money (60 cents), resulting in received wages around 550-770 cents monthly for

⁵³ Elsbeth Scholten, *Women and the Colonial State: Essay on Gender and Modernity in the Netherlands Indies 1900-1942* (Amsterdam University Press, 2000).

⁵⁴ Szekely-Lulofs, *Kuli*.

⁵⁵ Lily Clerkx, *Living in Deli: Its Society as Imaged in Colonial Fiction* (VU University Press, 1991).

⁵⁶ van Suchtelen, 'Memorie van Overgave Den Aftreden Gouverneur Der Oostkust van Sumatra'.

living expenses. Single unmarried female workers' monthly expenditures ranged 500-700 cents monthly, excluding clothing, health, sarongs, long cloths, beauty materials, and jewelry needs⁵⁷.

To meet daily needs when insufficient, workers sought alternative survival means including prostitution⁵⁸. Married female workers with families covered daily needs by growing vegetables, fruits, or medicinal plants utilizing planting knowledge from native Java, on provided plantation land or barracks yard spaces. Crop products served self-consumption or sales increasing income. Additional side jobs included trading food for male laborers, selling snacks during big salary night markets in plantation areas, chicken raising, and consumption management saving household needs by reducing unnecessary expenses such as clothing, sarongs, long cloths, jewelry, and others while utilizing environmental resources like firewood for cooking.

Cultural Preservation Practices

Javanese plantation workers in East Sumatra, who are mostly descendants of contract laborers (koelie) brought during the Dutch colonial period from the late 19th century to the early 20th century, still maintain various cultures and traditions of Javanese origin despite having experienced mixing with local culture and acculturation processes. Some of the cultural practices and traditions that are still maintained include⁵⁹:

- a. Preserve the culture of origin as a source of emotional strength and identity by strengthening the relationship between fellow workers in one barracks or huts, helping each other in various ways, whether in work in the hut or barracks in daily life. The tradition of cooperation or community service is still preserved, for example when building houses,

making celebrations, or cleaning the environment.

- b. The use of the Javanese language in daily life is still common, especially in the workplace, barracks, family and community environments. The dialect variations used usually come from Central Java and East Java.
- c. The cultural and religious traditions of Javanese women workers in East Sumatra are Muslim, and they carry out Islamic traditions wrapped in Javanese culture, including Slametan, which is eating together after prayers, is still strongly carried out on important occasions. There are also those who still practice syncretism, which is a combination of Islamic teachings and local/ancient Javanese beliefs.

Every large plantation payroll provided entertainment during night markets by holding *ketoprak* performances, *jaran kepong* (trance horse dance), and *campursari*, sometimes performed at traditional events or community entertainment. *Campursari* and *gamelan* remained recognized and played at community events. Traditional Javanese dance art and *macapat* songs continued teaching across generations. All these activities aimed to prevent female or male workers from fleeing or leaving plantations.

Conclusion

The struggle of women workers in colonial rubber plantations reflects the reality of double inequality they faced as working classes oppressed by the colonial system and as women constrained by patriarchal social constructions. Under harsh working conditions, inadequate wages, and strict supervision, they continued performing production tasks while bearing domestic and childrearing burdens. Although rarely recorded in mainstream historical narratives, their existence and resilience constitute clear evidence of women's roles in maintaining colonial production wheels while sustaining family and community life. Therefore, understanding women workers' stories

⁵⁷ 'Sinar Deli Newspaper', preprint, 1927.

⁵⁸ Vereeniging van Huisvrouwen, 'Communications from the Vereeniging van Huisvrouwen', preprint, 1928.

⁵⁹ Jan Breman, *Taming the Coolie: Colonial Politics, Plantation Owners and Coolies in East Sumatra* (Pustaka Utama, 1997).

transcends merely reviewing the past, opening space for reflection on gender and class injustices persisting today.

Women workers in rubber plantations experienced various systemic injustice forms ranging from wage discrimination, disproportionate workloads, workplace harassment, to reproductive rights and social protection neglect. This injustice not only reflects gender inequality but demonstrates how women were often positioned as cheap labor easily exploited. In non-participatory work systems, women workers' voices and interests were often ignored. Therefore, struggles eliminating these injustices cannot separate from efforts creating equal, safe, and humane workplaces for all including women positioned at labor structure's most vulnerable layers.

Survival strategies of female workers while confronting hard rubber plantation work full of exploitation and inequality involved developing various strategies reflecting resilience and solidarity. They formed fellow worker networks for mutual support, strictly managed finances meeting basic needs, and continued carrying dual roles in domestic realms despite physical and mental exhaustion. Not infrequently, they relied on collective action or protests to foremen, assistants, and plantation managers to fight for their rights. These strategies represent not merely adaptation forms but also tacit resistance to oppressive structures. In each of their steps exists resilience narratives deserving appreciation and use as foundations for struggles toward gender justice and more humane workforces.

This study's findings regarding gender struggles of women in East Sumatra's rubber plantations during colonial periods hold significant implications, both academically and practically. Academically, this research reinforces understanding that gender relations in colonial plantations constitute not merely economic issues but involve social, cultural, and political aspects shaping women's identities and bargaining positions. This research demonstrates women as not only exploitation objects but also actors playing roles in survival strategies and resistance against patriarchal colonial systems. This study's practical implication provides new perspectives in writing Indonesia's economic and social history, particularly by positioning women as active

subjects in plantation dynamics, contributing to more inclusive and gender-sensitive historiography emergence.

For future research, there are several things to consider. First, research can be expanded with an interdisciplinary approach, for example, combining history with anthropology or cultural studies, to see how the experiences of female plantation workers are passed down in the collective memory of communities to the present day. Second, future researchers are advised to explore more deeply local archival sources, company records, and oral testimonies from the next generation of plantation workers, so that the perspectives produced become more diverse and contextual. Third, a comparative study with other plantation areas in the archipelago or in Southeast Asia can provide a broader picture of the patterns of exploitation and resistance of women in the colonial system.

This research contributes to broader discussions on gender equality, labor rights, and colonial legacies, with implications highly relevant to contemporary efforts addressing gender inequality in modern industrial sectors while promoting more inclusive and pro-women policies.

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