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RESILIENCE AS RESISTANCE: POLITICAL DISCOURSES OF CLIMATE ADAPTATION AMONG SMALLHOLDER COFFEE FARMERS IN FOREST CONFLICT ZONES OF CENTRAL ACEH INDONESIA

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ABSTRACT. Climate change has exerted significant social, economic, and environmental pressures on small-scale coffee farmers, particularly those living near protected forest areas. Declining yields, land limitations, and restrictive conservation policies have created complex tensions related to resource access and survival strategies. This study aims to analyze the political discourses embedded in the dynamics of land rights disputes and climate adaptation strategies of small-scale coffee farmers. Using a qualitative approach and Critical Discourse Analysis (CDA), the study explores how farmers negotiate, reject, and reinterpret state environmental regulations through everyday practices and narratives. This study's findings reveal that coffee farmers' adaptation strategies are not merely technical responses to climate change, but also reflect resistance to dominant power structures. This process includes contesting land authority, territorializing space within the conservation framework, and recognizing the often marginalized identities of farmers. The conclusion of this research shows that the resilience of coffee farmers can be understood as a form of resistance, reflecting negotiations and opposition to dominant discourses, as well as their efforts to reclaim their living spaces increasingly threatened by exclusive conservation policies.

Keywords: Climate Change; Smallholder Coffee Farmers; Climate Adaptation; Political Discourse; Resilience.

ABSTRAK. Perubahan iklim telah memberikan dampak sosial, ekonomi, dan lingkungan yang signifikan bagi petani kopi skala kecil, khususnya mereka yang bermukim di sekitar kawasan hutan lindung. Penurunan hasil panen, keterbatasan lahan, serta kebijakan konservasi yang ketat menciptakan ketegangan kompleks terkait dengan akses terhadap sumber daya alam dan strategi bertahan hidup. Penelitian ini bertujuan untuk menganalisis wacana politik yang terkandung dalam dinamika perebutan hak atas lahan dan strategi adaptasi perubahan iklim yang dilakukan oleh petani kopi skala kecil. Menggunakan pendekatan kualitatif dan analisis wacana kritis (Critical Discourse Analysis/CDA), studi ini mengeksplorasi bagaimana petani merundingkan, menolak, dan menafsirkan ulang regulasi lingkungan negara melalui praktik dan narasi sehari-hari mereka. Temuan penelitian ini menunjukkan bahwa strategi adaptasi yang diterapkan petani kopi tidak hanya bersifat teknis dalam menghadapi perubahan iklim, tetapi juga mencerminkan perlawanan terhadap struktur kekuasaan yang dominan. Proses ini melibatkan perebutan otoritas atas tanah, teritorialisasi ruang dalam kerangka konservasi, serta pengakuan terhadap identitas petani yang sering terpinggirkan. Kesimpulan penelitian ini menunjukkan bahwa resiliensi petani kopi dapat dipahami sebagai bentuk resistensi yang menggambarkan negosiasi dan perlawanan terhadap wacana dominan, serta upaya mereka untuk merebut kembali ruang hidup yang semakin terancam oleh kebijakan konservasi yang eksklusif.

Kata Kunci: Perubahan Iklim; Petani Kopi Skala Kecil; Adaptasi Iklim; Wacana Politik; Resiliensi.

INTRODUCTION

Climate change is not just about rising global temperatures or extreme weather, but also a crisis that reshapes the landscape of human life and livelihood (Sujatmiko & Ihsaniyati, 2018). In tropical agriculture, the coffee sector is in a very vulnerable position. Several studies have shown that temperature changes (Bunn et al., 2015), erratic rainfall patterns (Ovalle-Rivera et al., 2015), and increasing intensity of extreme weather (Jiménez-Moreno & Fernández-Escobar, 2017), have caused a decline in coffee yields and quality. Smallholder farmers feel this pressure and depend on climate stability to maintain their livelihoods (Läderach et al., 2017).

However, the narrative about climate adaptation in the coffee sector is not neutral. Behind the technocratic discourse of resilience and adaptive technological solutions, structural inequalities shape who has the right to survive and in what ways (Muthee et al., 2022) social, and economic roles. In the wake of climate change and its diverse global effects, fragmentation and degradation of tropical forests have jeopardized their ability to support livelihoods and regenerate climate regulating services. Concerted efforts by local, national, and international players, which are primarily scientific, technological, or economic, have borne minimal results in safeguarding these forests from destruction, necessitating a more integrated and inclusive approach. The Rio Earth Summit (1992, especially since research on this is still limited, as in Figure 1.

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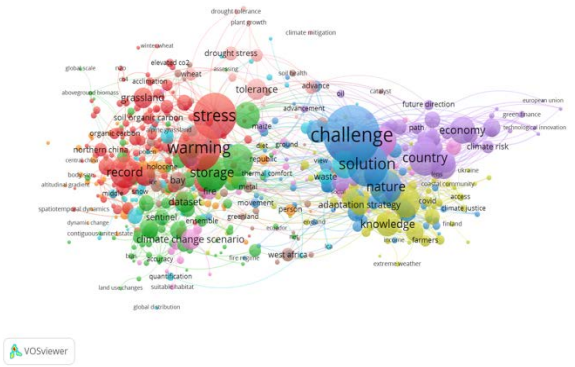


Source: Processed by VOSviewer Software (2025)

Figure 1. Bibliometric Map of Climate Change Studies in the Coffee Sector

The bibliometric map generated through VOSviewer (Figure 1) shows that studies on climate change in the coffee sector generally focus on keywords such as climate change challenge, solution, and adaptation strategy. The main clusters formed illustrate the tendency of global literature to position adaptation as a technical response to climate disturbances, such as the development of heat-resistant coffee varieties, water management, and climate prediction-based technology. This reflects the dominance of the adaptation-as-technical-fix framework in academic discourse related to climate change adaptation.

However, there is rarely a direct link to terms such as land rights, power, governance, or social justice—an indicator that adaptation's structural and political dimensions have not yet become mainstream in scientific discourse. This lack of connection reflects an epistemological bias, where adaptation tends to be defined as an individual or community effort that can be improved through technology, rather than as a political arena filled with power struggles between the state, the market, and local communities.

From a political ecology perspective, this is precisely where the main problem lies, namely that coffee farmers' adaptation strategies are never neutral. They are part of a complex negotiation process over access to and control over land, water, and information. When the state or corporations encourage technology-based adaptation without addressing the roots of inequality, such as tenure insecurity, export market dominance, or the marginalisation of local knowledge, adaptation can reinforce structural injustice. Thus, this study positions adaptation and resilience as political arenas, contested through discourse, policies, and the daily practices of coffee farmers (Amaruzaman et al., 2022; Sihidi et al., 2022).

Adaptation responses to climate change cannot be separated from the social, economic, and political structures that bind farmers' lives. Strategies implemented by coffee farmers in various countries, such as crop diversification in Uganda (IITA, 2019), agroforestry systems in Colombia (De Leijster et al., 2021)the interactions among ecosystem services, and the biotic and abiotic factors that explain them. Therefore, we study a chronosequence of agroforestry coffee farms, with 1–40 years since planting of shade trees. We found that aboveground carbon stock, habitat provisioning, timber volume and coffee bean quality followed positive asymptotic trajectories. Erosion control and pest control did not change over time. Coffee yield tended to decrease as the shade trees matured, but this was not significant. We found consistent positive relationships between carbon stock, erosion control and epiphyte richness. A trade-off between aboveground carbon stock and coffee yield was found for the first 10 years, while a positive relation between coffee yield and erosion control was found for the long term (10–20 years, or the use of shade trees in Indonesia (Koutouleas et al., 2022), are often positioned as technical models that have succeeded in increasing agricultural resilience. However, discourse analysis shows that these strategies are often part of a hegemonic narrative that normalises specific adaptation approaches while ignoring the realities of structural vulnerability experienced by smallholder farmers.

In practice, not all farmers have the same adaptive capacity. Access to assets such as land, technology, education, and information, which Läderach et al., (2017), call the main factors in adaptation, is primarily determined by socio-economic position, such as gender status, poverty levels, and ownership of coffee certification (organic or fair trade). This shows that adaptation is not just a technical issue, but also a reflection of how 'climate resilience' is interpreted, produced, and commodified in global markets and policy systems (Donovan & Poole, 2014; Moberg & Lyon, 2010).

Climate change exacerbates socio-ecological complexities in many cases in Indonesia, especially in areas bordering protected forest areas (Muthmainnah et al., 2020; Pham et al., 2019). For example, coffee farmers who have long managed their land for generations in the Gayo highlands of Aceh Province now face conservation regulations limiting their access to living space (Hammerschlag & Sims, 2024; Iswandono, 2016). Meanwhile, the state positions forests as entities that must be saved for climate change mitigation according to international agreements (REDD+ and the Paris Agreement), but on the other hand, local communities, including coffee farmers, are sacrificed in the process (A. H. Taylor et al., 2014). This narrative shows the dominance of conservation discourse that excludes local experiences and strategies in dealing with the climate crisis.

This study uses a political ecology framework Peluso & Lund (2011) to understand how coffee farmers build resilience amidst conservation and climate change pressures. Resilience in this context is not understood solely as an ecological capacity, but rather as the result of complex socio-political relations between farmers, the state, and non-state actors. There are three main aspects analyzed based on political ecology indicators, namely: (1) access and authority, which examines who has the right to access and control over resources; (2) territorialization, which looks at how the state and other actors produce and claim space legally and symbolically; and (3) recognition and legibility, which explores the extent to which farmers' social identities and local practices are recognized or ignored by formal policies.

When the state promotes shade technology or crop diversification through donor projects, many farmers have long been implementing similar strategies based on their local knowledge. However, these strategies are often not formally recognized because they do not fit into the framework of 'official science', which is used as a standard by conservation and development institutions (Ruiz Meza, 2015) Chiapas, Mexico and analyses the capacity of small coffee producers to adapt to hydrometeorological hazards. Small-scale farmers in the basin use various strategies to adapt to the impacts of such hazards and to confront the deterioration of their livelihoods, including diversifying the varieties of coffee they cultivate, diversifying their sources of income, and emigration. Analysis of these strategies suggests that high levels of poverty, coffee monoculture, food insecurity, and instability in sources of employment and income combine to limit the flexibility and stability of population's adaptive capacity. The strategies employed by local people have allowed for short-term subsistence but offer little chance of long-term sustainability. Conditions do not appear to reduce social vulnerability and, in fact, undermine local resilience that would reduce damage and risks from extreme climate events. The impacts of climate change are placing the region's small farmers in a very vulnerable situation from which it may be difficult to escape, without the implementation of social reform predicated on greater justice and social equality, which will require political will. This case illustrates the challenges that must be addressed in order to overcome the social inequalities that prevent small-farmer communities from reducing their vulnerability in the face of climate-(or non-climate-. Thus, farmers act not only as recipients of policies but also as agents who actively interpret, adopt, and even reject climate change discourses from outside. For example, when some farmers push for recognition of agroforestry practices (Purwanto et al., 2020; van Noordwijk, 2020)without a legal basis and permits, within the forest zone ('Kawasan hutan', while others choose to persist with illegal methods, which are not recognized by the state, such as clandestine planting or shifting cultivation (Holmes et al., 2016; Juniyanti et al., 2021).

From the dynamics of the state-farmer relationship, a fundamental question arises: how do coffee farmers, especially those in protected forest buffer areas such as Atu Lintang, Pegasing, and Ketol subdistricts in Central Aceh Regency, Indonesia**,** build resilience and adaptation strategies to climate change amidst the dominance of state conservation discourse? This question stems not only from concerns about the ecological impacts of climate change but also from epistemological concerns about how the state and global actors interpret adaptation as a technical action that seems to be value-free. In fact, for smallholder farmers, adaptation is a daily struggle filled with dilemmas between obeying state laws or maintaining a way of life passed down from generation to generation (Hajad & Ikhsan, 2024).

Thus, this study explores how coffee farmers' resilience and adaptation are practised, negotiated, and maintained in the context of climate change and land access restrictions due to conservation policies. While previous studies have examined climate adaptation in the coffee sector through technical solutions such as agroforestry systems (De Leijster et al., 2021) and crop diversification among smallholders (IITA, 2019) these works largely focus on biophysical or agronomic dimensions. Few studies, however, attend to the political–discursive dimensions of adaptation within contested forest buffer zones like those in Central Aceh. Therefore, this study fills that critical gap by unpacking how dominant discourses shape (and are shaped by) adaptation practices at the local level, and how farmers actively respond with strategies that do not always align with formal state adaptation frameworks (Tanner et al., 2015).

METHOD

This study uses a qualitative approach focusing on critical discourse analysis (CDA) to explore how narratives on climate change adaptation are produced, disseminated, and contested by various actors, especially coffee farmers and the state. The research location is centred in a coffee farming area directly adjacent to a protected forest in Central Aceh District, Aceh Province, Indonesia. This area was chosen purposefully because it represents a complex

socio-ecological terrain where smallholder farmers must deal with the pressures of climate change, conservation regulations, and the dynamics of the global coffee market.

Data collection techniques were carried out through three main methods. First, in-depth interviews with coffee farmers, village officials, local activists, and officials from related government agencies were conducted to explore their understanding, experiences, and adaptation strategies that they developed in the context of climate change and land management. Second, field observations were conducted to understand farmers' daily practices, their relationships with forest areas, and how adaptation is manifested in concrete actions. Third, document analysis was conducted on local and national government policies related to climate change adaptation, forest governance, and agricultural development.

Data analysis was conducted using Norman Fairclough (1992), Critical Discourse Analysis (CDA) approach, which views discourse as a social practice with ideological and political effects. In this context, CDA is used to uncover the hidden power relations in adaptation narratives and identify how language legitimises or challenges specific policies. The analysis covers three main dimensions: text (what is said), discursive practices (how discourse is produced and disseminated), and social practices (how discourse is connected to broader power structures). Thus, this study seeks not only to understand the meaning of adaptation from the farmers' perspective, but also how this meaning is negotiated in a broader discursive arena—between the state, the market, and local communities.

RESULT AND DISCUSSION

Climate Change and Conservation Discourse

The struggle for land rights and coffee resources in conservation areas cannot be separated from Indonesia's long-standing history of land politics, which is deeply rooted in asymmetrical power relations between the state and indigenous communities or smallholder farmers. In this context, land is more than just an economic asset—it represents cultural identity, ecological heritage, and the foundation of local livelihoods and socio-cultural sustainability (Hall et al., 2011; Soini & Birkeland, 2014; Sudarmono, 2024).

Historically, the state has imposed forestry and conservation policies that frame forest areas as national and global public goods, managed under the premise of environmental conservation and climate change mitigation. This framing is institutionalized through legal instruments such as the Forestry Law No. 41/1999, the Spatial Planning Law No. 26/2007, and Presidential Instruction No. 5/2019 on forest moratorium. These policies support state control over forest lands and reinforce exclusionary spatial zoning (Carrasco & Papworth, 2014; McCarthy et al., 2012).

As a result, coffee farmers—especially in conservation buffer zones like Pegasing, Atu Lintang, and Ketol in Central Aceh—are structurally excluded and increasingly criminalized. They are often portrayed as lacking legality or legitimacy in land management, despite their long-term agroecological stewardship. Conservation narratives supported by state institutions such as the Ministry of Environment and Forestry (KLHK), the Forest Management Unit (KPH Wilayah II Takengon), and the Gunung Leuser National Park Authority (BBTNGL) reinforce this exclusion through regulations and discursive practices.

In addition to state actors, non-state actors including several conservation NGOs and international donors—particularly those involved in global schemes like REDD+ and the Paris Agreement—also participate in the production of hegemonic conservation narratives. These actors deploy technocratic discourse emphasizing "biodiversity protection" and "emission reduction," which contributes to delegitimizing customary land practices and smallholder coffee-based agroforestry systems (Benjaminsen & Svarstad, 2021; Cairns, 2015).

The political ecology framework, as outlined by Peluso & Lund (2011), highlights how access and authority are co-produced through legal mechanisms and socio-discursive power. In this case, the discourse of conservation not only enforces physical exclusion but also marginalizes knowledge systems and lived practices that do not align with dominant conservation paradigms. This is where Critical Discourse Analysis (CDA) becomes essential. As noted by Perrin (2016) and Dryzek & Schlosberg (2013), CDA exposes how technocratic language—such as "protected zones," "ecological restoration," and "illegal cultivators"—functions as a form of symbolic power. These labels are not neutral descriptors; they operate as instruments of exclusion that discredit farmers' historical claims and reshape public perception to justify state control. Its regulations create an exclusive categorization of space, where the existence of local communities is not only ignored, but often criminalized through labels such as 'encroachers,' 'illegal cultivators,' or 'area violators.' This categorization effectively erases historical agrarian realities and delegitimizes community-based land stewardship, even in areas

where formal land titling is absent (Pichler et al., 2021, 2022).

Amid these pressures, local counter-narratives have emerged through community-based institutions and cooperatives such as Kokowagayo, which reframe smallholder coffee farming not as a threat to conservation, but as a culturally rooted, ecologically adaptive, and economically viable practice. These grassroots efforts challenge dominant technocratic discourses and assert the legitimacy of community knowledge systems in managing forest landscapes.

Consequently, the discourse of conservation becomes a hegemonic project that narrows the scope of "legitimate" ecological practices to those endorsed by formal institutions. In this discursive environment, smallholder coffee farmers are not only dispossessed of physical access but also of epistemic recognition. This dual exclusion—material and symbolic—illustrates how power operates both through laws and through the discursive regimes that justify them.

Political Ecology in Conservation

There are three main aspects of political ecology, namely: (1) access and authority, which examines who has the right to access and control over resources; (2) territorialization, which looks at how states and other actors produce and claim space legally and symbolically; and (3) recognition and legibility, which explores the extent to which farmers' local social identities and practices are recognized or ignored by formal policies.

Access and Authority

Indonesian spatial governance has institutionalized forest land classification into Protected Areas (*Kawasan Lindung*) and Cultivation Areas (*Kawasan Budidaya*), as outlined in Law No. 41/1999 on Forestry, Law No. 26/2007 on Spatial Planning, and Law No. 5/1990 on Conservation of Living Natural Resources and Their Ecosystems. These legal instruments are further reinforced by Government Regulation No. 104/2015 on Procedures for Forest Area Changes and Ministerial Regulation of Environment and Forestry (Permen LHK) 2016 on Forest Use Mechanisms. In practice, this regulatory regime has placed thousands of hectares of community-managed coffee land in areas such as Pegasing, Atu Lintang, and Ketol into the category of protected forests, despite a long-standing history of cultivation by smallholder Gayo farmers. These classifications, while framed as technocratic and ecological necessities, result in a structural dilemma that delegitimizes the agroforestry systems practiced by farmers for generations.

The result is a legal ambiguity that undermines tenure security and creates barriers to farmers' access to state support, agricultural certification, and conservation incentives. Many coffee farmers in Central Aceh face heightened vulnerability because the land they rely on is simultaneously categorized as forest estate (*kawasan hutan*) and subject to conservation zoning that prohibits cultivation. These limitations are not merely technical but deeply political. They shape whose knowledge is valued, whose practices are seen as legitimate, and who gets access to the rights of resource use.

State actors such as the Forest Management Unit (KPH Wilayah II Takengon) and the Gunung Leuser National Park Authority (BBTNGL), under the coordination of the Ministry of Environment and Forestry (KLHK), are the primary institutions responsible for enforcing conservation zoning.

These agencies actively promote forest protection narratives that frame human presence particularly traditional agroforestry as incompatible with ecological restoration. Through the implementation of monitoring systems, spatial planning tools, and legal enforcement, they assert territorial control over landscapes previously managed under local customary systems.

These efforts are further supported by international discourses and funding mechanisms such as REDD+ and the Paris Agreement. Under REDD+, deforestation emissions are monetized, and states receive performance-based payments to reduce forest degradation. Similarly, the Paris Agreement, ratified by Indonesia through Law No. 16/2016, has positioned tropical forests as global climate assets essential for achieving global temperature targets. In this paradigm, forests are abstracted into carbon stocks, and local land use practices are either included or excluded based on their alignment with carbon accounting frameworks. Indonesia has committed to reducing emissions by 29% unconditionally and up to 41% with international support by 2030, placing significant pressure on forest governance to deliver quantifiable climate outcomes (Benjaminsen & Svarstad, 2021; Cairns, 2015).

Table 1 shows how the conservation narrative is constructed globally within the framework of firm international commitments.

Although these mechanisms formally incorporate safeguards, including the protection of indigenous rights and local participation, field implementation remains highly top-down and exclusionary. Communities are rarely invited to participate in defining what counts as 'conservation,' nor are their customary land claims acknowledged in

spatial planning instruments. Instead, farmers are increasingly labeled as "encroachers," "illegal cultivators," or "forest destroyers," despite engaging in biodiversity-friendly, low-emission farming systems rooted in local ecological knowledge.

Table 1. International commitments in nature conservation discourse

Agreement / Year	Key Commitments
REDD+ (Reducing missions from Deforestation and Forest Degradation) 2008 (Indonesia's commitment began)	1. Reduction of emissions from deforestation and forest degradation. 2. Promotion of conservation and sustainable forest management. 3. Result-based financial incentives from donor countries. 4. Protection of indigenous peoples' rights (safeguards). 5. Credible Measurement, Reporting, and Verification (MRV) system.
Paris Agreement 2015 (ratified by Indonesia through Law No. 16/2016)	1. Limit global temperature rise to below 2°C, aiming for 1.5°C. 2. Indonesia's NDC: 29% emission reduction unconditionally, 41% with international support by 2030. 3. Preservation of tropical forests as a climate mitigation strategy. 4. Support for international funding and technology. 5. Principles of equity and transparency.

Source: Rainforest (2025)

Conservation NGOs also contribute to this dynamic. For instance, organizations such as the Forum Konservasi Leuser (FKL) have launched projects including wildlife corridors, biodiversity buffers, and reforestation programs that reclassify existing agroforestry zones into ecological restoration targets. While often promoted as community-inclusive, these interventions functionally extend the state's territorial reach and reinforce legal restrictions on land use. In the political ecology framework proposed by Peluso & Lund (2011), this constitutes a form of territorialization—whereby both state and non-state actors assert spatial control through legal, symbolic, and ecological means.

The use of technocratic language such as "ecological restoration," "carbon sequestration," or "spatial synchronization" plays a key role in this process. According to Perrin (2016), such discursive terms represent a form of symbolic domination. They mask political choices under the guise of scientific neutrality and replace the lived knowledge of farmers with external metrics. This results in the epistemic marginalization of traditional agroforestry practices, even when they contribute positively to biodiversity conservation and climate adaptation.

Nevertheless, Gayo coffee farmers are not passive subjects. Through institutions like *Koperasi Kokowagayo*, participatory land mapping, and village forums (*musyawarah gampong*), they have begun articulating counter-narratives that reframe agroforestry not as encroachment, but as a community-based conservation model. These farmers argue that their shade-grown coffee practices, which integrate multi-strata vegetation and protect soil health, align with global sustainability goals. In adopting terms like "sustainable agriculture" and "climate-resilient livelihoods," they engage in what can be called discursive mimicry—strategically using the language of conservation to assert their legitimacy.

These counter-narratives do more than just offer alternative views; they function as political tools to reclaim spatial legitimacy. By aligning with international discourses, farmers can engage with certification schemes, build market access, and influence local conservation planning. This demonstrates that smallholders are not mere obstacles to environmental governance, but crucial actors whose practices and knowledge systems must be recognized in the construction of just and effective conservation frameworks.

In sum, the current conservation paradigm in Central Aceh reveals deep asymmetries in how space, legality, and ecological value are defined. While state and donor-backed initiatives emphasize technical solutions to climate change, they often do so by ignoring or suppressing the socio-historical claims of farmers. Through their adaptive strategies, Gayo coffee farmers challenge these structures, insisting that conservation must be rooted not only in ecological science but in agrarian justice.

Territorialization

From a political ecology perspective, territorialization is a politically charged process, not merely a neutral act of land classification. It operates through legal mechanisms, spatial policies, and symbolic narratives used to claim and control areas (Fisher et al., 2017). The state, in the context of the Gayo Highlands and Central Aceh, enacts territorialization by redefining historically cultivated coffee lands as protected or conservation forests. These designations are legitimized through a legal framework comprising Law No. 41/1999 on Forestry, Law No. 26/2007 on Spatial Planning, and Law No. 5/1990 on Conservation of Living Natural Resources and Their Ecosystems. The structure is further reinforced by Government Regulation No. 104/2015 and the 2016 Ministerial Regulation of the Environment and Forestry.

This legal architecture denies the longstanding agroforestry practices of Gayo farmers by placing

them in conflict with spatial zoning. Farmers who have cultivated land for generations are suddenly criminalized through legal reclassification, even when their practices align with ecological sustainability. Conservation zoning by state institutions such as KPH Wilayah II Takengon and BBTNGL extends the state's territorial reach by excluding local land uses. These efforts are also supported by global discourses such as REDD+ and the Paris Agreement, which construct tropical forests as carbon sinks critical to climate mitigation (Benjaminsen & Svarstad, 2021; Cairns, 2015).

As Peluso & Lund (2011) note, territorialization is not simply about land—it is a struggle over authority and recognition. State and non-state actors deploy zoning maps, regulations, and environmental narratives to legitimize their claims. In contrast, local communities assert legitimacy through customary law, historical land tenure, and participatory mapping. These contrasting modes of spatial authority are illustrated in Table 2.

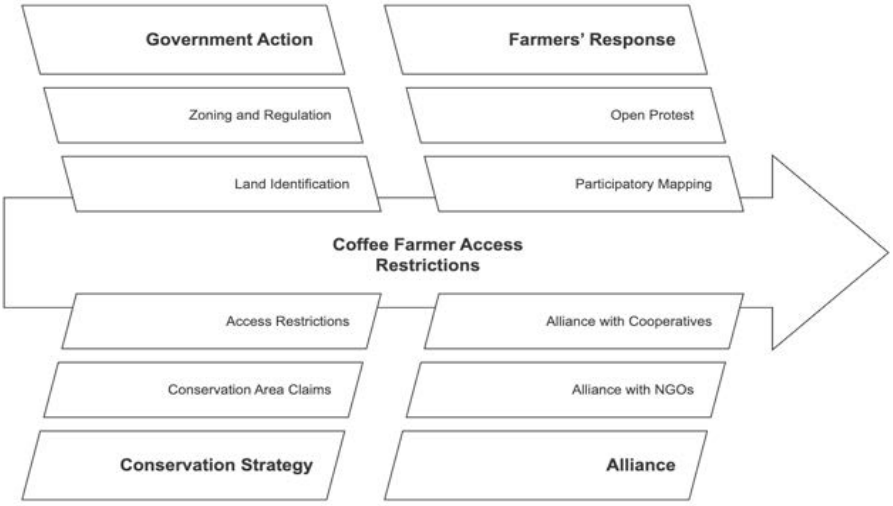
Table 2. Territorial claim mechanisms between the state and local communities

Aspect	State	Local Communities
Legal Basis	Forestry Law, Conservation Policies, Spatial Planning	Customary law, inherited historical land management
Claim Tools	Zoning maps, regulations, official area status	Participatory mapping, local narratives, historical evidence
Objectives	Formal conservation, territorial control	Livelihoods, cultural preservation, agrarian justice
Symbolic Legitimacy	Legal language, environmental narratives, labeling as 'illegal'	Cultural identity, local knowledge, agroforestry practices

Source: UNDP Folur (2024)

In response, coffee farmers in Central Aceh have developed multi-layered strategies of resistance—ranging from open protest to participatory counter-mapping and narrative advocacy. These strategies aim to assert the legitimacy of their land use by highlighting long-standing management practices, ecological contributions, and the cultural significance of coffee landscapes (Hall et al., 2011; Perfecto et al., 2005). Farmers also establish alliances with critical NGOs and form cooperatives, not only to strengthen their bargaining position with the state, but also to advocate for the recognition of their marginalized knowledge systems. Figure 2 shows the territorialization process and the response of coffee farmers.

The state's territorialization process through conservation policies has multidimensional consequences for coffee farmers. First, in terms of the economy, farmers lose access to production land, their primary income source. The inability to access land forces them to seek alternative jobs that are often unstable and high-risk (Hallegatte & Rentschler, 2015)decisionmakers from the household to the state level are confronted with a multitude of risks: from health and employment risks, to financial and political crises, as well as environmental damages and from the local to global level. The World Bank's 2014 World Development Report (WDR. Second, legally, farmers are trapped in an "illegal" status, even though the land they manage has been inherited from generation to generation. Data from the Forest Management Unit II records that more than 15,300 hectares of coffee plantations in Central Aceh are in protected forest and production forest areas, out of around 60,000 hectares of coffee plantation area. This reflects the vast area that is legally contested.



Source: Processed by the Author (2025)

Figure 2. Territorialization Process and Coffee Farmers' Responses

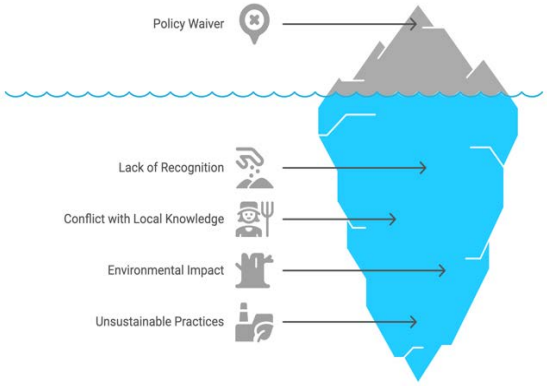
Third, there are symbolic impacts, such as farmers' local knowledge about agrofo restry and conservation is not recognized, even marginalized by the state's conservation narrative. Farmers are often stigmatized as 'forest destroyers', even though they protect the ecosystem through sustainable agricultural practices. This stigmatization not only reduces the identity of farmers, but also exacerbates social inequality in managing natural resources. The Agrarian Reform Consortium recorded 279 agrarian conflicts in the forestry sector in Indonesia, many of which involved coffee plantations in conservation areas (Hallegatte & Rentschler, 2015)decisionmakers from the household to the state level are confronted with a multitude of risks: from health and employment risks, to financial and political crises, as well as environmental damages and from the local to global level. The World Bank's 2014 World Development Report (WDR. To deal with this delegitimization, coffee farmers launched epistemic and political resistance, such as participatory mapping, compiling historical documents on land management, and reviving cultural narratives about the role of coffee in community sustainability. Farmers collaborate with NGOS, academics, and agrarian movements to dismantle the state's conservation logic that ignores local socio-ecological dimensions.

Thus, territorialization in the context of conservation is not merely a technocratic practice in spatial planning, but rather an arena for complex contestation of meaning. In it, the state and conservation actors confront local communities fighting for their right to life, recognition of knowledge, and agrarian justice. This process becomes a battleground between the logic of the state, which is oriented towards controlling space, and the logic of the community, which is based on the sustainability of life and local knowledge.

Recognition and Legibility

In Indonesia's conservation context, farmers' identities are often not shaped by their lived experiences, agrarian history, or ecological practices. Instead, these identities are constructed through formal lenses used by the state and conservation actors. This process is closely related to the concept of legibility as put forward by Scott (1998), namely the state's efforts to simplify social diversity into forms that are easy to monitor, regulate, and control through bureaucratic, legal, and technocratic systems.

The state creates a framework that makes local communities administrative subjects through spatial maps, conservation area regulations, land classifications, and labels such as 'encroachers' or 'indigenous peoples'. This ignores the autonomous capacity of farmers in the knowledge, history, and ecological relationships they build with their landscapes. Agroforestry practices, land rotation systems, and non-identified ecological relations become invisible in policy logic, so these practices are considered illegitimate or illegal. Figure 3 illustrates the factors that trigger resistance to dominant conservation narratives.



Source: Processed by the Author (2025)

Figure 3. Factors Triggering Resistance

The impartiality of the legibility system towards the diversity of local practices has profound implications for the recognition of identity. According to Fraser (2000) & Taylor (1994), recognition is not only a moral or symbolic issue but also rooted in social justice. When farmers are not recognized as legitimate subjects in conservation discourse and policies, they lose their rights in the decision-making process. Fraser calls this misrecognition—ignoring or distorting identity that contributes to social, economic, and ecological marginalization. In a political-ecological framework, legibility is not neutral and can be seen as an instrument of power. Legitimacy and recognition can determine two things: (1) determining how society can be controlled; and (2) determining who is recognized and considered to have legitimacy in natural resource governance.

The identity of farmers in conservation areas is not born from their social reality. However, it is shaped by the power relations between the state, conservation authorities, NGOS, donor agencies, and the media. Through regulations and dominant narratives, farmers are often labelled as illegal encroachers. This stigma simplifies their long history and ecological practices and positions them as an environmental threat. Conversely, a counter-narrative has emerged that positions farmers as forest guardians, especially when implementing coffee agroforestry practices that align with global conservation logics such as REDD+ or sustainable agriculture. However, this recognition is selective

and conditional, and when it is no longer appropriate, their identity will be returned to its original status as encroachers.

The dominant conservation narrative frames farmers in a narrow dichotomy of conservationists versus destroyers. Mainstream media and official documents reinforce this depiction, ignoring the diversity of local practices and the complexity of the ecological knowledge they hold. The state and conservation actors also hold representational power determining who is recognized as a development partner and who is labeled a violator. As a result, farmers are trapped in legal uncertainty and vulnerable to policy changes. Furthermore, local practices based on inherited wisdom, such as intercropping, land rotation, and biodiversity management, are often considered unscientific and sidelined because they are incompatible with formal zoning instruments, carbon calculations, or biodiversity indices. This creates an epistemic gap between local knowledge and modern conservation science. Farmers who have long maintained the landscape are positioned as 'unconservation-ignorant' and must be trained to conform to conservation projects' standards, reinforcing the dominance of technocratic knowledge while deepening ecological and social injustice.

One implication of this symbolic injustice is the stigmatization that undermines the social position of farmers. The label of 'illegal encroachers' limits their access to assistance, training, and certification, and creates identity alienation—farmers feel marginalized from the living space they have managed for generations. In this situation, the state and conservation institutions appear as the only legitimate authorities regulating space, while farmers' bargaining position is increasingly weakened. Therefore, understanding the identity and legitimacy of farmers in conservation must go beyond administrative categories. Their identity results from a long history of relationships with nature and struggles over living space. Recognition of this identity is not just a moral imperative, but a prerequisite for the realization of more inclusive ecological and social justice.

Interestingly, amidst these pressures, farmers' responses are not always in the form of open resistance. Many choose a silent adaptation strategy that is full of political meaning. This silent practice reflects a form of resistive resilience, namely a calculated way of surviving in the face of policy pressures, uncertainty of land access, and unequal power relations. In this context, farmer resilience can be read as an expression of covert resistance to the logic of conservation controlled by the state and the market.

Resilience as Resistance

In contemporary conservation discourse, farmers' adaptive strategies are often understood narrowly as passive ecological responses to environmental pressures and policy interventions. This view reduces the role of farmers to mere reactive actors who lack political capacity. In this framework, resilience is considered merely a technical response to the ecological crisis, without considering the power dimensions surrounding it. However, through the lens of political ecology and the Critical Discourse Analysis (CDA) approach, farmers' adaptive strategies can be read as discursive practices full of political meaning, even as a form of resistance to the domination of the state and global conservation institutions. including the Ministry of Environment and Forestry (KLHK), the Forest Management Unit (KPH Wilayah II Takengon), Gunung Leuser National Park Authority (BBTNGL), as well as international donor agencies and NGOs involved in REDD+ programs.

The concept of 'everyday resistance' put forward by Scott (1998), provides a deep understanding of invisible forms of resistance. Small actions such as maintaining gardens in conservation zones, choosing specific planting patterns, or secretly avoiding the authorities are not merely survival strategies, but rather subtle forms of resistance to the hegemony of the state and conservation actors. In a similar framework, Foucault emphasized that power does not only work repressively, but also productively, thus shaping subjectivity, identity, and meaning. Therefore, farmers' adaptation strategies must be understood as active practices to reshape their living space and agrarian identity claims.

Farmers' resilience in this context is not a form of resignation, but rather a political expression rooted in local knowledge, historical experience, and aspirations for autonomy. It becomes a tool to renegotiate power relations in a conservation landscape filled with inequality. The long history of state control over forests through regulations such as the Forestry Law and the REDD+ scheme shows how conservation is often carried out with top-down logic, in the name of global interests such as climate change mitigation and biodiversity conservation. In this narrative, the state and NGOS such as the Forum Konservasi Leuser (FKL) are positioned as 'environmental guardians,' while farmers and indigenous communities are portrayed as 'encroachers' or ecological threats.

However, farmers are not merely objects of conservation discourse, but active subjects who negotiate and divert dominant logic. As Scott (1998),

explains, actions that appear small and local can be effective strategies to disrupt the hegemony of state power. In Central Aceh, coffee farmers disguise their plantations as reforestation projects by planting shade trees—not only to adapt ecologically, but also to avoid criminalization and maintain living space. Adaptation strategies such as crop rotation, income diversification, and modification of cropping patterns reflect a renegotiation of state power. In this context, adaptation becomes a political maneuver to maintain identity and claims to land, while simultaneously shaking up the rigid and technocratic logic of conservation imposed by agencies like KLHK and the enforcement arms of BBTNGL.

Farmers' adaptation also appears in the form of discursive mimicry, namely when they adopt terms used by global conservation actors such as 'sustainable agriculture' or 'shade-grown coffee' to describe their traditional agroforestry practices. Through this tactic, farmers not only adapt to dominant discourses, but also re-articulate meanings so that their local practices can be legitimately recognized by external institutions. This opens up access to assistance, certification, and premium markets while still maintaining autonomy over agricultural practices. Thus, resistance does not have to be manifested through open confrontation; it can also appear as intelligent symbolic flexibility by using the language of power to expand living space.

From the perspective of political ecology, resilience is an arena of power struggle between the state, NGOS, and local communities to redefine the right to living space. Farmers use conservation discourse to change their position from lawbreakers to actors of sustainable development. They build alliances with cooperatives such as Kokowagayo, NGOs like FKL or Walhi Aceh, academics, and sympathetic bureaucrats to strengthen their claims through social forestry schemes, such as changing the status of forests to customary or village forests. This process is not only oriented towards legalization, but also as a form of discursive re-articulation that shifts the meaning of conservation from state control to community-based management.

Strategic alliances become institutional manoeuvres that allow farmers to exploit legal loopholes to expand their space, access support, and voice their interests. Resilience here is a power strategy, namely a form of ecological-political resistance that maintains autonomy over living space from the pressure of conservation regulations and uniform development narratives. Through these practices, Central Aceh coffee farmers not only survive but also reclaim their land rights, identity, and ecological future by asserting alternative narratives based on their local experiences and knowledge.

Critical Discourse Analysis of Climate Adaptation: Insights from Fairclough

In this study, data analysis was conducted using the Critical Discourse Analysis (CDA) approach developed by Norman Fairclough (1992), which understands discourse not only as a linguistic representation but also as a social practice that is laden with ideological and political dimensions. This approach allows researchers to examine how power relations are manifested, disguised, or resisted through the language used in the context of adaptation to climate change. In the context of small-scale coffee farmers living around protected forest areas, climate adaptation discourse cannot be separated from the dynamics of land politics, conservation, and survival.

Fairclough offers a three-dimensional analytical knife to comprehensively understand the relationship between language, social practices, and power structures. The three dimensions are: text, discursive practices, and social practices.

1. Text Dimension (Textual Analysis)

The analysis of the text dimension in Fairclough's CDA framework focuses on how language, both spoken and written, is used to represent social realities, frame problems, and shape public perceptions. At this level, text is not understood simply as a collection of words and sentences, but as a construction of meaning that reflects and simultaneously produces a certain ideology. In the context of climate change adaptation by small-scale coffee farmers, text analysis is directed at uncovering how adaptation narratives are formed through the choice of diction, sentence structure, use of metaphors, and other linguistic strategies.

Through the Critical Discourse Analysis framework (Fairclough, 1992), it is seen that terms such as "area protection," "forest control," or "ecosystem rescue" are used to shape public opinion and strengthen policy legitimacy. In this context, coffee farmers are often labelled as "encroachers" or "environmental destroyers," while state actors are positioned as "nature guardians." As a form of resistance, farmers formulate counter-narratives that emphasize land rights, agrarian justice, and community-based sustainability. In their narratives, protecting the forest does not mean expelling humans from their living space, but building a reciprocal relationship between humans and nature that has been going on for generations. These discourses reflect the struggle for authority over knowledge and space management. Table 3 summarizes the

discursive battle between state narratives and farmer narratives.

Table 3. Discourse Struggles in Land Conflict

Dimension	State Narrative	Farmer Narrative	Explanation
Text (What is Said)	Protection, conservation, environmental rescue	Agrarian justice, land rights, right to life	The state uses technocratic language, while farmers fight for agrarian rights
Discursive Practice	Formal regulations and conservation policies	Public forums, media, courtrooms	The state disseminates discourse through bureaucracy, farmers through the public.
Social Practice	The state controls conservation policies	Farmers are marginalized in land-related policy decisions	The state uses power for legitimacy; farmers resist marginalization.

Source: Compiled by the Author using CDA (2025)

In the analyzed texts, various key terms were found that were loaded with political meanings. Words such as 'resilience', 'sustainability', 'violation', and 'spatial planning' were often used to interpret a situation. For example, in state discourse, farming practices in or near conservation forest areas are often framed as illegal encroachment, which has a negative meaning and positions farmers as lawbreakers or ecological threats. This kind of framing shows that language functions as a tool to legitimize exclusive conservation policies and often does not consider the realities of farmers' lives.

In contrast, in farmers' narratives, their farming practices are often described as a form of sustainable adaptation that respects nature and relies on local knowledge. They use terms such as 'ancestral land', 'customary farming', or 'living side by side with the forest' to assert their moral and historical rights to the land. In these narratives, farmers do not position themselves as environmental destroyers, but as part of a long-established ecological system. Thus, the use of these terms reflects the existence of a counter-discourse that challenges the dominance of the state narrative.

In addition, it is also important to pay attention to the sentence structure and language style used in these texts. Conservation officials, for example, tend to use passive and formal sentences to cover up responsibility or to create an impression of objectivity in policies. For example, "the order was carried out to maintain the sustainability of the area," which obscures who is implementing the order and what impact it has on the community. In contrast, farmers use a more personal and emotional narrative, such as "we just want to survive on our own land," which emphasizes the identity, history, and human dimensions of land conflicts.

Metaphors are also an important element in the textual dimension. The state or conservation authorities often use militaristic metaphors such as 'area order', 'forest security', or 'red zone', which give the impression that the forest area is an area that must be protected from the 'enemy.' Farmers, on the other hand, use relational metaphors such as 'the forest is the mother' or 'the land as a source of life', which express an emotional and spiritual connection with nature. This text analysis aims to reveal that language is never neutral. Language always operates in a certain ideological space—either to support the status quo, which aims to reframe reality, or to resist domination. Thus, language becomes a political field that represents who has the right to land, what a legitimate way of life is, and what form of adaptation is recognized.

Thus, the textual dimension in CDA is not only about 'what is said', but also 'how' and 'why' it is said in a certain way. This analysis can provide an initial foundation for readers to understand how adaptation discourses cannot be separated from larger power relations, which will be further explored in the dimensions of discursive practice and social practice.

2. Discursive Practice Dimension

The discursive practice dimension in Fairclough's (1992) framework examines how discourse texts are not merely linguistic expressions, but are actively produced, disseminated, interpreted, and contested through institutional processes and by various social actors. Discourse, in this sense, is embedded in complex power relations where ideology, authority, and competing interests determine whose voice is amplified and whose is silenced. In the context of climate change adaptation among smallholder coffee farmers in Central Aceh, Indonesia, this dimension is particularly relevant to understand how dominant conservation narratives are institutionalized and how alternative, community-based discourses attempt to negotiate space in the public sphere.

In this case, discourse producers include government institutions, conservation agencies, NGOs, media outlets, and local communities. The key questions in this dimension are: who has the authority to speak, through which channels, and under what discursive constraints? In practice, the state—represented by the Balai Besar Taman Nasional Gunung Leuser (BBTNGL) and the KPH

Wilayah II Takengon (under the Aceh Provincial Forestry Service)—plays a dominant role in articulating and institutionalizing climate adaptation discourse. These agencies convey policy narratives through spatial planning, technical training, printed materials, and symbolic signage in forest buffer zones. Their messages emphasize "forest protection," "carbon reduction," and "area order," which are communicated using technocratic and depersonalized language. The effect is a top-down and exclusive framing of adaptation that marginalizes locally rooted knowledge systems.

In contrast, smallholder farmers in subdistricts such as Pegasing, Atu Lintang, and Ketol have limited access to formal communication channels. Their adaptive responses are embedded in informal discursive spaces—such as *musyawarah gampong* (village deliberations), adat gatherings, farming cooperatives, and everyday practices of cultivation and ecological monitoring. These forms of knowledge—e.g., the timing of planting based on phenological indicators or mixed cropping for risk reduction—are rarely codified in written form, and thus are often dismissed as "unscientific" or "invalid" by formal actors. This reflects a condition of epistemic injustice, wherein local knowledge systems are structurally devalued within a discourse environment dominated by institutional actors with symbolic capital.

NGOs, particularly the Forum Konservasi Leuser (FKL), operate as intermediary actors. While some NGOs attempt to translate farmers' narratives into donor-compatible language—through reports, spatial maps, or agroforestry trials—others risk becoming vehicles of discursive domestication, inadvertently aligning with the institutional logics they seek to challenge. The ability of NGOs to represent community voices is thus constrained by donor requirements, project timelines, and performance indicators.

Meanwhile, local and regional media outlets, such as *RRI Takengon* and *Serambi Indonesia*, tend to prioritize official press releases and expert commentary from state or NGO representatives. As a result, the framing of adaptation often reinforces the binary view of "state as protector" versus "farmers as violators"—reducing complex socio-ecological relationships into administratively convenient labels. Even when community voices appear, they are often filtered through the narratives of external actors.

This dimension illustrates that the circulation of adaptation discourse is not a neutral process of information exchange, but a discursive struggle over legitimacy, representation, and power. Formal institutions have structural advantages in shaping public discourse, while farmers' narratives remain peripheral unless they are incorporated into broader alliances involving NGOs, academics, or certification schemes. Thus, climate change adaptation must be understood not merely as a technical process, but as a contested discursive field in which meaning is continuously negotiated—and often monopolized—by actors with access to institutional authority and epistemic legitimacy.

3. Social Practice Dimension

The social practice dimension in Fairclough's (1992) framework situates discourse within a broader landscape of social structures. Here, discourse is not merely understood as symbolic representation or verbal communication, but as an integral component of social practices that actively reproduce or challenge existing power structures. In the context of climate change adaptation in Central Aceh, emerging discourses—whether articulated by the state, NGOs, or local communities—are inseparable from the prevailing knowledge regimes, agrarian structures, conservation policies, and the historically embedded state-society relations.

One of the most tangible manifestations of these social practices is the implementation of conservation policies rooted in the principle of area preservation (fortress conservation), enforced by state agencies such as the *Balai Besar Taman Nasional Gunung Leuser* (BBTNGL) and *KPH Wilayah II Takengon*. Through zoning systems, access restrictions, and ecological rescue rhetoric, the state constructs forest areas as exclusive zones that must be kept untouched by humans, disregarding the ecological histories and emotional attachments of local communities to these landscapes. In official narratives, farmers residing and cultivating in forest buffer zones are frequently labeled as "encroachers," "violators," or "environmental degraders"—labels used to justify their eviction or the criminalization of their traditional economic activities.

From the perspective of local communities, practices such as farming, harvesting forest products, or opening land are part of long-standing survival strategies and cultural heritage. Nature is not viewed as an external object that must be protected from humans, but as a living partner maintained through principles of balance and local wisdom. However, this worldview is often marginalized, as it does not align with the technocratic logic of conservation underpinned by Western scientific epistemologies and state-driven sustainable development narratives.

Inequality in agrarian structures constitutes a core dimension of this analysis. Many smallholder farmers lack formal land titles or legal documentation for lands cultivated over generations. Consequently, they are highly vulnerable to state interventions, including evictions and spatial restrictions implemented under ecosystem restoration or land rehabilitation programs. Although these initiatives are often framed in the language of adaptation and sustainability, they are frequently executed without meaningful community participation. As such, discourses of adaptation—despite appearing neutral—can serve as tools to legitimize policies that perpetuate structural injustice.

Symbolic dispossession also occurs when certain social identities—such as poor farmers, women cultivators, or indigenous groups—are not recognized as knowledge producers or agents of change. They are often positioned as passive recipients in need of "empowerment," rather than as epistemic subjects entitled to shape the future of their territories. Patriarchal and centralized social structures further reinforce inequities in access to resources, decision-making, and representation in adaptation policymaking. In these circumstances, local communities not only lose their right to govern their living spaces but also experience the erosion of meanings, memories, and identities embedded in their socio-ecological relationships.

Nonetheless, social practices also generate space for resistance. Farming communities in areas such as Pegasing and Atu Lintang have responded to state domination by forming informal resistance forums, contesting eviction policies, and articulating counter-narratives centered on community-based sustainability. *Kokawagayo Cooperative* stands as a key actor in this struggle—not only advocating for economic justice but also expanding the discursive battlefield through training, advocacy networks, and documentation of adaptive practices. Alliances between farmers, NGOs such as the *Forum Konservasi Leuser* (FKL), and local academics are emerging to construct alternative knowledge fronts that challenge the hegemony of technocratic discourse.

Within this framework, climate change adaptation must be understood not as a purely technical endeavor, but as a site of social and ideological contestation. Adaptation becomes a struggle over meaning, space, and legitimacy regarding ecological futures. Thus, the social practice dimension in critical discourse analysis reveals that language, knowledge, and power are always interlinked in shaping the social world we inhabit—and in the collective struggle to transform it.

CONCLUSION

Climate adaptation strategies of smallholder coffee farmers in forestry conflict areas are not only technical responses to climate change, but also political expressions shaped by struggles over power, agrarian conflict, and dominant conservation narratives that often marginalize that often marginalize farmers. Using the Critical Discourse Analysis (Fairclough) approach, this study explores three dimensions of discourse—text, discursive practice, and social practice—to demonstrate that farmer resilience constitutes a form of resistance to the power structures governing their living spaces. This includes resistance to exclusionary land-use policies, the delegitimization of traditional agroforestry systems, and the production of counter-narratives rooted in local knowledge. The research found that dominant conservation narratives—produced by state institutions such as the Ministry of Environment and Forestry (KLHK), the Forest Management Unit (KPH Wilayah II Takengon), and the Gunung Leuser National Park Authority (BBTNGL), along with non-governmental organizations and international donors involved in REDD+ construct farmers' identities through technocratic language that often criminalizes and erases their historical and ecological contributions. These findings challenge the reductive and technocratic interpretations of climate adaptation, emphasizing instead that adaptation is a contextual and political process embedded in historical conflicts, identity struggles, and spatial inequalities.

Based on these findings, it is recommended that climate adaptation policies be more inclusive by involving local knowledge and sustainable practices. Governments and conservation agencies need to adopt participatory and dialogical approaches that consider the social and political realities of farmers, not just technical solutions. This approach will reduce inequality in land access and strengthen the ability of local communities to adapt equitably. In addition, policies must support farmers' efforts to reclaim their living spaces threatened by exclusive and top-down conservation policies.

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