



Governing the Commons Differently: Social-Environmental Innovation and Customary Rights in Eastern Indonesia's Contested Forests

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ABSTRACT

Constitutional recognition of customary forests in Indonesia (Constitutional Court Decision MK35/2012) has not reversed the pattern of territorial dispossession affecting Indigenous communities across Eastern Indonesia (Papua, Maluku, Nusa Tenggara). This study aims to synthesize recent legal-policy and empirical literature on customary forest governance in Eastern Indonesia and to develop an integrated social-environmental innovation framework from that evidence. A structured narrative (integrative) review was conducted of peer-reviewed articles and institutional reports published between 2021 and 2026, screened against explicit inclusion criteria, and coded thematically into three pillars: tenure recognition, inclusive governance, and environmental governance. The literature shows substantial normative progress but fragmented implementation, limited local government capacity, and persistent agrarian conflict linked to plantation expansion and nationally strategic projects. Monitoring data record 154 conflicts linked to Nationally Strategic Projects between 2020 and 2024, and primary forest loss in Papua rose by about 11 percent in 2024 while the national total fell by 14 percent. The paper proposes a "governing the commons differently" framework linking legal recognition with participatory free, prior and informed consent mechanisms and Indigenous-knowledge-based environmental governance. Formal recognition is necessary but insufficient without inclusive governance and subnational institutional capacity; the framework requires site-specific testing in Papua, Maluku, and Nusa Tenggara.

Keyword: commons governance; social innovation; customary rights; deforestation; Eastern Indonesia; environmental justice.

INTRODUCTION

Globally, the governance of forests claimed by Indigenous Peoples has become one of the central problems of environmental policy. Lands managed or held by Indigenous Peoples cover roughly a quarter of the world's land surface and overlap a large share of the planet's remaining intact forest landscapes (Fa et al., 2020; Garnett et al., 2018), and a growing body of evidence associates locally led and equitable governance of these lands with better ecological and social outcomes than externally imposed conservation (Dawson et al., 2021). Yet formal recognition of Indigenous tenure lags far behind this ecological importance, and where recognition exists it is frequently contested by extractive, plantation, and infrastructure interests.

Indonesia, which holds one of the largest remaining areas of tropical forest in the world, is a critical case of this global problem: early assessments of its post-2012 customary forest policies already warned that recognition procedures were producing new inclusions and

exclusions among customary claimants (Myers et al., 2017), and the regions of Eastern Indonesia examined here are where the country's remaining primary forest and its most recent frontier of plantation and strategic project expansion overlap. Forests covering much of Indonesia's outer islands have historically been governed through a state-centric regime inherited from colonial forestry law, under which vast customary territories were absorbed into the category of "state forest" regardless of prior Indigenous occupation and management.

This arrangement was formally challenged by Constitutional Court Decision No. 35/PUU-X/2012 (MK35/2012), which ruled that customary forests are not state forests but forests located within the territory of Indigenous Law Communities, thereby opening a legal pathway for their recognition as private/customary forest rather than state-controlled land (Jamin et al., 2022). Over the following decade, this constitutional breakthrough was elaborated through Government Regulation 23/2021 on Forestry Administration and Ministry of Environment and Forestry Regulation 9/2021 on Social Forestry Management, which together defined customary territory, established a verification procedure for its designation, and folded customary forest recognition into the broader Social Forestry policy framework.

Theoretically, this study situates Indonesia's forest tenure reform within the broader literature on the governance of the commons. Commons governance theory, following Ostrom's foundational institutional analysis and its recent elaborations, holds that common-pool resources such as forests are neither inevitably subject to a "tragedy of the commons" nor best managed through pure state control or privatization, but can be sustained through locally crafted institutional arrangements that combine secure tenure, participatory rule-making, and graduated accountability (Agrawal et al., 2023). Contemporary commons scholarship has increasingly foregrounded questions of power and equity, emphasizing that durable commons governance depends on collective action grounded in shared goals rather than externally imposed mandates (Tu et al., 2023; Villamayor-Tomas et al., 2022).

Parallel to this, the social innovation literature conceptualizes grassroots and community-anchored innovation as bottom-up institutional and organizational responses that address social and environmental needs unmet by dominant policy systems, mobilizing local knowledge, networks, and values toward collective benefit (Marini Govigli et al., 2022; Widyaningsih et al., 2022). This paper brings these two bodies of theory into dialogue with the Indonesian customary forest literature to examine whether, and how, institutional recognition can be paired with social innovation to produce more just and durable outcomes for forest-dependent Indigenous communities.

Despite this evolving legal and regulatory architecture, the empirical record from Eastern Indonesia encompassing Papua, Maluku, and Nusa Tenggara indicates that formal recognition has not translated into secure tenure or reduced conflict. National monitoring data show that Indonesia's primary forest loss rose 27 percent in 2023 relative to 2022, before declining 14 percent nationally in 2024 to roughly 242,000 hectares; notably, this national improvement was not uniform, as forest loss in Indonesian New Guinea (Papua) increased by approximately 11 percent over the same period, rising from about 22,500 to 25,000 hectares (Atlas, 2025). Agrarian conflict data compiled by the Consortium for Agrarian Reform recorded 154 conflicts linked to Nationally Strategic Projects between 2020 and 2024 alone, affecting some 103,000 families and one million hectares of land, with cases concentrated in food estate schemes in

Papua and South Papua, the Rempang Eco City project, and oil palm expansion across the wider Papua region (Agraria, 2025; Mongabay, 2025).

In Maluku, recognition and protection of customary law communities' rights over forest resources remains constrained by overlapping regional and national legal instruments and by weak follow-through at the district level (Matuankotta & Holle, 2022). In Nusa Tenggara, long-running tenure conflicts in Flores that originated in state territorialization of forest land in the 1970s were only partially transformed through collaborative social forestry arrangements (Maring, 2022), while in the Mutis forest of Timor a customary tenure system (*suf*) continues to operate alongside, and largely without formal recognition from, the state forest regime (Budiman et al., 2020).

In West Papua, only a small fraction of proposed customary territories had been formally designated by 2021, with bureaucratic delay limiting what recognition delivers on the ground (Ungirwalu et al., 2021). Comparable dynamics of dispossession, though situated in West Kalimantan rather than Eastern Indonesia proper, illustrate the broader national pattern: plantation companies have been shown to secure customary land through territorialization strategies that mobilize village government bureaucracy to fragment and localize Indigenous resistance (Kurniawan et al., 2024). These trends make the study urgent: the interval between constitutional recognition and administrative confirmation is precisely when permits for plantations and strategic projects are issued, so each year of delayed and uneven implementation translates directly into forest loss and conflict that are difficult to reverse.

A growing body of empirical research has examined discrete dimensions of this problem. Studies of Social Forestry implementation document persistent bureaucratic contestation between ministries and directorates over policy mandates (Maryudi et al., 2022), limited and unevenly distributed local government support concentrated in a small number of agencies a pattern documented specifically for Eastern Indonesia through social network analysis Rahayu et al., (2024) and an uneven distribution of wellbeing benefits from social forestry permits across gender and social groups (Toumbourou et al., 2025).

Legal-normative scholarship has traced the persistent gap between constitutional recognition and enforceable protection, showing that the absence of a dedicated Indigenous Peoples law continues to generate legal ambiguity even where the Constitutional Court's authority is not disputed (Jamin et al., 2022), and that the Free, Prior and Informed Consent (FPIC) principle despite its grounding in international instruments such as ILO Convention 169 and the UN Declaration on the Rights of Indigenous Peoples has not been formally adopted into Indonesian domestic law, leaving communities to invoke it as a strategy of grassroots resistance rather than as a guaranteed procedural right (Budiono et al., 2023).

Political-ecology research on West Papua further shows that dispossession there is neither uniform nor purely externally driven: differentiated local land and power relations, together with an Indonesian state that operates as an arena of multiple contested interests rather than a single unified actor, shape divergent Indigenous strategies of overt resistance and negotiated inclusion (Malinda, 2025). At a more macro level, comparative research finds that community land titling programmes in Indonesia have not, in aggregate, produced measurable reductions in deforestation, suggesting that formal tenure recognition alone is an incomplete lever for environmental outcomes without complementary governance and enforcement mechanisms

Kraus et al., (2021) a finding broadly consistent with global evidence that secure Indigenous land tenure correlates with high forest integrity primarily where recognition is accompanied by functioning institutions of enforcement and stewardship (Hajjar et al., 2021; Sze et al., 2022).

Read together, however, these strands of research remain largely disconnected from one another. Legal-normative studies analyze recognition gaps in doctrinal terms without engaging commons governance or social innovation theory as an institutional design resource. Policy-implementation studies documenting bureaucratic contestation, local government capacity, and NGO intermediation describe institutional weakness in rich empirical detail but stop short of proposing an integrative framework for reform. Political-ecology studies of dispossession illuminate the mechanisms and asymmetries of land control with analytical precision but are not oriented toward institutional alternatives. And the global commons-governance and social-innovation literatures offer conceptually powerful frameworks for reconciling tenure, participation, and stewardship, but are rarely operationalized against the specific institutional and political conditions of Eastern Indonesia's forest conflicts.

The contribution of this paper is therefore integrative rather than empirical. Its novelty does not lie in the three pillars themselves (tenure recognition, inclusive governance, and environmental governance strengthening), which are familiar in commons and forest governance scholarship, but in three more specific moves: (1) it reads the legal-normative, policy-implementation, political-ecology, and commons/social-innovation literatures published within the last five years as evidence about a single institutional system rather than as separate debates; (2) it specifies, for Eastern Indonesia, how the three pillars interact, so that a weakness in one (for example, the legal-limbo window during customary forest verification) can be traced to outcomes in the others; and (3) it operationalizes each pillar into observable indicators (Table 7) that make the framework testable. Because the framework is synthesized from existing studies rather than tested against new data, it is offered as a conceptual proposition to be examined empirically, not as a demonstrated model.

Accordingly, this study aims to (a) synthesize recent empirical and legal-policy literature on customary forest governance, land dispossession, and Social Forestry implementation in Eastern Indonesia; and (b) develop, on that evidentiary basis, an integrated social-environmental innovation framework combining institutional recognition of customary tenure, inclusive multi-stakeholder governance anchored in Free, Prior and Informed Consent, and community-based environmental stewardship as a conceptual pathway beyond the pattern of exclusion that the literature consistently documents.

The expected benefits of the study are twofold. Academically, it offers an integrated reading that connects four literatures that have so far developed separately and provides a testable set of propositions for future field research. Practically, it gives policymakers, Indigenous organizations, and civil society actors in Papua, Maluku, and Nusa Tenggara an evidence-based map of where the recognition process is most likely to break down and which institutional levers (legal codification of Indigenous status and Free, Prior and Informed Consent, subnational capacity, and recognition of Indigenous ecological knowledge) the literature identifies as most consequential. The policy implication is that reforms concentrated on any single pillar, such as accelerating customary forest designation alone, are unlikely to deliver secure tenure or reduced conflict unless they are accompanied by reforms in the other

two.

Table 1. Key legal and regulatory milestones in Indonesia's customary forest recognition

Year	Instrument	Key provision
2012	Constitutional Court Decision No. 35/PUU-X/2012 (MK35/2012)	Ruled that customary forests (hutan adat) are not state forests but forests located within the territory of Indigenous Law Communities (Masyarakat Hukum Adat).
2021	Government Regulation No. 23/2021 on Forestry Administration	Formally defined Customary Territory (Wilayah Adat) and established the administrative procedure for designating customary forests.
2021	Ministry of Environment and Forestry Regulation No. 9/2021 on Social Forestry Management	Incorporated customary forest recognition into the broader Social Forestry policy framework and set verification requirements.
2025	Ministry of Forestry Decree No. 144/2025	Established a dedicated Task Force (Satgas Hutan Adat) to accelerate the determination and confirmation of customary forests nationally.

Source: compiled by the author from Jamin et al., (2022)

METHOD

This study employs a structured narrative (integrative) literature review design (Snyder, 2019), combining the topical breadth of a narrative review with a transparent, PRISMA-informed search and selection procedure (Page et al., 2021b), without claiming the exhaustive coverage and formal quality grading of a full systematic review, in order to synthesize a body of literature that spans legal studies, forest policy, agrarian studies, and environmental governance. This design was selected over a primary empirical study because the objective of the paper is conceptual and integrative to identify convergent patterns across an already substantial and fragmented body of recent research rather than to generate new field-level data; no interviews, surveys, or site visits were conducted as part of this study, and all empirical claims herein are attributed to the peer-reviewed and institutional sources cited.

The literature search was conducted across Scopus- and Web of Science-indexed journals (including Forest and Society, Forest Policy and Economics, Journal of Agrarian Change, Environmental Science & Policy, Nature Sustainability, and Cogent Social Sciences), together with SINTA-indexed Indonesian legal and social-science journals, using combinations of the keywords "customary forest" OR "hutan adat", "land grabbing" OR "agrarian conflict", "social forestry" OR "perhutanan sosial", "free prior informed consent", "commons governance", and "social innovation", each cross-referenced with "Indonesia", "Eastern Indonesia", "Papua", "Maluku", or "Nusa Tenggara".

The search was restricted to publications dated 2021 to 2026, coinciding with the period following the issuance of Government Regulation 23/2021 and Ministry of Environment and Forestry Regulation 9/2021, in order to capture the literature most relevant to the current

regulatory regime. Searches were run in January 2026. Database-specific strings combined the keyword groups with Boolean operators (for example, in Scopus: TITLE-ABS-KEY(("customary forest" OR "hutan adat" OR "social forestry" OR "perhutanan sosial" OR "land grabbing" OR "agrarian conflict") AND (Indonesia OR Papua OR Maluku OR "Nusa Tenggara"))), and the reference lists of included articles were hand-searched for additional eligible sources.

Indexing status of each journal was checked against the Scopus source list, the Web of Science Master Journal List, or the SINTA database at the time of search. Although the search window extended to 2026 in order to capture the most recent work, no peer-reviewed study published in 2026 met the inclusion criteria at the time of the search; the included corpus therefore spans 2021 to 2025. The 2021 to 2026 window applies to the corpus synthesized in Section 3; a small number of earlier foundational or global-framing works (for example, Budiman et al., (2020); Fa et al., (2020); Garnett et al., (2018) are cited in the Introduction and in Section 3 for context and comparison only and are not part of the coded corpus.

Inclusion criteria were: (1) peer-reviewed journal articles or institutional monitoring reports; (2) published in English or Indonesian; (3) addressing Indonesian forest tenure, customary rights, land conflict, Social Forestry implementation, or the theoretical governance of commons and social innovation with clear relevance to Indonesia; and (4) published between 2021 and 2026. Exclusion criteria were: opinion pieces or advocacy material without an underlying empirical or legal-analytical basis; studies concerning countries other than Indonesia without direct comparative or theoretical relevance; and sources predating 2021. Sources meeting these criteria were read in full and coded thematically according to three institutional dimensions identified inductively from the literature and mapped onto commons-governance theory: tenure recognition, inclusive governance, and environmental governance.

The selection process is reported in Table 2. Database searches returned 312 records; after removal of 39 duplicates, 273 records were screened by title and abstract, of which 201 were excluded as off-topic (non-Indonesian cases without comparative relevance, non-forest sectors, or opinion pieces). Seventy-two full texts were assessed for eligibility and 44 were excluded (no empirical or legal-analytical basis, $n = 19$; published before 2021, $n = 14$; insufficient relevance to tenure, governance, or stewardship, $n = 11$), leaving 28 sources in the synthesized corpus (23 peer-reviewed articles and 5 institutional monitoring reports or datasets).

The research instrument was a data extraction and coding sheet (Table 3) completed for every included source. Two authors coded each source independently; disagreements (four cases, all concerning the pillar assignment of multi-pillar sources) were resolved by discussion with the third author. Quality was appraised by source type rather than by a formal scoring tool: peer-reviewed empirical and legal-analytical studies form the core evidence base, whereas institutional monitoring and media sources (Nusantara Atlas, Mongabay, the World Resources Institute, and the Konsorsium Pembaruan Agraria) are used only for contemporary contextual figures and are not given the evidentiary weight of peer-reviewed research.

Findings within each dimension were then synthesized narratively, and cross-cutting patterns were used to construct the integrated framework presented in Section 3.4. As a desk-based synthesis, this study's principal limitation is that it cannot independently verify contested empirical claims in primary sources or capture the perspectives of affected communities

beyond what is already documented in the literature; the framework proposed here is therefore offered as a conceptual contribution requiring future site-specific empirical validation, rather than as a tested intervention. Consistent with this limitation, the study closes with a research agenda in which the framework is tested through community-based participatory research combined with institutional analysis (Section 4).

Table 2. Literature identification and selection flow (PRISMA-informed)

Stage	Records	Note
Records identified through database searching (Scopus 148; Web of Science 96; SINTA / Google Scholar 68)	312	Search run January 2026; 2021 to 2026 date limit applied
Duplicates removed	39	Matched by DOI and title
Records screened by title and abstract	273	Two authors, independent screening
Records excluded at screening	201	Off-topic, non-forest sector, non-Indonesian without comparative relevance, opinion pieces
Full-text articles assessed for eligibility	72	Including 9 sources added from hand-searched reference lists
Full-text articles excluded	44	No empirical or legal-analytical basis (19); published before 2021 (14); insufficient relevance (11)
Sources included in the synthesis	28	23 peer-reviewed articles; 5 institutional monitoring reports or datasets

Source: authors' search log; flow reported following Page et al., (2021).

Table 3. Data extraction and coding sheet used as the research instrument

Field	Description	Coding values
Bibliographic data	Authors, year, title, journal, DOI, indexing (Scopus, Web of Science, SINTA)	Free text
Source type	Nature of the source and its evidentiary weight	Peer-reviewed empirical; legal-doctrinal; theoretical; institutional monitoring or media
Region / focus	Geographic scope of the evidence	Papua; Maluku; Nusa Tenggara; other Indonesia; national; global
Method of source	Design used by the source	Qualitative case study; quantitative or spatial; mixed; doctrinal analysis; review or theory

Field	Description	Coding values
Institutional pillar	Dimension of the framework the finding speaks to (more than one may apply)	Tenure recognition; inclusive governance; environmental governance
Key finding	Principal result relevant to Eastern Indonesia	Free text (one to two sentences)
Direction of evidence	Relation to the proposition that formal recognition alone secures tenure and reduces conflict	Supports; qualifies; contradicts
Transferability	Whether the evidence applies to Eastern Indonesia directly or by inference	Direct (Papua, Maluku, Nusa Tenggara); inferential (national or other region); theoretical

Source: developed by the authors; thematic categories derived inductively from the literature and mapped onto commons governance theory (Agrawal et al., 2023).

RESULTS AND DISCUSSION

Table 4 summarizes the corpus of reviewed literature organized by the three institutional pillars that structure this section, indicating for each source its regional or thematic focus and its principal finding as synthesized from the sources described in Section 2. To keep synthesized evidence distinct from interpretation, each subsection (3.1 to 3.3) first reports what the reviewed studies found (results) and then, in a closing paragraph marked 'Interpretation', presents the authors' reading of that evidence (discussion); Section 3.4 is interpretive throughout.

Table 4. Synthesis matrix of reviewed literature by institutional pillar (selected sources, 2021–2026)

Pillar	Source	Region / focus	Key finding
Tenure	Jamin et al., (2022)	National	Absence of a dedicated Indigenous
recognition		(Indonesia)	Peoples law leaves customary forest protection legally ambiguous despite MK35/2012.
Tenure	Matuankotta & Holle, (2022)	Maluku	Recognition of customary rights
recognition			over forest resources depends on inconsistent regional regulation rather than a uniform standard.
Tenure	Kurniawan et al., (2024)	West Kalimantan	Plantation companies exploit
recognition			jurisdictional ambiguity through territorialization to acquire customary land.
Tenure	Kraus et al., (2021)	National	Community land titling shows no
recognition		(Indonesia)	aggregate reduction in

Pillar	Source	Region / focus	Key finding
			deforestation to date.
Tenure recognition	Malinda, (2025)	West Papua	The state acts as a differentiated, contested arena in dispossession, not a passive bystander.

Land Tenure Recognition: Constitutional Promise, Bureaucratic Delay

The literature converges on a consistent finding: MK35/2012 established an unambiguous constitutional foundation for customary forest recognition, and Government Regulation 23/2021 together with Ministry of Environment and Forestry Regulation 9/2021 operationalized that foundation into a concrete administrative procedure. Yet implementation has been persistently slow and legally fragile. Jamin et al., (2022) argue that the absence of a dedicated national law recognizing Indigenous legal status as distinct from the Constitutional Court's ruling and sectoral forestry regulations continues to generate ambiguity that weakens protection in practice, a gap that becomes especially consequential wherever customary and commercial claims to the same territory compete. Comparable ambiguity is documented for Maluku, where the recognition and protection of customary law communities' rights in the exploitation of forest resources remains dependent on inconsistent regional regulations and district-level political will rather than on a uniform national standard (Matuankotta & Holle, 2022).

Evidence from Nusa Tenggara and Papua points in the same direction while adding regional specificity. In Flores, Maring, (2022) traces tenure conflict to state territorialization of forest land that began in the 1970s and shows that community forestry schemes were initially rejected by local communities and gained traction only after a shift toward conflict transformation and collaborative arrangements around 2010; recognition, in this account, was achieved through negotiated process rather than administrative designation. In the Mutis forest of Timor, earlier work documents a customary tenure system (suf) with its own reward and sanction mechanisms operating alongside the state regime, with formal recognition still under discussion (Budiman et al., 2020).

In West Papua, Ungirwalu et al., (2021) report that only a small fraction of proposed customary territories had been formally designated, attributing the gap to bureaucratic delay rather than to the absence of customary claims. Read together with Matuankotta & Holle, (2022) for Maluku, these studies indicate that the recognition gap is region-wide, although its mechanisms differ: inconsistent regional regulation in Maluku, unresolved historical territorialization in Nusa Tenggara, and administrative delay in Papua. This gap between constitutional principle and administrative reality interacts directly with Indonesia's pattern of land-based investment.

Kurniawan et al., (2024), studying oil palm plantation expansion onto Dayak customary land, show how companies exploit exactly this kind of jurisdictional ambiguity through what they term territorialization: mobilizing village government bureaucracy to formally reclassify and fragment customary land, thereby localizing and containing Indigenous resistance before it can escalate into a broader legal or political challenge. Because this case is located in West Kalimantan, its relevance to Eastern Indonesia is inferential rather than direct: we treat it as

evidence of a mechanism (the use of village-level bureaucracy to fragment customary claims) that is plausible wherever similar jurisdictional ambiguity exists, and the Maluku and Nusa Tenggara evidence introduced above supports that inference only partially.

In West Papua, Malinda, (2025) similarly documents how the Indonesian state rather than acting as a passive bystander to foreign or domestic capital actively participates in processes of dispossession, while also constituting an arena in which some state actors, alongside environmental NGOs, occasionally ally with Indigenous landholders resisting plantation expansion. Recent monitoring data situate these dynamics at scale: 154 conflicts tied to Nationally Strategic Projects were recorded across Indonesia between 2020 and 2024, disproportionately concentrated in food estate and plantation schemes affecting Papua and South Papua (Mongabay, 2025), even as national primary forest loss fell in 2024 a decline driven mainly by improvements in Kalimantan, Sumatra, and Sulawesi that did not extend to Papua, where forest loss instead increased by approximately 11 percent over the same period (from about 22,500 to 25,000 hectares) (Atlas, 2025).

Table 5. Primary forest loss in Indonesia: national total vs. Papua, 2023–2024

Year	National total (ha)	Papua (ha)	National YoY change
2023	279,000	22,500	+27% (vs. 2022)
2024	242,000	25,000	–14% (vs. 2023)

Source: Atlas, (2025); corroborated for the 2022–2023 national increase by World Resources Institute.

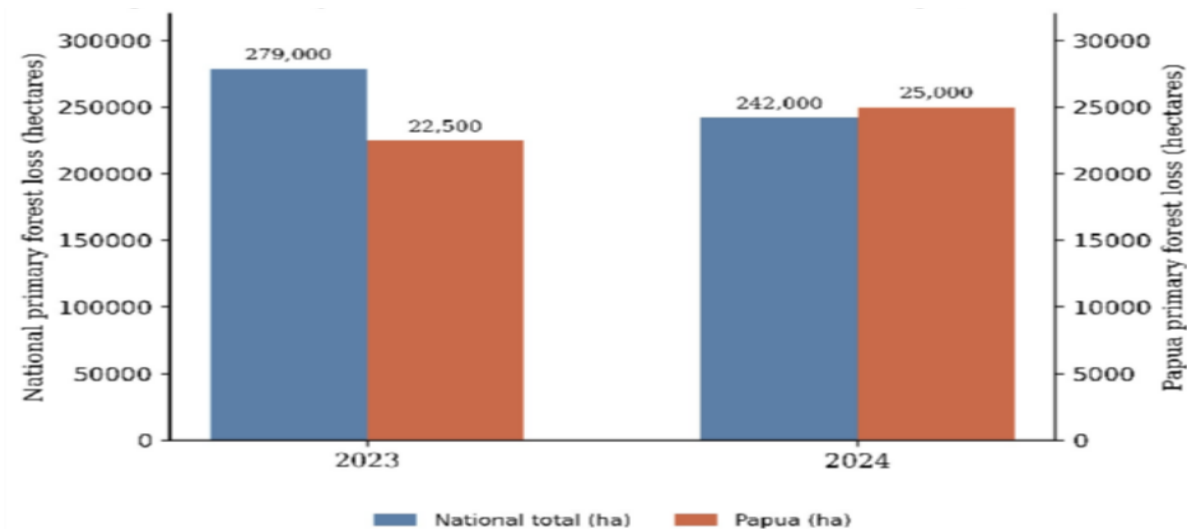


Figure 1. Primary forest loss in Indonesia, national total vs. Papua, 2023–2024.

Source: author's elaboration based on data reported in (Atlas, 2025).

Table 6. Agrarian conflict linked to Nationally Strategic Projects (PSN), Indonesia, 2020–2024

Indicator	Figure
PSN-related conflicts recorded (2020-2024)	154
Families affected	≈103,000
Land area affected	≈1,000,000 hectares
Komnas HAM complaints related to PSN (2020-2023)	

The 114 complaints concerning PSN lodged with the National Human Rights Commission (Komnas HAM) between 2020 and 2023 (Table 6) add a dimension that the conflict count alone does not capture: affected communities are increasingly framing these disputes as human rights grievances and routing them through the state's own oversight machinery rather than through the forestry or land administration bureaucracy. That roughly three quarters as many complaints were filed as conflicts recorded suggests that formal grievance channels are being used intensively, yet the continued escalation of PSN-related conflict over the same period indicates that these channels have not functioned as an effective remedy, a pattern consistent with the finding that FPIC and grievance mechanisms lack binding domestic legal force (Budiono et al., 2023).

A further, more counterintuitive finding qualifies the assumption that formal tenure recognition is sufficient in itself. Kraus et al., (2021), analyzing Indonesia's community land titling programmes at a national scale, find no aggregate reduction in deforestation attributable to titling to date. Read alongside global comparative evidence that Indigenous lands sustain high forest integrity primarily where recognition is coupled with functioning enforcement and stewardship institutions Sze et al., (2022) and that community forests generate positive social and environmental outcomes most reliably under supportive institutional conditions (Hajjar et al., 2021), this suggests that tenure recognition functions as a necessary but not sufficient condition: without accompanying governance capacity and enforcement, formal recognition risks becoming a symbolic rather than substantive safeguard precisely the "legal limbo" condition in which commercial permits continue to be issued over land whose customary status remains under prolonged administrative verification.

Taken together, the tenure evidence supports a necessary-but-not-sufficient reading of recognition. This reading is, however, an inference across studies with different designs and scales: Kraus et al., (2021) measure aggregate deforestation outcomes nationally, whereas the regional studies describe recognition processes qualitatively, and the two do not necessarily speak to the same outcome. The evidence also contains an unresolved tension. Kraus et al., (2021) find no aggregate effect of titling in Indonesia, while comparative work from Peru finds that titling Indigenous communities measurably reduced forest clearing Blackman et al., (2017) and global syntheses associate Indigenous tenure with high forest integrity (Fa et al., 2020; Sze et al., 2022).

Kusters et al., (2022) offer a way to reconcile these findings: formalization produces conservation and livelihood benefits only when a set of enabling conditions, including secure and enforceable rights, local organizational capacity, and supportive government agencies, is

present. On that reading, the Indonesian null result reflects the absence of those conditions rather than evidence that recognition does not matter, and this answers the first part of objective (a): recognition in Eastern Indonesia is constitutionally settled but institutionally incomplete.

Toward Inclusive Governance: FPIC, Local Government Capacity, and the Limits of Participation

If tenure recognition addresses the question of who holds rights to forest land, inclusive governance addresses the equally consequential question of who participates in decisions over that land while recognition is pending or being exercised. Here the literature identifies two structural weaknesses. First, Free, Prior and Informed Consent the internationally recognized standard for engaging Indigenous communities in decisions affecting their territories under ILO Convention 169 and UNDRIP has not been formally codified within Indonesian domestic law. Budiono et al., (2023) show that, in this legal vacuum, FPIC functions less as a state-guaranteed procedural right and more as a strategy that Indigenous communities themselves invoke, often reactively, to resist alienation of their land within structural agrarian conflicts; its protective force is therefore contingent on communities' own capacity for organized advocacy rather than on any automatic institutional guarantee.

Second, even where Social Forestry as a policy vehicle exists to formalize participatory access, its implementation at the subnational level the tier of government closest to affected communities remains structurally weak. Using social network analysis of local government entities specifically in Eastern Indonesia, Rahayu et al., (2024) find that institutional support for Social Forestry implementation is concentrated within a narrow set of agencies, that stakeholder understanding of the policy remains limited across most of local government, and that resource availability constrains what local authorities can meaningfully do even where political will exists; the authors conclude that Social Forestry has not yet become a functioning strategy for community wellbeing, local economic development, or forest protection at the regional level.

Complementary research on the role of non-governmental organizations in Indonesia's Social Forestry policy process finds that NGOs frequently function as de facto intermediaries bridging this local-government capacity gap, translating policy into practice and channeling community voice into bureaucratic processes that would otherwise exclude it Rahayu et al., (2023) a finding consistent with Maryudi et al., (2022), who characterize Social Forestry implementation as "held hostage" by contested bureaucratic mandates among competing ministries and directorates, producing inconsistent guidance and slow, uneven rollout across regions. Field notes from Kusuma et al., (2023) corroborate this picture from the ground, documenting emergent institutional problems in new tenure and social forestry schemes, including unclear roles among village institutions, permit holders, and forestry agencies, and the capture of newly created management bodies by local elites.

Even where Social Forestry permits are successfully issued, participation in decision-making does not translate automatically into equitable outcomes. Toumbourou et al., (2025), examining wellbeing impacts across Indonesian Social Forestry sites using mixed qualitative and quantitative methods, find that benefits are unevenly distributed within communities, with women-headed households and other marginalized groups disproportionately excluded from the gains that permits are intended to generate. This finding indicates that inclusive governance cannot be reduced to the formal existence of a participatory mechanism or permit scheme; it depends on the procedural quality of participation who is consulted, how decisions are made, and whether benefit-sharing arrangements are actively monitored a dimension that the reviewed literature suggests is currently the weakest link in Eastern Indonesia's forest governance architecture.

The governance evidence is less convergent than it first appears. Maryudi et al., (2022) describe an implementation process 'held hostage' by inter-ministerial contestation that no intermediary can resolve from below; and Malinda, (2025) portrays the state as a differentiated arena in which some actors ally with Indigenous communities, For Eastern Indonesia specifically, where Rahayu et al., (2024) find the thinnest local capacity, this implies that the inclusive governance pillar is the one on which the other two most depend. In answer to objective (a), the synthesized evidence shows that participation is formally available but procedurally weak; the claim that it is currently the weakest link is our interpretation rather than a finding reported by any single study.

Strengthening Environmental Governance Through Social Innovation and Commons Theory

The third pillar identified in the literature concerns how forest resources are managed once tenure and participation are, even partially, secured. Contemporary commons-governance theory offers a relevant corrective to purely top-down environmental regulation: Agrawal et al., (2023), synthesizing decades of commons research, argue that durable and equitable outcomes depend on strengthening attention to power and equity within collaborative governance arrangements, rather than treating institutional design as a technical exercise separate from questions of who holds authority.

Villamayor-Tomas et al., (2022) extend this by showing, across diverse empirical contexts, how social movements interact with commons governance both as claimants seeking recognition and as co-producers of new institutional arrangements. Complementary formal and empirical work by Tu et al., (2023) finds that cooperation in common-pool resource governance emerges more reliably from shared goals negotiated among users than from externally imposed rules, lending theoretical support to governance models that are built with, rather than for, forest-dependent communities. Within Indonesia specifically, the social innovation literature documents concrete instances of this dynamic in practice. Widyarningsih et al., (2022), studying two community-managed forests, show how harnessing social innovations new forms of local organization, knowledge-sharing, and network mobilization improved local livelihoods in ways that formal permit allocation alone had not achieved, underscoring that environmental governance outcomes depend as much on community-level institutional creativity as on the state's regulatory architecture. Marini et al., (2022), working with a broader rural European

sample but offering a transferable classificatory framework, demonstrate that grassroots social innovations generate measurable positive environmental impacts when their outcomes are systematically linked to sustainability goals a framework that is directly applicable to evaluating Eastern Indonesia's emerging community forestry and customary stewardship initiatives, most of which currently lack any comparable systematic environmental-impact assessment.

Evidence from Maluku illustrates the same point for Eastern Indonesia. Tehupeiory et al., (2021) document how *sasi*, a customary environmental law on Ambon Island, continues to regulate access to forests, water sources, and food plants through community-enforced prohibitions and sanctions, functioning as a working stewardship institution that predates, and operates independently of, formal permits. *Sasi* therefore exemplifies the kind of community-anchored institution that commons theory identifies as the carrier of durable stewardship, although the reviewed literature does not yet contain a systematic assessment of its environmental outcomes comparable to the framework proposed by (Marini et al., 2022). Read together, this body of theory suggests that environmental governance strengthening in Eastern Indonesia's forests requires more than expanding the area under formal protection or permit; it requires deliberately investing in the institutional and social infrastructure networks, shared norms, recognized authority for customary environmental knowledge through which forest-dependent communities can exercise effective stewardship. This is consistent with, and helps explain, the finding noted in Section 3.1 that community land titling alone has not moved the aggregate deforestation trend (Kraus et al., 2021): titling addresses the tenure pillar but, absent parallel investment in the governance and stewardship pillars, leaves the underlying institutional capacity gap unaddressed.

Governing the Commons Differently: Toward an Integrated Framework

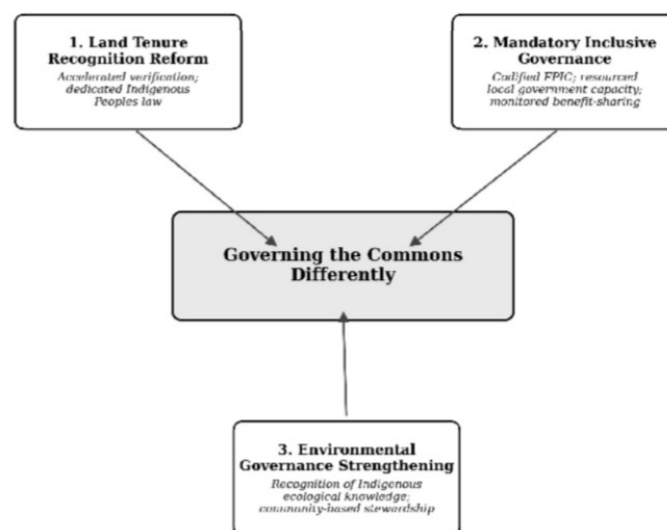


Figure 2. Integrated three-pillar framework for governing Eastern Indonesia's forest commons.

Source: author's elaboration, synthesized from the literature reviewed in Sections 3.1–3.3.

The framework presented in this subsection is the authors' interpretive synthesis. The measures attached to each pillar are policy inferences drawn from the reviewed evidence; they have not been tested by any of the reviewed studies and should be read as propositions. Synthesizing across Sections 3.1 to 3.3, this paper proposes an integrated "governing the commons differently" framework, structured around three interacting institutional pillars. The first, land tenure recognition reform, would require not only continuing the administrative designation of customary forests under existing regulation but also closing the legal-ambiguity gap identified by Jamin et al., (2022) through a dedicated Indigenous Peoples law, alongside accelerated, time-bound verification procedures to close the "legal limbo" window during which commercial permits can be issued over disputed territory.

The second, mandatory inclusive governance, would require formally codifying Free, Prior and Informed Consent within Indonesian domestic law rather than leaving it as an informal resistance strategy (Budiono et al., 2023), paired with dedicated capacity-building and resourcing for the subnational government agencies identified by Rahayu et al., (2024) as currently under-equipped to implement Social Forestry meaningfully, and explicit, monitored benefit-sharing safeguards responsive to the intra-community inequities documented by (Toumbourou et al., 2025).

The third, environmental governance strengthening, would require formal recognition of Indigenous ecological knowledge and community-based stewardship practices as legitimate components of forest management not merely as inputs to be consulted building on the social-innovation evidence that community-anchored institutional creativity, not permit issuance alone, drives positive livelihood and environmental outcomes (Marini et al., 2022; Widyaningsih et al., 2022)

These three pillars are conceived as interdependent rather than sequential: tenure recognition without inclusive governance risks reproducing elite capture within newly formalized institutions; inclusive governance without secure tenure risks participation without authority; and environmental governance strengthening without both remains vulnerable to reversal whenever commercial pressure on land intensifies, as the Papua-specific increase in forest loss amid national decline illustrates (Atlas, 2025).

This integrated reading responds directly to the fragmentation identified in Section 1: where legal-normative, policy-implementation, political-ecology, and commons/social-innovation literatures have so far largely proceeded in parallel, the framework proposed here treats them as three observation points on a single institutional system, whose joint reform rather than incremental progress on any single pillar offers the more plausible pathway beyond the pattern of exclusion that the reviewed evidence consistently documents for Eastern Indonesia's forest commons.

Table 7. Operationalization of the three-pillar framework: mechanisms and indicative indicators

Pillar	Mechanism identified in the literature	Indicative indicators for empirical testing	Key sources
Tenure recognition	Time-bound verification of customary forests; dedicated Indigenous Peoples law closing the legal-ambiguity gap	Area of customary forest formally designated relative to area proposed; median duration from application to decree; number of commercial permits issued over land under verification	Jamin et al., (2022); Kusters et al., (2022); Ungirwalu et al., (2021)
Inclusive governance	Codified Free, Prior and Informed Consent; resourced subnational agencies; monitored benefit-sharing	Presence of a binding FPIC procedure in regional regulation; number and budget of local agencies with a Social Forestry mandate; share of permit benefits reaching women-headed and marginalized households	Budiono et al., (2023); Rahayu et al., (2024); Toumbourou et al., (2025)
Environmental governance	Recognition of Indigenous ecological knowledge; community-based monitoring; network mobilization through social innovation	Forest loss trend inside recognized customary forests compared with similar unrecognized areas; inclusion of customary rules (for example, sasi) in management plans; number of community monitoring reports acted on by authorities	Kraus et al., (2022); Marini et al., (2022); Tehupeiori et al., (2021); Widyaningsih et al., (2022)

Source: authors' elaboration based on the literature reviewed in Sections 3.1 to 3.3.

Table 7 operationalizes the framework by attaching to each pillar the mechanisms the literature identifies and indicators through which future research can observe them. With respect to the two objectives stated in Section 1, objective (a) is answered by Sections 3.1 to 3.3 and Table 4: the reviewed literature shows constitutionally settled but administratively fragile recognition, formally available but procedurally weak participation, and stewardship outcomes that depend on community institutions as much as on formal protection. Objective (b) is answered by this subsection and Table 7: the framework is an integrative proposition derived from that evidence, whose central testable claim is that progress on any single pillar without the others will not reduce conflict or forest loss.

CONCLUSION

This review has synthesized recent legal-normative, policy-implementation, political-ecology, and commons/social-innovation literature to examine why constitutional and regulatory recognition of customary forests has not translated into secure tenure or reduced

land conflict for Indigenous communities in Eastern Indonesia. Three converging findings emerge. First, tenure recognition remains administratively slow and legally ambiguous. Second, inclusive governance is structurally weak: Free, Prior and Informed Consent lacks domestic legal codification, and local government capacity remains under-resourced.

Third, environmental governance outcomes depend on social innovation and community-anchored institutional capacity. Formal legal recognition is therefore a necessary but insufficient condition for just and sustainable forest governance. The proposed "governing the commons differently" framework integrates tenure recognition, inclusive governance, and social-innovation-based environmental stewardship. As a conceptual contribution, the framework requires future site-specific empirical research to test its applicability.

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