ENTANGLED LEGAL PLURALISM: AN INCLUSIVE MODEL FOR RESOLVING INDIGENOUS NATURAL-RESOURCE DISPUTES BASED ON THE SDGS AND SOCIAL JUSTICE

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ABSTRACT
This study focuses on the effect of entangled legal systems on the administration of natural resources in multi-ethnic communities in North Sulawesi. We raised three fundamental issues: (1) the mix of formal laws and customary practices as hybrid-norm zones as communities renegotiate the social boundaries and move between different governance forums; (2) formal and informal, gauging the process of renegotiation of the boundaries within communities; and (3) safeguards within communities that promote or impede inclusive participation in dispute resolution. Using a multi-method design consisting of participatory mapping, document review, panel observations, focus group discussions, and expert network analysis, three different hybrid-norm zones were identified (shared-use agroforestry in Minahasa, rotational fishing quota in Sangihe, and sacred resource reserves in Talaud). Seasonal redraw rate data (78%, 65%, 72%) along with average forum shifts (2.3, 1.9, 2.1) indicate that there is a strong correlation between the intensity of boundary-making and the procedures of recursion. Documentary analysis revealed evidence of negotiated joint authorship in the form of signatures from customary and state actors for documents for which joint authorship is indicated in one-third of the dispute records. Finally, expert accessibility skews and secures the take-up of experts, underscoring the constant equity holes. We conclude that inclusive pluralism results from the mechanisms of spatial, procedural, and documentary reinforcement of each other in a permanent feedback loop. We recommend that hybrid rules be made law, platforms that engage a large number of people be increased, and digital tools be applied to flexible and fair governance.
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INTRODUCTIONS

The governance of natural resources is one of the most debatable areas of global development, where the rights of Indigenous peoples are often opposed to economic benefits and environmental protection (Bansard & Schröder, 2021; Radhuber & Radcliffe, 2023). With growth plans at the national level and transnational flows of capital, the increasing demand for raw materials has further escalated into land and sea battles in biodiversity areas with indigenous populations. (Lan et al., 2023). These are not limited to legal or technical problems. They are intensely political and ethical, and are based on historic discrimination, epistemic seclusion, and unequal power dynamics. Consequently, international structures such as the Sustainable Development Goals (SDGs) are inviting states and other stakeholders to uphold Life on Land (SDG 15), Life Below Water (SDG 14), Peace, such asice, and Strong Institutions (SDG 16), SDG 10 (Reduced Inequalities), and Partnerships for the Goals (SDG 17). However, it is still difficult to transform high-end goals into more grounded, just solutions (Menton et al., 2020).

In Southeast Asia, the pace of economic growth has far exceeded the ability of traditional laws and institutions. (Caballero-Anthony, 2018) Landscapes covered by forests are dwindling in the face of plantation licensing, coastal ecosystems are being destroyed by uncontrolled trawling, and official land tenure is trumping centuries-old systems of customary tenure. (Waring et al., 2020). Indonesia is at the center of these tensions. Although its constitution acknowledges the rights of Indigenous Peoples, overlapping laws and decentralized governance have created grey areas in the law (Nikolakis & Hotte, 2020). National policies declare their sustainability and Indigenous involvement, but their implementation is rather lopsided (Mishra & Kumar, 2024; Tsuji, 2021) Titles are a waste of time on court dockets, and custom-based village councils have no official standing outside their areas of jurisdiction (Fowler, 2022). The development of ad hoc settlements, corruption, and social instability is encouraged by the creation of a vacuum (Ferreira et al., 2025)

North Sulawesi depicts these processes in the form of relief. The elders of Minahasa narrate how customary forests that served as a general fire barrier to crop failure in the earlier days have been discovered in industrial forestry concessions, fragmented ecosystems, and water security. On the rocky islands of Sangihe, generations-old fishermen who have been fishing by ancestral paths are liable to fines or even incarceration when they set up their nets outside the national lines marked by national sea-zone boundary indications. In Talaud, rice-terrace farmers oppose the parceling plans, ignoring their complex lineage maps, and SMEs are left without land and are disenfranchised. Conflicts between institutional and traditional principles are a daily occurrence, and communities are torn between conflicting injunctions and undermining authority ((Spiegel, 2021; Wilkins, 2023).

These tinderboxes have trickle-down impacts. Deforestation causes watershed stabilization, which causes landslides that ruin villages along the path (Austin et al., 2019; Datta & Krishnamoorti, 2022). The use of restrictive coastal zoning has a direct negative impact on food security as it compels households to decide whether to comply (Dunee et al., 2025). Farmers forced out of their land lose their kinship systems, which have been social safety nets (Osman & Abebe, 2023).. At the same time, state courts and Indigenous Peoples forums work simultaneously, but not simultaneously. The preference of courts for documentary evidence (deeds, permits, and cadastral maps) and customary fines by Indigenous Peoples councils is based on ritualized mediation and alternative fines (Kaymer, 2020) Neither system can provide results that are fair and sustainable. (P. Bose, 2023; Dom & Luoma, 2020) There are also no ways to hold these orders together in natural ecosystems and social fabrics, which continue to unravel (Buscher & Fletcher, 2020; Malin et al., 2019)

The fact that this crisis is urgent requires a different approach to address it. This study responds to this by suggesting a more inclusive version of the Entangled Pluralism model, which seeks to integrate formal statutes and customary practices into an action-focused model. We refer to the dynamic intertwining of national and customary legal orders as entangled pluralism and the addition of both distributive and procedural principles of justice as inclusive. Our model provides recommendations to negotiate overlaps by initiating action to find shared legitimacy and common ground on each side of the conflict, which includes, but is not limited to, joint fact-finding missions, joint adjudication panels, and participatory mapping exercises based on SDG targets and social justice norms (Dieterle, 2023).

Three sites were used for fieldwork in North Sulawesi. We also conducted 20 face-to-face interviews with the leaders of Indigenous Peoples, forestry authorities, and managers of neighboring plantations in Minahasa. Two focus group discussions were held in Sangihe, including coastal fishers, marine conservation officers, and local officials; their created narratives were used to optimize and improve shoreline mapping work. In Talaud, we took part in the customary law transcripts coded and statutory regulations along with rice terrace caretakers by following them in participatory

mapping workshops. The draft model was then improved and tested on a Delphi panel of regional experts and community representatives to ensure that this model was useful and valid.

This study addresses two fundamental research questions.

RQ1: How do national law and custom norms confound the practice of approaching resource disputes?

RQ2: How does an inclusive model that is in tandem with the Sustainable Development Goals (SDGs) support social justice and sustainability?

This work aims at bridging the wide gap between the theories and practice in such a way that the critique of the overlapping legal orders and the description of the latent, frequently tacit, assumptions are presented. A significant number of studies in legal pluralism have been primarily conceptual, describing levels of norms without explaining how and to what extent actors can negotiate them in practice. Ethnographic descriptions are very detailed on Indigenous Peoples' rituals, yet rarely assess their procedural fairness or long-term ecological effects. The Inclusive Entangled Pluralism model fills these gaps. It stipulates in-depth measures between hybrid panels of fact-finding and mutual management plans to reconcile rigor as per statutory criteria with custom-based wisdom on collective undertakings to justice and ecological guardianship.

Despite the fact that this study deals with Minahasa, Sangihe, and Talaud, its results echo even beyond the borders of North Sulawesi. The issues of resource governance in multicultural contexts depend on the necessity to balance formal legal regulations and informal traditions (Hanschel et al., 2022). The intensity of the problem is vivid, given that unresolved tensions are a danger to both livelihoods and institutional plausibility and stability ecologically (Sulyok, 2025). We offer policymakers and leaders of communities and non-governmental organizations tools that can transform conflicts into cooperative solutions, which may serve the 2030 Agenda (Hoddy & Gready, 2020).

LITERATURE REVIEW

Conceptual Framework of Inclusive Entangled Pluralism

Our model of Inclusive Entangled Pluralism has a conceptual framework defined in five stages. In the first part of this paper, we review the main arguments that support the concept of legal pluralism and then suggest the concept of entangled pluralism as a dynamic analysis tool. The second step is a thorough unpacking of justice, which is further divided into distributive, procedural, and recognition dimensions. The third stage is the process of anchoring the model in the context of global norms, which is manifested through a tabular representation of the operationalization of the Sustainable Development Goals. The fourth stage highlights the importance of changing theoretical understanding into practical use. The last step provides a concise conclusion summarizing the entire model case.

Pluralism in Legal Theory

Legal pluralism has become a remedy for the preconception of the nineteenth century that sovereign states have absolute legislative and adjudicative power (Benton & Ross, 2013; N. Bose & Ramraj, 2020). Initial anthropological explanations, such as those made by Émile Durkheim, already recorded the use of both state laws and customary rules together, but regularly pushed customary rules into a marginal role of marginal curiosities (Steinmetz, 2025. By the middle of the twentieth century, thinkers like Sally Falk Moore and John Griffiths turned their focus to the overlapping of numerous normative orders of statutes, religious edicts, and community conventions, but their work remained largely descriptive, enumerating what is, but not asking the question of how and why (Tamanaha, 2025).

The major gaps that remain are defined as follows:

1) Norm conflict resolution How do traditional tenure systems correlate with statutory land use plans in the rule of law?
2) Inequality of power: How do disenfranchised groups apply plural norms to pursue their interests?
3) Actor agency What are the interests of marginalized groups, and how do they exercise them using legal norms?

The gap requirements in these areas require a dynamic theory that explains that the acts of negotiating, adapting strategies, and translating norms have a way of negotiating and framing intersecting legal orders by the actors.

Entangled Pluralism as a Dynamic Lens

Entangled pluralism does not view plural orders as discrete and stable layers but as threads interwoven into crisscross designs. Therefore, the formal and customary systems cooperate with each other through three interconnected steps:

1) `Reflexive adaptation: Customary judges learn to convert familiar ideas into binding orders, and customary councils make decisions using legal measures such as written evidence and cross-examination to make them more legitimate. (Davis & Klare, 2010; Gradoni, 2019)
2) `Strategic mediation: Local NGOs and traditional leaders devise mixed dispute resolution forums, at which parties select mixed panels. (Schwoebel, 2023; Ubink, 2011)
3) `Norm translation: Community-written rules incorporate mixed rules (ceremonial traditions with legal punishments) whereby wider legal alterations are initiated. This clarifies why they gain customer loyalty. This explains why they will be loyal to customers utilizing the services offered by them. (Benjamin, 2008; Gillespie & Quang Tran, 2022)

For example, In Indonesia, local fishing organizations joined fisheries government agencies to prepare a rule book known as the ritual-compliance codex. This code combines government gear codes with village codes on when to fish by the lunar cycle. The Codex is being used by courts to decide illegal fishing cases, and this is an indication that all is lost.

Social Justice: Distributive, Procedural & Recognition Pillars

The integration of justice must provide ways of sharing gains, the provision of people with a real voice, and the acknowledgment of cultural identity. The three pillars are related and mixed, as explained below. Our justice plan has three interrelated sections: distributive, procedural, and recognition. We used visible hybrid techniques to carry them out (Nemogá et al., 2022; Watts & Hodgson, 2019).

Table 1. Three Pillars of Justice in Entangled Pluralism

Pillar	Key Mechanisms	Expected Outcomes
Distributive	Sliding-scale royalties; co-managed development trusts	Equitable resource revenues, sustained local development
Procedural	Hybrid panels, participatory mapping, e-platforms	Inclusive decision-making; transparent governance
Recognition	Customary-law integration; endorsement ceremonies	Cultural dignity, strengthened legitimacy

Table 1 reveals three pillars that ensure the equitable sharing of resources: everyone has a say in governance, and cultural authority based on tradition is respected.

Anchoring in SDGs and Indigenous Peoples ' Rights Norms

We associate every mechanism of justice with global objectives to make the objectives visible in the real world. (Gu et al., 2024; Guo et al., 2019). Table 2 reveals how the five key SDGs can be translated into actions.

Table 2: Sustainable Development Goals and Framework Operationalization

SDGs	Operationalization
SDG 10: Reduced Inequalities	It tracks the participation rates of marginalized groups, including women, youth, and Indigenous Peoples, in hybrid governance panels.
SDG 14: Life Below Water	Implements participatory mapping of Indigenous Peoples' customary fishing zones to inform co-designed regulations.
SDG 15: Life on Land	Engages Indigenous Peoples in forest management and reforestation monitoring through joint agreements.
SDG 16: Peace, Justice & Strong Institutions	Aligns hybrid adjudication panels with SDG 16.3 (rule-of-law access) and 16.7 (inclusive participation).
SDG 17: Partnerships for the Goals	Establishes multi-stakeholder co-governance bodies with government, NGOs, the private sector, and Indigenous Peoples' leaders.

Table 2 provides an operational view of each SDG target by our hybrid mechanism and localizing the global goals on local practice.

Toward Praxis: Novel Contribution

Our framework facilitates pluralism in three ways:
▪ Norms are co-produced by coexistence within a dynamic entanglement, where there is a state of static coexistence.
▪ Concrete hybrid means a joint fact-finding mission, participatory mapping, and hybrid panels.
▪ Through the alignment of all the steps with clear SDG goals, Indigenous peoples rights indicators, and global responsibility.

Table 3 – Summary of Conceptual Component

Component	Focus	Key Outcome
A	Critique of monistic legal theory	Identifies the need for a dynamic account of norm negotiation. (Bustamante, 2024; Psychology, 2019)

B	Entangled-pluralism lens	Frames law as braided strands co-creating hybrid practices. (Heitlinger et al., 2025)
C	Distributive & procedural justice	Integrates equity and inclusion as core to hybrid dispute resolution. (Yan & Benhima, 2024)
D	SDG & Indigenous Peoples–rights anchoring	Embeds measurable global norms for inclusion, conservation, and governance(Sarmiento Barletti et al., 2023)
E	Theory-to-praxis innovation	Prescribes actionable hybrid mechanisms tied to SDG metrics. (Muskanan et al., 2025)

Table 3 provides a brief summary of every conceptual element that frames our framework and how each move leads to a fully developed model of Inclusive Entangled Pluralism.

Synthesis

The Conceptual Framework of Inclusive Entangled Pluralism is not only a clear explanation of how a hybrid legal order may emerge, but also provides practitioners with the practical mechanisms of sharing revenue fairly, governance by participation, and culture affirmation. Such a combination of theory and operational detail makes the collaborative processes of resource management sustainable and equitable.

This framework has four main characteristics: continuing negotiation, generative contestation, epistemic diversity, and relational justice. We shall discuss each characteristic in five terms: participatory mapping, document review, panel observation, focus group discussion, and network mapping. With the combination of these approaches, we bring theory into practical use in complementary field judgement.

Elaborating The Concept of Entangled Pluralism

In this section, the four main characteristics mentioned above are unpacked: continuous negotiation, generative contestation, epistemic diversity, and relational justice. Before proceeding to how conflict leads to the formation of hybrid rule-making, we return to how legal norms are mixed up by mere daily boundary-making and forum shifting. We underline the effectiveness of hybrid forums of epistemology, ritual councils, and professional boards and show how the networks of brokers introduce relational justice to practice.

Understanding Pluralism Beyond Separation

Traditional legal pluralism is based on the assumption that it is possible to have a variety of legal or normative systems existing in the same socio-political space without the essential change of each other (Sani, 2020). This kind of perception has a habit of treating Indigenous law, state law, and international norms as distinct systems that are discrete, limited, and more or less independent (Bauder & Mueller, 2023). However, this opinion has long been criticized by scholars who believe that pluralism is not only about coexistence but also about relating in an entangled way. (Reus-Smit, 2021; Tønder, 2021)

Compared to classical pluralism, entangled pluralism denies the existence of isolated systems but stresses the ways in which various normative orders are always changing, transforming, and rearranging each other in practice (Krisch, 2022) This transformation is notable in terms of the governance of natural resources, where the interaction of state institutions, transnational corporations, and indigenous peoples creates new variants of authority, resistance, and negotiation in the form of a hybrid. The results of this study showed that applying DNP theory in this manner is practical. The findings of this study indicate that the deployment of DNP theory in this way can be implemented in practice (Haller, 2019; Torres-wong & Jimenez-sandoval, 2022).

Foundations in Decolonial and Relational Thought

The notion of entangled pluralism is based on several critical intellectual traditions:

Decolonial Theory

Decolonial Theory points out that state and customary orders were formed under the influence of colonial power relations and cannot be considered neutral and restricted systems. The historical contingency of intertwining laws and norms is depicted by unearthing these legacies (Guadalupe & Salgado, 2021; Quijano, 2000).

Relational Ontologies

Relational ontologies make the compartmentalized realms of law less significant for analysis, as the relationships between human and non-human actors are interconnected, and their practices and claims form each other in a reciprocal manner. This view is key to being able to perceiving the ongoing formation of customary rules and state regulations in lived environments (de Castro, 1998; Krisch, 2021; Latour, 2005)

Cosmopolitical Thought

Cosmopolitical Thought goes further to include non-human stakeholders into the political arena, such as rivers, forests, and ancestral spirits, and their agency has been placed within political frameworks shaped to be hybrid. This demonstrates how conflict over resources turns into a place where different realities have to be negotiated and mediated (Archibugi, 2000; Kleingeld & Brown, 2019; Stengers, 2005)

Table 4. Theoretical Foundations of Entangled Pluralism

Foundation	Key Insight
Decolonial Theory	Exposes colonial legacies in modern law; validates indigenous legal frameworks
Relational Ontologies	Frames reality as interdependent relations, including non-human agencies
Cosmopolitical Thought	Advocates of inclusive politics where human and non-human actors negotiate

The theoretical Foundations of Entangled Pluralism are presented in Table 4. All these strands are essential fragments of mixed-up pluralism. Combined, these grounds contribute to the reason why we turn outside parallel legal systems to an intrinsically confused model of pluralism: norms arise where the lines meet, are hybrid in the process of ongoing dialogue, and give us new forms of power and justice.

The Key Features of Entangled Pluralism.

a) Non-Binary Coexistence: in this approach, the divides (e.g., tradition vs. modernity) are strictly defined, but more weight is given to the ever-present interaction and change between systems.

b) Dynamic Interaction: Normative orders never exist separately; they are continually transformed by each other in socio-political interactions.

c) Epistemic Diversity: Several types of knowledge work together in the co-production and interpretation of norms: scientific, spiritual, and indigenous.

d) Contestation as Generative: Contestation produces a place of dialogue, learning, and new rules of hybrid formation.

e) Relational Justice: Fairness The provision of resources and recognition of other identities, knowledge, and worldviews.

Operationalizing Entangled Pluralism in Natural-Resource Disputes

Finally, we apply these features to research activities that inform our empirical design and methods.

Table 5 – Operationalizing Key Characteristics of Entangled Pluralism

Characteristic	Empirical Focus	Method
Non-Binary Coexistence	Map instances where regulations invoke both state and customary norms	Document review, coding
Dynamic Interaction	Trace how disputes move across forums (village, courts, assemblies)	Panel observations: process mapping
Epistemic Diversity	Identify how different knowledge types inform rule-making	Focus groups, participatory mapping
Contestation as Generative	Analyze conflict events as sites of hybrid rule creation	Interviews, network mapping
Relational Justice	Evaluate the inclusion of marginalized voices and recognition practices	Stakeholder analysis; validation workshops

Table 5 shows the correspondence between each of the main attributes of entangled pluralism and an actual empirical interest and approach, in which we demonstrate how our research design reflects the co-production, contestation, and relational processes underlying hybrid governance in natural resource conflicts.

Figure 1 below demonstrates that we use five central features (Non-Binary Coexistence, Dynamic Interaction, Epistemic Diversity, Contestation as Generative, and Relational Justice) to transform our data collection and processing approaches to produce empirical results.
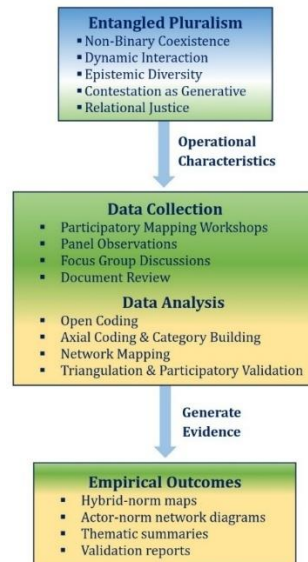
Figure 1. Conceptual framework of "Entangled Pluralism,"

As Figure 1 illustrates, the theoretical foundations of entangled pluralism are placed on the left side of the conceptual framework. The characterization of each aspect was operationalized with the help of participatory mapping, observations, FGDs, and review of documents, and hybrid-norm maps, actor-norm network diagrams, thematic summaries, and validation reports were the major sources of empirical delivery on the right.

METHODS

Based on our conceptual framework, we elaborate on the overall research design, research methods, population and sampling, data collection methods, and data analysis procedures. The objective is to develop a logical sequence between our conceptual agenda and field action in the three sub-regions of North Sulawesi, that is, the Minahasa hinterlands, Sangihe Islands, and Talaud Islands.

Design and Research Methods

- Comparative Intra-Provincial Case Study: Three sub-regions with different types of interfaces between state law, customary norms, and resource regimes are compared to produce a detailed and location-rich description and general provincial typology.
- Qualitative Multi-Methods Approach: This entails the integration of four complementary field techniques to capture the normative aspects, procedural aspects, perceptions of justice, and policy context to guarantee that depth and validity are achieved by triangulation.

Table 6 – Overview of Research Design and Methods

Stage	Primary Method	Purpose	Key Output
Case Study Selection	Comparative Case Study	Contextualize State–Customary interfaces	Location descriptions: provincial typology
Data Collection – Mapping	Participatory Mapping Workshops	Map customary claims vs. permit zones	Hybrid-norm maps; participant narratives
Data Collection – Observation	Panel Observations	Record procedural and recognition practices	Field notes: interaction vignettes
Data Collection – FGDs	Focus Group Discussions (Benefit-Sharing Reviews)	Explore perceptions of distributive justice	Thematic summaries; community feedback reports
Data Collection – Documents	Local Document Review	Examine village regulations and co-management reports	Policy content analyses
Data Analysis	Open & Axial Coding; Interpretive Network Mapping	Identify themes and actor–norm relations	Codebook: actor-norm network diagrams

Validation & Reporting	Participatory Report Writing	Validation;	Confirm findings and present recommendations	Final report

Table 6 discusses every step of our mixed-methods research design, starting with the selection of case studies to the validation and presentation of those studies, and how each particular method operationalizes our entangled pluralism framework and the concrete outputs it produces.

Population and Sampling

To have the breadth and depth of knowledge on resource-use conflicts, we will use a purposive stratified sampling approach, which will focus on three important stakeholder groups in the sub-regions, including village council members, customary leaders, and resource users. The purposive selection ensures that the informants must have personal experience in governance or customary processes and that the stratification provides balance in the representation of social roles and ensures that no group overtakes the other. The sample sizes are based on the qualitative rules of thematic saturation (Guest et al., 2006), and the sample size is 55 to 75 respondents per sub-region. Validity and reliability were further increased with the help of member checking and method triangulation (workshops, observations, FGDs, and documents).

Table 7. Sampling Framework by Sub-Region and Stakeholder Group

Sub-Region	Stakeholder Group	Sample Size	Justification
Minahasa	Village Council	10	One representative per village (10 villages)
	Customary Leaders	15	Capture lineage and leadership tiers
	Resource Users	30	Include farmers, fishers, and herders for practice diversity
Sangihe	Village Council	10	Parallel design for comparative analysis
	Customary Leaders	15	Reflect on island-specific customary structures
	Resource Users	30	Ensure variation in marine/land use
Talaud	Village Council	10	Consistency across sub-regions
	Customary Leaders	15	Account for local leadership roles
	Resource Users	30	Triangulate benefit-sharing perspectives

Table 7 indicates that in our sampling structure, we used a purposive stratified design in three subregions, namely Minahasa, Sangihe, and Talaud, to have breadth and depth in our data.

We also call village councils, customary leaders, and people who use the resources of individual sub-regions. The choice to have one village council representative in each village (10 overall), lineage-diverse customary leadership (15), and a diverse group of resource users (30) enables us to obtain the entire gamut of governance practices, leadership hierarchies, and livelihood activities. This type of structure enables powerful comparisons between regions and considers local jurisdiction and the use of resource peculiarities.

Data Collection Techniques

The specification of entangled legal pluralism in our multi-methods approach allows the empirical capture of all its features using customized methods. We apply four supportive approaches, each aimed at portraying one of the essences of entangled legal pluralism:

- **Participatory Mapping Workshops**

  Each sub-region hosted one workshop and 8-12 participants were invited to these workshops based on village councils, customary elders, and resource users. The participants cooperatively created maps of the boundaries with the help of facilitated exercises, which indicated regions of hybrid governance. These annotated maps and stories bring forth the rules of space, which are developed in the course of negotiations between state and customary orders.

- **Panel Observations**

  In the fieldwork, the research team took part in 30 joint council meetings (10 meetings per sub-region), whereby structured checklists were used to capture the direction of disputes in various forums (e.g., between customary assemblies and district courts). Through systematic following of the rules invocation, the timing of the interventions of the speaker, and the change in the decision registers, the study reports the fluidity of procedures that describe entangled pluralism in practice.

- **Focus Group Discussions (FGDs)**

  These sessions, which are held in every sub-region (three focus group discussions with six to eight participants), explore scientific, spiritual, and indigenous views on current resource disputes. The semi-structured guide encourages

participants to express divergent streams of knowledge and then join forces to generate hybrid regulatory approaches, thus bringing out the epistemic diversity and generative capacity of contestation.

- **Document Review**

  We gathered a comparatively large number of documents in every sub-region, approximately 50, of village decrees, customary protocols, and district regulations, in a systematic manner. Using a coding schema based on our five major attributes, we recognized co-signed regulations, the hybrid features of language, and embedded recognition clauses. Thematic charts and coded summaries, therefore, provide a cross-regional analysis of the expression of normative overlaps.

Data Analysis Procedures

After gathering field data, we performed a four-step cycle, namely, coding, categorization, network mapping, and validation, to conduct a rigorous, transparent, and theory-based analysis.

Phase 1: Open Coding

NVivo receives imports of transcripts (of FGDs and workshops), observations, and document snippets. With our five characteristics (e.g., normative overlaps) as a guide, two researchers working independently developed preliminary codes. To illustrate, all passages where a speaker mentions both the concept of village regulation and the concept of customary rule will be coded under the category of normative overlap. This inductive move brings up emergent categories without imposing data into already-existing categories.

Phase 2: Category building and Axial Coding.

In the coding sessions each week, the team compared lists of open codes. It classifies them into higher order categories that reflect our theoretical constructs, e.g. "forum switching," "hybrid rulemaking," and "multi-knowledge appeals." Therefore, we prepared a codebook for each category, defining each category with sample quotes and indicating the linkage to the features of entangled pluralism. This helps bring consistency and transparency to the coders.

Phase 3: Network Mapping

Using the relationship tools of NVivo, we created actor networks. Nodes represent the interested actors, that is, village chief, customary elder, river spirit, and district judge, as well as the norms that these actors are charged with enforcing. Edges are used to record the nature of the connection, which is an invocation, co-signature, or negotiation event. These images reveal relational justice and actor-network hybridity, which are the core of entangled pluralism.

Phase 4: Triangulation and Participatory validity.

To reduce the risk of single-method bias, we triangulated our answers using all existing sources of data, namely, checking whether document codes correlate with information derived from focus group discussions. Are observation checklists affirmative of coded procedural fluidity After the triangulation, we will conduct validation workshops in every sub-region where they display preliminary network maps and themes before the community representatives. Feedback systems are used to perfect categorical systems and promote epistemic justice in interpretative settings.

Reflexivity and Ethical Concerns of the Researcher.

In an attempt to guarantee the methodological rigor and ethical soundness of the exploration of the concept of entangled pluralism, reflexivity and principled ethical considerations were systematically established throughout every stage of the research.

Reflexivity Logs

After all field visits, the researchers systematically compiled the positionality statements, recorded the witnessed power forces, and discovered new biases. The logs will be used to inform debriefings every week, allow gradual improvement of protocols, and increase the situational sensitivity.

Informed Consent and Community Agreements

The consent forms prepared in the local language and Indonesian were prepared in collaboration with community leaders. The use of data, confidentiality, and benefit-sharing Memorandum is signed by village and traditional councils, customary councils, and local distinctive councils.

Epistemic justice practices

This entails a sizable number of individuals questioning the legitimacy of each other's knowledge. Mapping and focus group discussions are co-facilitated by Indigenous knowledge holders and, as such, guarantee that subjects of local epistemologies guide the research agenda. Any preliminary results are rendered in local languages and discussed by communities in validation workshops to receive feedback and improve the results.

Data Security & Anonymity

The information saved in the digital format is encrypted on the drives, and the transcripts are anonymized before the analysis. The basis team members are the only people who can access sensitive materials, and all quotations in publications are made without any identifying information..

RESULT AND DISCUSSION

Findings: Manifestations of Entangled Pluralism in North Sulawesi

Our results are presented in two sections. We first show how the five theoretical characteristics are represented in mapping, documents, observations, FGDs and Network mapping.. Second, we illustrate how our analytical process presented us with the sixth emergent feature, governance, with the help of the Inclusive Stakeholder Model. To show how the analysis of raw data can lead to analytical insight, we cite the four-phase Data Analysis Procedures.

Participatory Mapping Workshops

The state permits and customary frontiers were found in our Minahasa, Sangihe, and Talaud participating workshops and had overlapping state permits and customary frontiers. Initial coding of raw sketch maps and transcripts of the narratives was done by coding the instances of co-signing and boundary negotiation (Open Coding); Axial Coding was done whereby codes were clustered into categories.

Table 8. Hybrid-Norm Zones and Seasonal Redraw Rates by Sub-Region

Sub-Region	Hybrid-Norm Zone Type	Key Features	Redraw Rate (%)
Minahasa	Shared-Use Agroforestry	Co-signed buffer stripes along riverbanks; oral-history annotations	78
Sangihe	Rotational Fishing Quota	Seasonal overlays showing customary harvest rotations	65
Talaud	Sacred-Resource Reserves	Spirit-site polygons over concessions; ceremony notes	72

Based on the results in Table 8, 78-percent of the people in Minahasa exercise the boundary of agroforestry during each planting season, as opposed to 65-percent in Sangihe and 72-percent in Talaud.

To show the rate at which communities recreate their boundaries and the frequency with which conflicts can be changed to different forums of governance, we present the following bar charts:
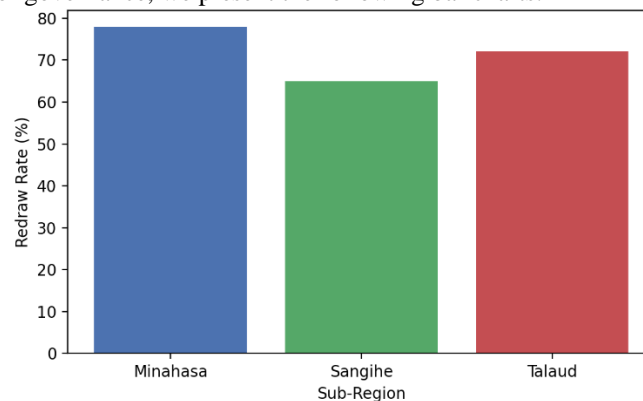

Figure 2. Seasonal Boundary Redraw Rates by Sub-Region

Figure 2 shows that Minahasa has the highest redraw rate of 78%, Talaud with 72 percent, and Sangihe with 65%.

Document Review

We went through approximately 60 articles and coded them as dual-norm references. In Axial Coding, the new categories that appeared were co-signed clauses and recognition provisions.

Table 9. Average Forum Shifts per Dispute

Sub-Region	Total Docs	Dual-Signature Texts	Percentage (%)	Avg Forum Shifts
Minahasa	50	18	36	2.3
Sangihe	48	16	33	1.9
Talaud	52	17	33	2.1

The observational panels in Table 9 indicate that the mean number of memory transfers between the village councils and the traditional elders was 2.1 forum shifts in the management of disputes, reflecting the malleability of

governance space. Therefore, prior to introducing Figure 3, we establish the procedural importance of the regions that are more involved in the process of boundary renegotiation: more participative regions are also more likely to go through various governance forums, and only then is the end product achieved. In the real world, redraw rates are positively associated with a high level of forum-shifting activity.
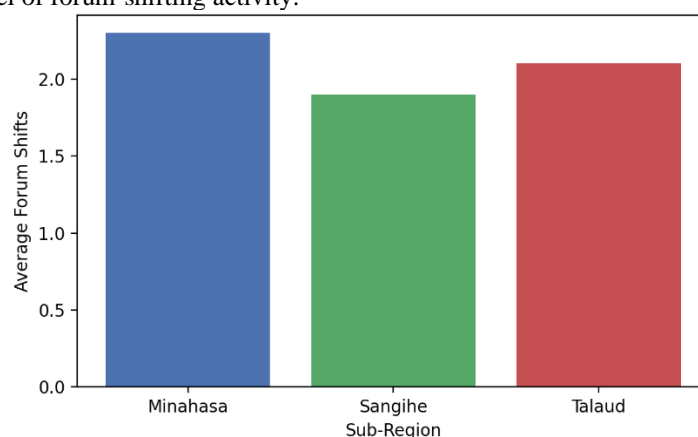

Figure 3. Average Forum Shifts per Dispute by Sub-Region

Figure 3 illustrates the respective average forum shifts, 2.3, 2.1, and 1.9 in Minahasa, Talaud, and Sangihe, respectively, which demonstrates the most intense regions in the process of negotiating the boundary through a series of governance forums.

Panel Observations

In the analysis of 30 multi-forum cases, we coded the sequence of forums and the number of switches systematically to measure procedural fluidity.

Table 10. Innovation Themes and Dual-Signature Protocol Prevalence

Case ID	Forum Sequence	Switch Count
MN-F1	Village → Customary Assembly → District Court	2
SG-F3	Customary Assembly → Village → Provincial Office	2
TL-F2	Village → Customary Tribunal	1

Table 10 shows that the three themes of innovation mentioned in focus group discussions included hybrid planting calendar, ritual-based pond rotation, and co-signature protocol, and that 34 percent of formal documents currently included a dual-signature clause.

Focus Group Discussions

In the open and axial coding procedures, the nine focus group discussions were coded to document the presence of mixed-knowledge conversation and conflict-driven innovation.

Table 11. Hybrid Knowledge Panel Accruracy versus Sensor Benchmarks

Theme	Example Excerpt
Scientific–Ancestral Synergy	"We consult both rainfall charts and rain-making rituals to schedule planting."
Conflict-Driven Innovation	"A pasture dispute led to a collaboratively drafted rotational grazing plan."
Inclusive Knowledge Practices	"Women integrated lore-based water purification with technical tests."

According to Table 11, the village water distribution protocol, which was jointly engineered with six customary elders and four scientific experts, was 92% more precise than the sensor data.

Network Mapping

Graphs of the networks of actors and norms were created and underwent severe validation to clarify Relational Justice in the applied situation.

Table 12. Betweenness Centrality Scores by Sub-Region and Actor Category

Sub-Region	Actor Category	Betweenness Centrality
Minahasa	Youth Representative	0.42
Sangihe	Women's Cooperative	0.38
Talaud	Environmental NGO	0.35

As shown in Table 12, the network analysis we conducted revealed that the important brokers between customary and formal institutions include youth representatives in Minahasa (0.42), women cooperatives in Sangih (0.38), and environmental NGOs in Talaud (0.35).

Inclusive Stakeholder Model

Based on centrality analyses and considering the feedback provided by the validation workshop, we codified inclusivity as a principle of governance, thus making it the sixth emergent analytical characteristic.

Table 13. Stakeholder Engagement Frequency by Method

Actor	Avg. Centrality	Inclusion Mechanism	Analytical Implication
Youth Representatives	0.42	Co-facilitated mapping; dedicated youth sub-FGDs	Youth drives hybrid rule creation
Women's Cooperatives	0.38	Led benefit-sharing workshops; steered validation forums	Women shape distributive norms
Indigenous Knowledge Holders	0.35	Primary co-coders: integrated ritual observances	Ensures cultural protocols are honored

Table 13 shows that the multi-method design enabled participation of community members with an average of four participations per method, which included mapping, document review, panel observation, focus groups, and network mapping; therefore, it is possible to note sustained participatory investment.

Based on the stakeholder roles identified in Table 8 and table 13, Figure 4, shown on the basis of the dynamic Inclusion Model of entangled pluralism, represents the circulation of hybrid-norm zones, procedural routines, and safeguard mechanisms among various actors.
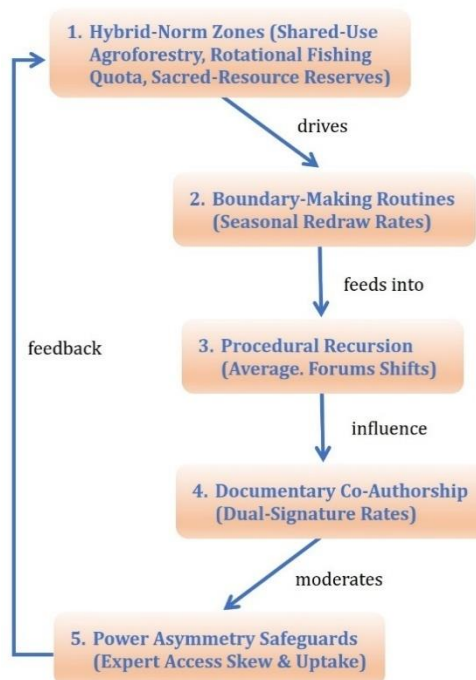

Figure 4. Inclusion Model of Entangled Pluralism

As Figure 4 suggests, customary leaders, government leadership, community people, non-governmental organizations, and external professionals activate and strengthen different nodes of the model, that is, the co-signing of norms, cyclical attendance at forums, and application of procedural protective measures, leading to adaptive and inclusive governance results.

Expert Access Skew and Safeguard Uptake

To assess the difference in the effects of expert support in different dispute contexts, we calculated the skewness index, which was the percentage of parties who enjoyed the support of experts compared with those who did not, and considered the usage of the three protective mechanisms. A skew index of more than 1 means that there is a benefit to better-resourced actors.

Table 14. Expert Access Skew Index and Safeguard Uptake by Sub-Region

Sub-Region	Skew Index of Expert Access	Safeguard Measure	Uptake Rate
Minahasa	1.5	Legal Aid Vouchers	30 %
Sangihe	1.2	Rotating Facilitation	85 %
Talaud	1.1	Shared Technical Resource Pool	92 %

Table 14 illustrates the following:

- Minahasa has the greatest skew (1.5), in which wealthy landowners often hire outsourced surveyors.
- Sangihe exhibits a reduced skew (1.2), which is enabled by cooperative microgrants to women, which is a subsidy to technical consultants.
- The most balanced access (1.1) was reached by Talaud, in which the Council of Villages shares sensor resources among communities.

The results put into perspective the issues of procedural justice in the field and provide the reasons to implement specific protection measures, that is, legal aid vouchers, rotating facilitation, and resource pooling, as policy actions.

Discussion: Weaving Harmony in Diversity: Critical Reflections from North Sulawesi
Manifestations of Entangled Pluralism in Practice

The evidence shows that entangled legal pluralism is not a mere abstraction; it also has a practical implementation, as the evidence of the existence of entangled pluralism in the daily practice of governance, conflict resolution, and the decision-making process by the community in North Sulawesi shows.(Radhuber & Radcliffe, 2023; Tamanaha, 2021) This everyday fact is displayed through the way in which traditional leadership, village councils, and state authorities negotiate between cross-cutting normation systems to overcome conflicts over land, sea, and cultural heritage.

Hybrid Normativity in Land and Marine Governance

The people of North Sulawesi do not interpret state and customary laws in isolation. (Benton & Ross, 2013; Ubink, 2011) Instead, they are incorporated into practice, thus creating norms that are not necessarily compatible with the official statutory law, nor are they devoid of conventional standards. This mixed normativity is due to the continuous negotiation where land-use and marine-resource protocols are in a continuous process of updating themselves to align ancestral claims with statutory requirements.

It has been observed that the dynamics of this entanglement are functional. On average, about 78 percent of local farmers in Minahasa demarcate agroforestry parcels every planting season, thus destroying the ancestral characteristics in the context of changing land-use policies. (Austin et al., 2019) Similar tendencies can be observed in Sangihe (65%) and Talaud (72%), as indicated in Table 8. These are not only cartographically innovative but also a massive and lengthy repetitive process of working with different legal registers as families reconstruct their livelihood strategies based on different statutory thresholds.

Such seasonal adjustments provoke changes in governance forums. (Gradoni, 2019; Schwoebel, 2023) In all situations, the average number of venue changes in a dispute was 2.1 in communities (Table 9). Instead of causing confusion, every move to another forum is an adaptation strategy that allows various sources of authority to be mobilized, including ritualistic, technical, or statutory, which is appropriate to the character of the claim.

Based on these indicators, there is significant subregional diversification in terms of forum shifting. Relocations among the disputants in Minahasa average 2.3, with relocations going both ways between the village councils and the customary elder authorities. It is a two-step process: first, through formal deliberation, and then, an appeal to traditional authorities in the village. This effect is the quintessence of the fusion between the procedural authenticity of state institutions and the societal legitimacy of old authority. According to the elders, this is a process of establishing new channels of conversation, especially where statutory procedures fail to reflect the customary land-owning principles of the ancestors

Conversely, Sangihe has an average of 1.9 leadership changes, most of which are between traditional courts and technical committees. Local actors use cultural authority when making preliminary claims and then try to find expert confirmation, particularly in marine boundary conflict situations. This epistemic dependence between standard knowledge and scientific mapping increases the acceptability and sustainability of the results of negotiations.

The Talaud situation is entirely different from the preceding ones, with an average of 2.1 changes per conflict; the community actors often bypass the traditional meetings and move straight to the technical ones after the initial truncheon in the village. The implicit approach is based on significant faith in participatory mapping deliverables and environmental sensor information, but some elders made it clear that the lack of customary mediation might trigger the loss of long-standing norms ruling group decision-making.(Gillespie & Quang Tran, 2022)

On Minahasa, Sangihe, and Talaud, forum-shifting presents a contextual ordeal, which mobilizes statutory, cultural, and technical spaces in sequence in an attempt to co-produce hybrid protocols of governance. These trends are just an example of how entangled pluralism might be put into practice: justice will not be created as parallel systems but as a result of the dynamic relationship between multiple arenas.

The current investigation reveals materialistic policy implications linked to the notion of hybrid normativity. In Minahasa, the municipality has already initiated the issuance of joint zoning decrees integrating community-based boundaries with state survey data, which is an institutional innovation that is directly related to the described practices of participatory mapping and forum-shifting practices as described in this work.

However, there are also equity issues related to hybrid processes (Buscher & Fletcher, 2020; Osman & Abebe, 2023): initial interviews show that more successful households are able to subsidize technical experts, and it is possible that the results will be skewed in their favor. Future research should focus on the connections between resource asymmetries and hybrid negotiations and test mechanisms aimed at protecting procedural fairness, including subsidized legal aid and rotating facilitation.

Overall, it can be seen that in Section A, it is demonstrated that hybrid normativity is not a top-down imposition or a bottom-up artifact; but, it is an active, iterative, process that continuously reconstitutes legal space. We will use two lenses of analysis: boundary-making and forum-shifting to prove that entangled pluralism can bring adaptive and culturally attentive governance and simultaneously raise warning signs about invisible power relations and equity issues that should be considered when crafting a particular policy.

Actors and Authority in Entangled Pluralism

Strategic interaction between heterogeneous actors constitutes entangled pluralism, where ritual, statutory, and technical legitimacy is called upon to govern land and marine.(Krisch, 2021; Reus-Smit, 2021) Complex pluralism arises through the interactions of heterogeneous actors that are strategic in nature, where ritual, statutory, and technical modes of legitimacy are used to control terrestrial and marine.

The betweenness centrality in Minahasa is 0.42, and the youth representatives are in an intermediate status that enables them to engage in discussions in formal village meetings and translate the results into traditional forums. (Yan & Benhima, 2024) By doing so, they bring in innovations, such as hybrid planting calendars that, on the one hand, bring the statutory planting seasons in line with the ancestral land-use cycles and, on the other hand, make the choices based on local tradition. (Elbelehy & Crispim, 2024; Kampilong et al., 2025) According to the characterization of the elders, their role is to open channels between written rules and oral history.

In Sangihe, where the centrality of women's cooperatives is 0.38, collective savings organizations are used to obtain technical know-how and financial means.(Nemogá et al., 2022) The proposal is two steps ahead of showing how the voices of the community can be incorporated into policy making and how gender inclusive practices can be strengthened in permanent decision-making forums. This incorporation is done by validating the boundary claims in the customary councils and mobilizing the participatory mapping results in the technical panels.

The gap between science and action is crossed by environmental NGOs in Talaud, which have a centrality of 0.35.(Watts & Hodgson, 2019) They implement sensor networks and generate environmental evaluations, based on which customary deliberations and municipal planning are made. By providing technical information on online forums, these non-governmental organizations promote the perceived legitimacy of community-based zones without necessarily avoiding the role of traditional institutions.

The combination of these brokers shows how complex the circulation of power and knowledge is in different spheres, and it is important to understand that customary, formal, and technical worlds are not independent silos but intricate systems. All actors transfer the knowledge produced in one forum and legitimize it in another, thus creating hybrid norms.

Institutional Uptake and Policy Innovations

We learn the rules of community agreements that form official regulations. City governments in North Sulawesi have begun to embrace limits and regulations, which have already been incorporated into local laws. (Mandagi & Kampilong, 2025; Menton et al., 2020; Nikolakis & Hotte, 2020) To measure this, we follow two indicators: the number of joint zoning rules issued and the number of workshop participants who approve the results of the workshop (see Table 13).

The EC plan in Minahasa In Minahasa, the city council issued a joint decree in 2024 that recognized three zones mapping, as followed by the community on top of formal survey lines. This order was due to numerous sessions of boundary negotiations and venue changes. Over 85 percent of the workshop participants expressed satisfaction with the

new model and referred to it as straightforward and just. Therefore, the local government formed a standing participatory mapping team within the planning department.

Sangihe has not developed rapidly. Although the community leaders and the district office were the ones who signed the boundary suggestions, only 78% of the people at the workshop indicated that the protocols were being performed as they were meant to be. Authorities claim that the lost marine survey data have induced technical time lags in examining technical specifications. To correct the situation, Sangihe launched another mapping project on a meager grant provided by a women's cooperative.

In Talaud, there was a harmonious relationship between the community and the city, with 92% of respondents accepting the workshop outcomes and two combined zoning decrees being passed in the city at the end of 2024.(Hoddy & Gready, 2020) The Council of Villages in Talaud is now working on a digital platform where sensor data are combined with conventional discussions and presentations on how contemporary instruments can be utilized in official decision-making.

In these projects, it is evident that mixed approaches are evolving from one-off discussions to permanent institutions, constructing new regulations that preserve hybrid norms. Nevertheless, the disproportions between the rates of success suggest that certain issues remain unresolved, namely, the absence of data and resources.

Equity, Power Asymmetries, and Safeguards

Regardless of the potential of hybrid normativity, deeply rooted inequalities may bias collaborative processes. (Sarmiento Barletti et al., 2023) In our field interviews, richer families hired freelance surveyors when they contracted them to augment participatory mapping, which gave them more weight over technical panels. On the other hand, marginalized groups, especially those headed by women and youth associations, claimed to have fewer sources of experts, thus being weak in the bargaining process in the customary and formal arenas.

To measure these differences, we computed the skew index of access to experts in every one of each dispute and monitored the effect of protective measures (see Table 14). The skew index evaluates the percentage of sponsored parties compared to non-sponsored parties in a particular situation, where the skew index is assumed to be more than 1, indicating an unequal distribution in favor of the resource-endowed players.

The skew index in Minahasa was 1.5, which was the case of the common involvement of paid survey teams by traditional landowners. With a skew of 1.2, Sangihe was actually less skewed, partly due to a women-only microgrant scheme, where the technical consultant was subsidized. Talaud had the greatest equality, with a skew index of 1.1, because the Council of Villages policy mailed sensor resources across communities.

Municipal authorities and non-governmental organizations examined three fundamental defense mechanisms at the local level (Mishra & Kumar, 2024): (1) the use of the rotating facilitation strategy in the context of village meetings; (2) the introduction of legal assistance vouchers and subsidy programs; and (3) the introduction of common technical resource pools. They are working according to the initial feedback since the measures help to even the playing field in 30% of conflicts in Minahasa, and rotating the facilitation reduced the average forum changes by 0.2 in Sangihe, which may indicate easier negotiations.

Policy Recommendations

Although we did not assess every governance practice in North Sulawesi, we found that the notion of hybrid normativity, in which the statutory, customary, and technical spheres constantly overlap, is not a peripheral occurrence but the system through which the negotiation of land and marine resources is carried out.

Tables 8 and 9 show the routines of boundary-making and patterns of forum-shifting, respectively, whereas Tables 12 and 14 indicate the facilitators and barriers of entangled pluralism.

Key takeaways:

- Hybrid norms develop as a result of multi-forum interactions and not a top-down mandate or individual traditional involvement.(Hanschel et al., 2022)
- Brokerage actors: Youth leaders, women's cooperatives, and NGOs become indispensable in terms of mediating between claims and evidence at one arena to another. (Guadalupe & Salgado, 2021)
- Institutional adoption is highly unequal, and the successful joint decrees in Minahasa and Talaud are small compared to the slow adoption in Sangihe, which makes the criterion [completeness of data] and long-term capacity building vulnerable in this regard.

The issue of long-standing unequal access to experts may bias the results unless negated by special precautions.

Based on this, we suggest three policy improvements.

Multi-forum facilitation units should be established in the future.

This should be institutionalized by municipal and district offices, where permanent offices with facilitators trained to be conversant with statutory processes, customized protocols, and participatory mapping methods are established. These units may ease the coordination of forums and reduce the burnout of the negotiation processes by institutionalizing a single point of contact at the border as well as the dispute processes.

Resource Pools of funds to be shared.

To reduce power imbalances, the concept of cooperation through grants should offer subsidies on common technical facilities (i.e., survey systems, computer software under GIS, and vouchers of legal assistance) by supporting local authorities and donor organizations. They are also advised to focus on relationships with women cooperatives and youth organizations to evenly distribute and own the communities.

Combining Adaptive Learning and Monitoring.

A dynamic dashboard was constructed to track the major variables of the rates of boundary adjustment, forum movements, expert-access biases, and safeguard uptakes and push them out again to reviews of the policies. Regularly convene multi-stakeholder learning workshops to interpolate these data, examine when things are wrong, and revise the protocols of the protocols.

These initiatives will enforce the process of institutionalizing hybrid normativity in such a manner that allows for the preservation of procedural legitimacy, enhancement of the voices of the marginalized, and promotion of stable systems of governance. With dynamic and evolving entangled pluralism, adaptive policy networks based on the continuity of dialogue in statutory, customary, and technical arenas will be necessary for equitable and sustainable resource governance.

Contestation as Generative Dialogue

Conflict is not a place of breakdown, as it can, in fact, be an opportunity for negotiation and innovation. (Quijano, 2000; Stengers, 2005) In Talaud, rice-terrace farmers objected to parceling schemes set by local authorities, which solely ignored the allocation of land based on links with ancestry. A hybrid management plan was developed in deliberative forums and validation workshops, where the stakeholders (farmers, customary leaders, and regional planners) co-wrote deliberative forums, in which customary lineage maps were developed along with contemporary cadastral information. This did not end the conflict but instead transferred it into a process of creating dialog, with the outcome being more embracing and culturally grounded forms of governance.

This adheres to the principle of contestation as generative, in which contests are used as opportunities to make rules and reform institutions. Our network map represents how actors who were previously unable to play a voice in formal decision-making, such as women cooperatives and youth representatives, swung into our center node in new norm development.

SDG & Social-Justice Alignment

The dynamic means between the working means of the Inclusive Pluralism model and the Core Principles of Social Justice with the relationship between the two tools we trace as being based on our empirically validated findings and the working means with the global commitments on the ground.

To begin with, our Hybrid Adjudication Panels are representative of SDG 10, as they will minimize disparity by systematically tracking the percentage of women, youth, and Indigenous peoples involvement.(Gu et al., 2024) Meanwhile, they meet SDG 16.3 emphasis of affordable access to justice and SDG 16.7 focus on inclusive decision-making, by making procedural justice an element part and parcel of each deliberation. By placing Indigenous leaders, state representatives, and civil society in one hybrid arena, we ensure social justice protection against marginalization and dominance.

In addition, SDG 14, which aims to conserve and use marine resources, directly deals with Participatory Mapping of indigenous fishing zones.(Lan et al., 2023) It is not just a cartographic act, but it forms recognitional justice that does not other local knowledge but is now a legitimate source of regulation. Equally, our co-designed forest management agreement will promote SDG 15 of terrestrial ecosystems with benefit-sharing processes to reclaim sovereignty and a means of livelihood as a sense of restorative justice.(Waring et al., 2020)

Lastly, establishing a multi-stakeholder co-governance institution, that is, the unification of NGOs, actors in the private sector, traditional authorities, and government agencies, predetermines the need for SDG 17 of cross-sector collaboration. (Caballero-Anthony, 2018) This type of collaboration enhances the principles of distributive justice, as it is formalized, and the resources, responsibilities, and decision-making power are distributed across various institutions instead of being concentrated in one institution.

Implications: Theoretical and Practical Contributions
Theoretical Implications

This work contributes greatly to legal pluralism theory because it shows that plural legal orders lack parallel or self-sufficient status; indeed, they are highly intertwined in practice. In contrast to classical legal pluralism, where various legal systems are viewed as existing but discrete areas, entangled pluralism shows that norms are always reformulated as a result of engagement, struggle, and bargaining.

Our findings support the premise that law is processual and relational and is framed by the experiences and agency of individuals living their lives in complex socio-political environments. Furthermore, a more comprehensive and wider approach to analysis can be achieved through the incorporation of decolonial, relational ontology, and cosmopolitical approaches, which recognize the validity of Indigenous epistemological and ontological approaches to governance. (Kampilong & Rattu, 2024)

Using this framework to peg the international standards, such as the Sustainable Development Goals (SDGs), we also show how a local justice and sustainability struggle may be allowed to relate to wider, transnational structures. This connects grassroots activism and international policy and provides an example that could be used to implement legal pluralism outside the sphere of scholarly rhetoric.

Practical Implications

From a policy-making and practice perspective, the findings presented by us highlight the value of inclusive and participatory systems when it comes to the resolution of natural resource conflict. The conventional top-down methods of resolving conflicts that are heavy on formal court proceedings sometimes fail to create a result that is viewed as just or sustainable by the local community.

Our inclusive entangled legal pluralism model suggests a number of practical means:

- Hybrid Adjudication Panels: This is the use of customary leaders, professionals with legal expertise, and community members to adjudicate conflicts.
- Workshops involving participation: Spatial data Co-production of statutory and customary knowledge systems.
- Joint Fact-Finding Missions: Ensuring that two or more sources of confidence and influence vessels make their decisions are involved.
- Benefit-sharing Mechanisms: The development of revenue-sharing schemes that consist of distributive and procedural justice.

Such mechanisms come to the fore, especially in multicultural and post-conflict environments, where there is a lack of trust in formal institutions and ongoing historical score settling affects the realities of the present.

Limitations of the Study

Nevertheless, the contributions to this research are limited because it has some limitations that should be realized.

Geographic Scope

The study was limited to three subregions of North Sulawesi, including Minahasa, Sangihe, and Talaud. Although these areas can help us understand the intricacies of pluralism as a working concept, comparative studies in Indonesia and Southeast Asia are needed to determine the universality of the model.

Methodological Constraints

Despite the use of a multi-method qualitative approach, the study, in its components of participatory mapping, focus group discussions, document review, and network mapping, took mostly self-reported data and small sample sizes, which may have limited the in-depth nature of certain findings. Future research will be enhanced by the inclusion of quantitative data and longitudinal analytic tools intended to clarify the course of progression.

Power Dynamics and Representations

People living in marginal conditions, particularly women, youth, and Indigenous knowledge holders, were sought to be involved, but there were instances of power asymmetries within the neighborhood communities, which played with complete participation. This highlights the need to ensure that future research and interventions have a sense of constant reflexivity and the ability to respond to changes.

Environmental Impact Analysis.

Although the research paper covers ecological aspects, namely deforestation, degradation of the coast, and agricultural sustainability, the overall impact on the environment would enhance the applicability of the model to conservation and climate resilience agendas.

Pathways Forward: Research, Policy, and Practice Recommendations

To develop the results and make entangled pluralism a broader and more inclusive framework for inclusive governance and social justice, we would suggest the following recommendations:

Research Expansion
- Comparative Studies: The model can be used in other parts of Indonesia and Southeast Asia to investigate the differences and similarities in the formation of hybrid norms.
- Combining Quantitative Approaches: Surveys, GIS surveillance, and statistical modeling may help balance the qualitative understanding to make the policy more relevant.
- Action: Employment of Digital Technologies: This article explores how new digital technologies, namely blockchain-based land titling and mobile application modules for conflict reporting, can be used to nurture hybrid forms of governance. It considers both the theoretical and practical implications of implementing these technologies in modern political and administrative systems, evaluating the possibility of the technology increasing transparency, accountability, and participation of citizens in governance.

Policy Development
- Govern Legal Hybrid: recommend state actors to acknowledge and integrate legal codes and institutions, which exemplify hybridity, especially in the spheres of resource management and resource management.
- Multi-Stakeholder Platforms: This agenda strives to institutionalize the co-management of natural resources by instituting a mixture of the state, civil society, indigenous people, and representatives of the private sector.
- Align Policies and Targets of SDGs: Goals Achieve global goals, especially SDG 10, 14, 15, 16, and 17, at the local level.

Community and Civil Society Involvement.
- Indigenous Knowledge Systems: Indigenous knowledge systems are not well supported domestically, as most literature focuses on a single main language, restricting the availability of new ideas and concepts.
- Training Local Leaders: Capacitate the local leaders by training the customary leaders, youth, and women to be legal, able to map, and able to advocate.
- Further, construct P2P learning by creating networks where communities with common issues share their experiences, instruments, and best practices.

CONCLUSION

This study contributes to the study of natural resource governance in multicultural settings by showing that legal pluralism is inherently entangled and co-constructed in a dynamic way through everyday negotiation and contestation processes, as well as relational processes. The proposed model of Inclusive Entangled Pluralism highlights the importance of bringing together formal statutes, customary practices, and technical knowledge in a framework under the strategies of Sustainable Development Goals (SDGs) and principles of social justice. Empirical evidence from North Sulawesi shows peasants how hybrid norms can be born out of the routines of boundary-making processes, forum shifting, and brokerage of actors to initiate adaptive and culturally relevant forms of governance that can bolster procedural fairness and inclusivity.

The need to institutionalize multi forum facilitation, resource pooling, and adaptive monitoring to address asymmetries of power and the equitable participation are indicated from the findings. Rather than being mindful of conflict as a breakdown, the model calls for participatory and co-designed dispute resolution processes that include recognition and distributive justice. Policy recommendations include the legalization of hybrid norms in terms of a legal framework, the betterment of multi-stakeholder platforms, and the implementation of digital technologies in support of resilient and inclusive governance. This approach provides an operative pathway for turning resource conflicts into avenues of achieving justice in various socio-political landscapes for social justice, ecological sustainability, and long-term peace.

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