

MULTI-DIMENSIONAL STUDY OF PROTECTED FOREST MANAGEMENT POLICY IN JANTHO DISTRICT, ACEH BESAR

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ABSTRACT

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The complexity of protected forest management policy in Jantho Subdistrict, Aceh Besar, reveals a significant discrepancy between the de jure designation of the area by the government and the de facto land use by the community, which has been going on for generations. The main pressure on the Jantho Protected Forest has shifted from illegal logging to permanent illegal land occupation and land speculation practices along the Jantho–Lamno development project route. Although conservation efforts in the core conservation area (Jantho Nature Park, Jantho Pine Forest Reserve) showed an increase in management effectiveness based on the 2019 METT evaluation, external pressures in the buffer zone remain high. To resolve tenure conflicts and ensure sustainable conservation, management policy must adopt a multi-stakeholder approach. Strategic vertical collaboration is needed between the Aceh Besar District Government, the Aceh Provincial Government, and the Ministry of Environment and Forestry. These efforts must be supported by the preparation of a comprehensive integrated Academic Paper, in accordance with the DPRC's recommendations. The long-term solution lies in the implementation of the Social Forestry model, particularly Community Forests (CF) or Customary Forests, as a mechanism to legitimise community management rights while maintaining the essential conservation functions of forests.

Keywords: social forestry, multi-stakeholder collaboration, conservation of jantho protected forest

INTRODUCTION

The Protected Forest Area in Jantho, Aceh Besar, is a highly vital ecological area. Geographically, this area functions as a major water catchment area and a buffer for biodiversity, the preservation of which has a direct impact on the condition of the downstream area of Aceh Besar. However, this area is under great pressure from forest encroachment, illegal land occupation, and strong pressure from the community to change the status of the land, which they claim as their ancestral domain (Wily, 2021; Muur, 2018; Barrow et al., 2016). This issue is becoming increasingly urgent given findings in the field, as revealed by joint patrols by the Aceh Regional Police and the Aceh Environment and Forestry Agency (EFA), which confirmed indications of illegal land occupation within the Protected Forest Area across Jantho–Lamno. The issue of land status and control in this region has become an ongoing controversy that requires structured and integrated policy intervention (Selden et al., 2001; Version, 2010).

The issue of Protected Forest management in Aceh Besar, particularly involving tenure conflicts, has risen to become a strategic agenda at the regional legislative level (Leeuwen, 2025; Tchatchouadjomo, 2018). This issue is no longer considered a sectoral issue alone, but has entered into the core discussions of the Aceh Besar District People's Representative Council (DPRC). This is evident from the

inclusion of the recommendations of the Protected Forest Special Committee in the Second Plenary Meeting of the Aceh Besar DPRK for the First Session of 2025/2026. The plenary meeting also included discussions on the Draft Regional Medium-Term Development Plan (MTDP) 2025–2029, the Draft General Policy on Budget Changes (DGPBC) and Changes to the Provisional Budget Priorities and Ceilings (P-PPAS) for the 2025 APBK.

The inclusion of the Protected Forest issue in the main regional planning documents (MTDP and DGPBC) indicates that the resolution of the tenure conflict in Jantho has reached a critical point, where its resolution is considered important for the stability and regional development planning of Aceh Besar for the next five years. The establishment of this status in the MTDP provides political legitimacy and opens up the potential for a larger budget allocation (through DGPBC/PPAS) to finance the scientific studies and legal-administrative processes necessary for revising the status of the area, in line with national policy (Vdovichen et al., 2025; Law & Agrarian, 2024; Legal & Policy, 2021; Berezhna et al., 2020). In addition, Jantho covers areas with multiple protection statuses, including the Jantho Nature Park (NP) and the Janthoi Pine Forest Nature Reserve (CA). The management performance of these areas is routinely evaluated using the Management Effectiveness Tracking Tool (METT) by the Aceh Natural Resources Conservation Agency (NRCA) (Areas, 2019; Cook et al., 2015).

Forestry management in Aceh is regulated within the framework of Special Autonomy (Otsus), which grants asymmetric decentralisation authority to the Aceh Government. The main legal basis is Qanun Aceh No. 7 of 2016 concerning Forestry in Aceh. This Qanun explicitly requires the Aceh Government to manage, protect, maintain and conserve protected forest areas. Furthermore, the obligation to manage protected areas is a shared responsibility. Article 18 paragraph (1) of the Aceh Qanun stipulates that the Central Government, the Aceh Government, and the Regency/City Government (Aceh Besar) are obliged to manage, protect, maintain and conserve protected areas, both within and outside the Forest Area. This shows that the Aceh Besar Regency Government has a clear mandate to play an active role in conservation, even though the authority to determine the status of an area lies at a higher level (Olalekan et al., 2019; Borrini-feyerabend & Hill, 2015).

METHOD

This study utilised a descriptive qualitative research method, focusing on a Multi-Dimensional Study of Protected Forest Management Policy in Jantho Subdistrict, Aceh Besar, using purposive sampling to select informants based on their expertise (Leah, 2024; Pahwa et al., 2023; Thomas, 2022). This approach is in line with the principles of qualitative research, which emphasises understanding complex social phenomena through in-depth interviews and observation, as emphasised in the literature (Usman et al., 2025; (Fossey et al., 2002; Document, 2018). Data collection techniques included observation, interviews, and documentation, which were essential for gathering rich contextual information on the research topic.

In addition, the study's reliance on primary and secondary data sources deepened the analysis, enabling a comprehensive understanding of the mechanisms involved in local governance and accountability, as discussed in related public policy research (Print et al., 2024; Klepac et al., 2023; Hendren et al., 2023). This study is expected to reveal real events that occur in the field through interviews, observations, and documentation in accordance with the data and facts obtained related to the Multi-Dimensional Study of Protected Forest Management Policy in Jantho District, Aceh Besar.

RESULTS AND DISCUSSION

A. Analysis of Regulatory and Institutional Dimensions

Qanun Aceh No. 7 of 2016 sets very strict limits on the use of Protected Forests (PF), which is the source of conflict with community claims to land use. Legally, forest utilisation in PL areas can only take the form of: (1) area utilisation (such as cultivation of medicinal plants, mushrooms, bees, rattan, sugar palms, bamboo, or wildlife breeding); (2) environmental services (such as nature tourism, water/water energy utilisation, biodiversity protection); and (3) the collection of Non-Timber Forest Products (NTFPs), including rattan, honey, sap, fruit and mushrooms (Sherpa, 2025; Rahmadhani & Asmara, 2021; Saha & Sundriyal, 2012). The explicitly prohibits activities that alter the primary function

of protected forests, such as open-pit mining, large-scale land clearing, the use of mechanical equipment or heavy machinery, and the construction of facilities and infrastructure that alter the landscape (Dabros et al., 2025; Tiamgne et al., 2022; Coast, 2020) . This prohibition creates a contradiction with findings in the field in Jantho- Lamno, where the patrol team found buildings being constructed, barbed wire fences being installed, and young agricultural commodities being planted, all of which indicate violations of forest utilisation regulations.

Efforts by the Aceh Besar District Government and the DPRC to revise the status of Protected Forests face significant obstacles in the vertical conflict of authority between the Regional Government and the Central Government. Although the Aceh Besar DPRC Special Committee is actively reviewing the evaluation of changes to the status of protected forest areas, the Banda Aceh Region XVIII Forest Area Consolidation and Spatial Planning Agency (FACSPA) (representing the central government) emphasises that the designation of areas is the result of a proposal by the local government through the Aceh Spatial Planning Qanun (PSP) and has been approved by the Ministry of Environment and Forestry. The process of changing the status of a forest area is highly bureaucratic and multi-layered (Sani et al., 2019; García-lópez, 2018). FACSPA explained that the official request must come from the Provincial Government, complete with the Governor's recommendation, and then require an integrated scientific study by a non- ministerial government agency (such as LIPI/BRIN), before finally being stipulated through a Ministerial Decree (Ribot & Agrawal, 2006; Turyahabwe, 2015). This shows that the authority of the Aceh Besar District Government is very limited, namely to facilitating the collection of academic and historical data. In spatial planning conflicts, Aceh Qanun No. 7 of 2016 stipulates that in the event of a difference between the forest function guidelines issued by the District/City Government and the Aceh PSP, the guidelines used shall be the forest function guidelines in accordance with the Aceh (Provincial) PSP.

This situation creates structural difficulties, where the biggest obstacle in resolving the land conflict lies in vertical authority conflicts and strict administrative requirements (Bakker, 2023; Patoari et al., 2020; Cahyadi & Saptomo, 2024). The Aceh Besar DPRC Special Committee realised that they had to collaborate with the Aceh Provincial Government to pass the Governor's recommendation 'gateway' before negotiating with the Central Government. Therefore, the Aceh Besar District Government had to proactively prepare a strong Academic Paper to convince the Governor of Aceh to support the proposed revision, as the Governor held the administrative key to the ministerial level decision.

Table 1. Analysis of Protected Forest Management Authority Based on Aceh Qanun No. 7/2016

Aspects of Authority	Aceh Provincial Government	District/Municipal Government (Greater Aceh)	(Aceh Qanun No. 7/2016)
Management, Protection, Maintenance	Must manage, protect, and preserve protected areas.	Must manage, protect, maintain, and conserve protected areas within/outside Forest Areas.	Article 13 paragraph (1), Article 18 paragraph (1)
Forest Function Guidelines (Spatial Planning)	Serves as the primary guideline (Aceh Spatial Plan) if there are differences with the district government.	May use a larger PSP map if the difference is only in scale.	Article 17(3) & (4)
Initiation of PF Status Change	Must submit an official application, complete with the Governor's recommendation, to the Ministry of Environment and Forestry.	Facilitate academic studies and historical data to be submitted to the Provincial/Central level.	FACSPA Statement

Source: Data Analysis Results, 2025

B. Dimensions of Social-Agrarian Conflict and Land Tenure

Tenure conflicts in Jantho stem from the community's claim that the designation of protected forest areas ignores history, customary rights, and the land they have managed for generations. Members of the Aceh Besar DPRC highlighted the importance of protecting forests that have long been preserved by indigenous peoples, urging collaboration to change the status of protected forests to Community Forests or Customary Forests (Kothari et al., 2013; Cronkleton et al., 2012). Although the focus of this study is Jantho, the polemic over the status of protected forests in the Lampuuk-Lhoknga mountains, Aceh Besar, is a relevant case study that reflects the same struggle. In the Lampuuk-Lhoknga controversy, it was found that the regulation designating the area as a protected forest was deemed inconsistent with the conditions on the ground (*de facto*). Advocacy efforts led by the Aceh Besar DPRC Special Committee demonstrated the local government's political will to fight for a revision of this status at the ministerial level.

The customary system in Aceh provides a mechanism for community-based forest resource management. Qanun Aceh No. 10 of 2008 on Customary Institutions legally recognises the role of Pawang Glee, or other titles, as leaders responsible for regulating customs related to forest management and conservation. The duties of Pawang Glee (or *Pengulu Uten*, another local term) include. Leading management, assisting the government in forest management, enforcing customary laws on forests, and resolving disputes between community members over forest use (Kaimowitz et al., 2003; Hayes & Persha, 2010; Asare et al., 2025). However, the role of Pawang Glee is marginalised when conflicts arise between customary land claims (community) and state land claims (protected forests). The current conflict is not only between community members, but also between the community and centralised large-scale zoning policy (Puustinen et al., 2022; Journal et al., 2016). Recognition of customary institutions (Pawang Glee) must be supported by recognition of Customary Forests (territories). Without the designation of customary territories, Pawang Glee does not have state-recognised jurisdiction to address encroachment by outsiders, such as retired civil servants who purchase land in the Jantho-Lamno Protected Forest area with only a receipt (Boone, 2019; Royer et al., 2018).

In order to fight for a revision of the status of the area at the ministerial level, authentic and complete data from the community is required in terms of academic and legal aspects. This data must include historical data, boundaries of control, and scientific justification that the status of the area can be changed to Community/Customary Forest without neglecting its critical conservation function (Maryam et al., 2025; Flintan & Flintan, 2012; Raya et al., 2022). The Aceh Besar DPRC Special Committee specifically requested that the Aceh Besar Government immediately prepare an academic paper and conduct integrated research related to protected forests. In addition, every spatial plan revision document must be synchronised with the Aceh Province Spatial Plan (PSP) after conducting public consultations with various stakeholders to ensure the social legitimacy and completeness of the document (Boiral & De, 2017; Joshi et al., 2018).

Table 2. Data Requirements and Administrative Requirements for Revising the Status of Protected Forest Areas

Data Dimension	Purpose of Data Collection	Parties Involved/Responsible	Status/Description
Academic/Scientific Paper	Supports legal and technical arguments related to factual conditions and the feasibility of status changes.	DPRC Special Committee, District Government, Scientific Institutions/Academics	A comprehensive integrated study is required
Historical/Tenure Data	Fighting for claims of hereditary management and indigenous peoples' rights.	Indigenous Communities, Advocates, DPRC Special Committee	Must be authentic and complete for advocacy at the ministerial level

Regional Policy Recommendations	Administrative basis for submitting proposals to change the status of forest areas.	Provincial Government (Governor)	Official requests must originate from the Provincial Government.
Spatial Planning Synchronisation	Ensuring the alignment of change documents with the Provincial Spatial Plan.	DPRC, District Government, Stakeholders	Conducted through Public Consultation.

Source: Data Analysis Results, 2025

C. Ecological Threats and Implementation Success

Threats to protected forests across Jantho-Lamno show a pattern of significant degradation. Joint patrols conducted in November 2022 showed that the focus of the threats had shifted. Although no illegal logging (large-scale illegal logging) was found, the team found a number of indications of serious illegal land occupation (Win et al., 2018; Trends & Series, 2013; Kleinschmit et al., 2016). The modus operandi of permanent land conversion included the construction of several buildings, both wooden and concrete, the installation of barbed wire fences as land boundaries, and the planting of young agricultural commodities such as corn and chillies (Klaus, 2019; Empire & Zealand, 2013; Müller, 2022). All of these findings were confirmed to be located within the Protected Forest Area and are legally prohibited. A prominent case involved land speculation. The team found a retired civil servant who claimed to have recently purchased land in the area with only a purchase receipt, without the official administrative documents that normally accompany land sales. This indicates the existence of a black market for land that allows outsiders, who have no customary or historical rights, to claim ownership and convert land in protected areas (Unless et al., 2014; Tesfaw et al., 2018; Wolf et al., 2023). This illegal land control has more chronic and difficult-to-recover impacts than temporary illegal logging (Zimmermann et al., 2025; Matteucci et al., 2016; Han et al., 2021).

Table 3. Indications of Violations and Key Findings in the Jantho-Lamno Protected Forest Area

Type of Violation	Field Findings Description	Implications for Protected Forest Function	Key Follow-up Actions
Illegal Land Occupation	Construction of buildings (wood/concrete) and installation of barbed wire fences.	Changing the landscape and main function of PF. Violating the prohibition on the construction of facilities that change the landscape.	Data collection, persuasive guidance, potential law enforcement
Clearing of agricultural land	Planting of young crops (maize, chilli).	Potential for erosion and soil degradation; violating PF utilisation restrictions.	Persuasive guidance to dismantle buildings/stop activities
Illegal Land Transactions	Buying and selling using only receipts without official administrative documents.	Resulting in land occupation without legal rights; triggering speculation.	Enforcing the law against unlawful ownership claims
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Source: Data Analysis Results, 2025

The response to alleged encroachment in the Jantho-Lamno forest involved a high level of institutional collaboration, triggered by directives from the Acting Governor of Aceh. The parties involved included the Director of Special Crimes at the Aceh Regional Police, the Head of the Aceh EFA, the KLHK law enforcement team, and elements of the Indonesian National Army. Law enforcement took a phased approach. The initial step is the collection of data on building owners by relevant elements at the district level (district police, sub-district police, community police, military personnel, EFA). Next, the building owners were invited to receive persuasive guidance from the Sustainable Forest Task Force to voluntarily dismantle the buildings, if persuasion failed, repressive law enforcement would be carried out (Kaimowitz et al., 2003) Science, 2019b; Science, 2019a). This priority shows recognition that the problems in Jantho are not only forestry issues, but also issues of law enforcement against illegal land occupation.

In the core conservation areas in Jantho under the management of the Aceh Conservation of Natural Resources Office, there are indications of successful governance. An evaluation of the effectiveness of conservation area management using the METT (Management Effectiveness Tracking Tool) method conducted showed a significant increase (Geldmann et al., 2015; Gopalakrishnan et al., 2024; Van, 2025; Chen et al., 2023). For example, the management effectiveness of the Jantho Wildlife Reserve increased from 74% to 81%, and that of the Jantho Pine Forest Nature Reserve increased from 70% to 87%. This increase reflects improvements in internal governance in the six elements assessed by METT (context, planning, inputs, processes, outputs, and outcomes) (Ungureanu, 2012; Waldt, 2012; Ngobo & Malefane, 2017; Manginte, 2024). However, this success contrasts with the high levels of encroachment and land conversion detected in the wider protected forest areas surrounding it, such as the Jantho–Lamno corridor. This implies that improved conservation performance in small, intensively managed areas (NPs/CAs) is not strong enough to stem external pressures and land speculation at their peripheries. Therefore, the focus of law enforcement must be expanded from traditional illegal logging surveillance to tackling speculation and illegal land grabbing in fragmented protected areas (Massé, 2020; Kaimowitz et al., 2003).

D. Participatory Governance Strategies

Resolving tenure conflicts in Jantho requires recognition of community rights as part of the conservation solution. The Social Forestry model (Community Forest, Village Forest, or Customary Forest) must be accelerated to legitimise sustainable land use by communities, in accordance with the limitations on the use of non-timber forest products in protected areas (Sheppard et al., 2020). The Social Forestry programme is not only an economic tool, but also a de-conflictualisation mechanism that offers reconciliation between the state's conservation function and the tenure rights of communities (Robinson et al., 2018) (Kitamura & Alex, 2013). By officially changing the status of land managed by communities to Social Forest, the district government effectively transfers the responsibility of border control from the repressive state to the community, which now has the incentive and legal right to preserve the forest. As a replication model, the Aceh Besar District Government can adopt the success of the *Tuah Sejati* Community Forest (CF) in Gampong Pudeng, Lhoong (Aceh Besar). This model has successfully integrated non-timber economic aspects (agroforestry such as durian, areca nut, coffee, rattan) with high-value processed products (Kelulut honey, Durian Halwa) and the development of ecotourism (Humairah Pond). This model is in line with the types of utilisations permitted in Qanun Aceh No. 7 of 2016. Additionally, the potential of the Jantho Waqf Forest must be promoted for recognition as a community-based conservation entity that combines religious values and local wisdom.

To achieve the desired change in the status of the area, the Aceh Besar District Government must implement a structured policy roadmap. Integrated Data Collection and Academic Paper: The district government must immediately form a multidisciplinary team of experts to compile a comprehensive Academic Paper (as requested by the Special Committee). This document must combine historical data, sociological studies of tenure rights, and biophysical analysis to provide strong scientific and legal justification for the change in status of the area, ensuring that the proposed revision does not result in the loss of critical protective functions (e.g., protection of springs or steep slopes). Political Steps to the

Aceh Government: The district government must take advantage of the momentum of the 2025–2029 MTDP Qanun to ensure that the Aceh Government (Governor) provides official recommendations on the proposed revision of the PF status to the Ministry of Environment and Forestry, as a crucial step in the administrative procedure leading to ministerial approval. Audit and Socialisation of Area Boundaries: Form an Integrated Technical Team (involving the FACSPA) to review and massively socialise the Forest Area boundaries to the community and village officials, in order to minimise illegal sales and purchases based solely on receipts.

Law enforcement must specifically target the root of the problem, namely land speculation, not just small communities. Priority action must be given to speculators and buyers of PF land without rights (receipt cases), who are often individuals from outside the indigenous community. The persuasive approach currently applied by the Sustainable Forest Task Force must be followed by firm action in accordance with procedures if instructions to demolish illegal buildings are ignored. Furthermore, the role of Pawang Glee must be functionally integrated into the tenure dispute monitoring and resolution system at the site level, especially in areas proposed to become Customary Forests. This strengthening ensures that local wisdom is used to preserve forests and prevent new encroachment.

CONCLUSION

The management of protected forests in Jantho Subdistrict, Aceh Besar, requires multi-dimensional policy. This analysis concludes that there are deep regulatory discrepancies and tenure conflicts triggered by illegal land occupation and speculation, which pose a chronic threat to forest sustainability. Although the Special Autonomy legal framework and the Qanun Aceh provide a basis for the active role of local government and customary institutions (Pawang Glee), conflict resolution is highly dependent on vertical political collaboration (district government – governor – central government) supported by credible academic documents. Future conservation success is determined by social legitimacy through the recognition of indigenous peoples' rights in the Social Forestry scheme. Aceh Besar must position the resolution of Protected Forest conflicts and the development of the Social Forestry scheme as a long-term strategic investment. The implementation of models such as CF Tuah Sejati can be a key pillar in natural disaster mitigation, protection of hydrological functions, and improvement of community welfare, in line with the vision outlined in the Qanun MTDP 2025–2029. Participatory Mapping Study (PMS): Conduct an in-depth study and participatory mapping (Indicative Map of Social Forestry Areas - PMS) in Jantho to quickly identify and validate community management areas, in order to accelerate the legalisation process of Customary Forests/Village Forests. Environmental Carrying Capacity Analysis: Conduct a detailed and independent biophysical analysis of the areas claimed by the community to ensure that any proposed revisions to the status of the area will not eliminate critical protective functions, particularly those related to upstream ecosystem protection and downstream disaster risk mitigation.

BIBLIOGRAPHY

- Areas, P. (2019). *The International Journal of Protected Areas and Conservation Developing capacity for a protected planet*. 25.
- Asare, R. A., Kyei, A., & Mason, J. J. (2025). *The community resource management area mechanism : a strategy to manage African forest resources for REDD p. December*. <https://doi.org/10.1098/rstb.2012.0311/105731/rstb.2012.0311.pdf>
- Bakker, L. (2023). Social Sciences & Humanities Open Custom and violence in Indonesia ' s protracted land conflict. *Social Sciences & Humanities Open*, 8(1), 100624. <https://doi.org/10.1016/j.ssaho.2023.100624>
- Barrow, E., Nhantumbo, I., Oyono, R., Savadogo, M., Nhantumbo, I., & Oyono, R. (2016). Who owns Africa ' s forests ? Exploring the impacts of forest tenure reform on forest ecosystems and livelihoods. *Forests, Trees and Livelihoods*, 8028, 0. <https://doi.org/10.1080/14728028.2016.1159999>
- Berezhna, K., Yuzikova, N., Maistro, S., Paliukh, V., & Antonova, L. (2020). *THE IMPORTANCE OF PUBLIC ADMINISTRATION IN*.
- Boiral, O., & De, D. (2017). *Managing biodiversity through stakeholder involvement : Why , who , and for what initiatives ?* 1–32.

- Boone, C. (2019). Legal Empowerment of the Poor through Property Rights Reform : Tensions and Trade-offs of Land Registration and Titling in Sub-Saharan Africa Legal Empowerment of the Poor through Property Rights Reform : Tensions and Trade-offs of Land Registration and Titling in Sub-Saharan Africa. *The Journal of Development Studies*, 55(3), 384–400. <https://doi.org/10.1080/00220388.2018.1451633>
- Borrini-feyerabend, G., & Hill, R. (2015). *Governance for the Conservation of Nature*.
- Cahyadi, D., & Saptomo, A. (2024). *Complexity of Agrarian Law Regulations in Disputes over Unauthorized Use of Land*.
- Chen, M., Zeng, C., Zeng, X., Liu, Y., & Wang, Z. (2023). *Assessment of marine protected areas in the East China Sea using a management effectiveness tracking tool*. January, 1–14. <https://doi.org/10.3389/fmars.2023.1081036>
- Coast, C. (2020). *RESOURCES MANAGEMENT THREATS TO FOREST RESERVE MANAGEMENT FROM MINING PRACTICES IN TARKWA FOREST DISTRICT , WESTERN REGION , GHANA*.
- Cook, C. N., Carter, R. W. B., & Hockings, M. (2015). *Measuring the accuracy of management effectiveness evaluations of protected areas*. 139(2014), 164–171.
- Cronkleton, P., Pulhin, J. M., & Saigal, S. (2012). *Co-management in Community Forestry : How the Partial Devolution of Management Rights Creates Challenges for Forest Communities*. 10(2), 91–102. <https://doi.org/10.4103/0972-4923.97481>
- Dabros, A., Antwi, E. K., Waldron, C., Darko, A. N., & Higgins, K. L. (2025). *Risk assessment of potential impact of mining development (linear infrastructure) on peatland ecosystems in the Ring of Fire region , Northern Ontario*. September, 1–18. <https://doi.org/10.3389/fenvs.2025.1676633>
- Document, P. (2018). *OFFICE_JEDEP@SPIRUHARET.RO*.
- Empire, C., & Zealand, N. (2013). *Gideon Biger*. 2, 87–108.
- Flintan, F., & Flintan, F. (2012). *Making rangelands secure : (Issue January)*.
- Fossey, E., Harvey, C., Mcdermott, F., & Davidson, L. (2002). *research **.
- García-lópez, G. A. (2018). *Rethinking elite persistence in neoliberalism : Foresters and technobureaucratic logics in Mexico 's community forestry*.
- Geldmann, J., Coad, L., Barnes, M., Craigie, I. D., Hockings, M., Knights, K., Leverington, F., Cuadros, I. C., Zamora, C., Woodley, S., & Burgess, N. D. (2015). Changes in protected area management effectiveness over time: A global analysis. *BIOC*, 191, 692–699. <https://doi.org/10.1016/j.biocon.2015.08.029>
- Gopalakrishnan, L., Abidin, S. Z., Cheng, M., & Saaban, S. (2024). *DEVELOPING STRATEGIES TO IMPROVE METT SCORES AND OVERALL MANAGEMENT EFFECTIVENESS IN SELECTED MALAYSIAN PROTECTED AREAS*. 30(November).
- Han, Y., Ke, Y., Zhu, L., Feng, H., Zhang, Q., Sun, Z., & Zhu, L. (2021). Tracking vegetation degradation and recovery in multiple mining areas in Beijing , China , based on time-series Landsat imagery. *GIScience & Remote Sensing*, 58(8), 1477–1496. <https://doi.org/10.1080/15481603.2021.1996319>
- Hayes, T., & Persha, L. (2010). *Forest Policy and Economics Nesting local forestry initiatives : Revisiting community forest management in a REDD + world*. 12, 545–553. <https://doi.org/10.1016/j.forpol.2010.07.003>
- Hendren, K., Newcomer, K., & Sumner, N. (2023). *How qualitative research methods can be leveraged to strengthen mixed methods research in public policy and public administration ? October 2020*, 468–485. <https://doi.org/10.1111/puar.13528>
- Joshi, O., Parajuli, R., Kharel, G., Poudyal, N. C., & Taylor, E. (2018). *Stakeholder opinions on scientific forest management policy implementation in Nepal*. Fig 1, 1–15.
- Journal, T., Medicine, L., & City, N. Y. (2016). *Zoning Law , Health , and Environmental Justice : What 's the Connection ? December*. <https://doi.org/10.1111/j.1748-720X.2002.tb00427.x>
- Kaimowitz, D., Enforcement, F. L., Diversity, B., Partnership, F., Witness, G., International, T., & Forest, G. (2003). *Forest law enforcement and rural livelihoods*. 5(3).

- Kitamura, K., & Alex, R. (2013). *Land Use Policy Common property protected areas : Community control in forest conservation*. 34, 204–212.
- Klaus, F. (2019). *Walls and Fences : A Journey Through History and Economics* *. 330.
- Kleinschmit, E. D., Mansourian, S., Wildburger, C., & Purret, A. (2016). *IUFRO World Series Volume 35 Illegal Logging and Related Timber Trade – Dimensions , Drivers , Impacts A Global Scientific Rapid Response Assessment Report*.
- Klepac, B., Mowle, A., Riley, T., & Craike, M. (2023). Government , governance , and place - based approaches : lessons from and for public policy. *Health Research Policy and Systems*, 1–19. <https://doi.org/10.1186/s12961-023-01074-7>
- Kothari, A., Camill, P., & Brown, J. (2013). *Conservation as if People Also Mattered : Policy and Practice of Community-based Conservation*. 11(1), 1–15. <https://doi.org/10.4103/0972-4923.110937>
- Law, P., & Agrarian, D. S. (2024). *FOREIGN EXPERIENCE OF FINANCIAL-LEGAL AND ADMINISTRATIVE- LEGAL REGULATION OF THE ACTIVITIES OF PUBLIC ADMINISTRATION BODIES Yevhen Leheza*. 51–60.
- Leah, N. (2024). *Types of Purposive Sampling Techniques with Their Examples and Application in Qualitative Research Studies*. 5(1), 90–99.
- Leeuwen, M. Van. (2025). *Uganda Doi link to publisher : <https://doi.org/10.1016/j.landusepol.2014.02.007> Version of the following full text : Publisher ' s version Published under the terms of article 25fa of the Dutch copyright act . Please follow this link for the Terms of Use : <https://repository.ubn.ru.nl/page/termsfuse> Downloaded from : <https://hdl.handle.net/2066/131804> Download date : 2025-12-06 Note : To cite this publication please use the final published version (if applicable) . Land Use Policy Renegotiating customary tenure reform – Land governance reform and tenure security in Uganda. 2014, 292–300.*
- Legal, T., & Policy, S. (2021). *The Legal, Administrative, and Governance Frameworks of Spatial Policy, Planning, and Land Use: Interdependencies, Barriers, and Directions of Change*.
- Manginte, S. Y. (2024). *Advances in Management & Financial Reporting Fortifying Transparency : Enhancing Corporate Governance through Robust Internal Control Mechanisms*. 2(2), 72–84.
- Maryam, S., Epriadi, D., Alam, M., Sari, S. P., & Kirin, A. (2025). *Role of customary forest recognition and social trust in community- based biodiversity conservation in Bungo , Jambi , Indonesia*. 26(9), 4511–4521. <https://doi.org/10.13057/biodiv/d260923>
- Massé, F. (2020). Conservation Law Enforcement : Policing Protected Areas Conservation Law Enforcement : Policing Protected Areas. *Annals of the American Association of Geographers*, 110(3), 758–773. <https://doi.org/10.1080/24694452.2019.1630249>
- Matteucci, S. D., Totino, M., & Aristide, P. (2016). *Land Use Policy Ecological and social consequences of the Forest Transition Theory as applied to the Argentinean Great Chaco*. 51, 8–17.
- Müller, F. I. (2022). *Housing Security : Placing Brazil ' s Social Housing Program in a Violent Context*. 4(3), 390–400. <https://doi.org/10.31389/jied.177>
- Muur, W. Van Der. (2018). Forest conflicts and the informal nature of realizing indigenous land rights in Indonesia. *Citizenship Studies*, 1025, 1–15. <https://doi.org/10.1080/13621025.2018.1445495>
- Ncgobo, P., & Malefane, S. R. (2017). *Internal controls , governance and audit outcomes Case of a South African municipality*. 74–89.
- Olalekan, R. M., Adedoyin, O., Christianah, B., & Modupe, O. (2019). *The roles of all tiers of government and development partners in environmental conservation of natural resource : a case study in*. 114–121. <https://doi.org/10.15406/mojes.2019.04.00142>
- Pahwa, M., Cavanagh, A., & Vanstone, M. (2023). *Key Informants in Applied Qualitative Health Research*. 33(14), 1251–1261. <https://doi.org/10.1177/10497323231198796>
- Patoari, M. H., Husin, A., Nor, M., Nizam, M., Awang, B., Chowdhury, A. H., & Talukder, J. (2020). *Legal and Administrative Challenges of Alternative Dispute Resolution (ADR) as a Peaceful*

- Means of Resolving the Land Dispute in the Rural Areas of Bangladesh.* 415–428. <https://doi.org/10.4236/blr.2020.112026>
- Print, I. O., Swastika, A. F., Wibawa, S., & Marvin, J. (2024). *Enhancing Local Government Accountability through Good Governance Policies: A Mixed-Methods Study.* 18(03), 122–131.
- Puustinen, T., Krigsholm, P., & Falkenbach, H. (2022). Land Use Policy Land policy conflict profiles for different densification types: A literature-based approach. *Land Use Policy*, 123(September), 106405. <https://doi.org/10.1016/j.landusepol.2022.106405>
- Rahmadhani, B., & Asmara, N. A. A. (2021). Strategi Implementasi Kebijakan Program Indonesia Pintar Melalui Kartu Indonesia Pintar Tingkat SMP Kota Bandung (SMPN 37 dan 35 Kota Bandung). *Konferensi Nasional Ilmu Administrasi (KNIA)*, 1, 244–250.
- Raya, J., Prabumulih, P., & Indralaya, K. (2022). *The complexity of integrating indigenous knowledge for ecotourism planning: a case of Mude Ayek 's customary forests , Indonesia Alfitri * Andy Alfatih and Andries Lionardo Abdul Kholek Erlisa Saraswati Muhammad Izzudin Anang Dwi Santoso.* 9(1), 76–97.
- Ribot, J. C., & Agrawal, A. (2006). *CO CO. August*, 1–24. <https://doi.org/10.1016/j.worlddev.2005.11.020>
- Robinson, B. E., Masuda, Y. J., Kelly, A., Holland, M. B., Bedford, C., Ginsburg, C., Hilhorst, T., Childress, M., Fletschner, D., Game, E. T., Lawry, S., Miteva, D. A., Musengezi, J., Naughton-treves, L., Nolte, C., Sunderlin, W. D., & Veit, P. (2018). *Incorporating Land Tenure Security into Conservation.* 11(April), 1–12. <https://doi.org/10.1111/conl.12383>
- Royer, S. De, Noordwijk, M. Van, & Roshetko, J. M. (2018). *Does community-based forest management in Indonesia devolve social justice or social costs ?* 20(2), 167–180.
- Saha, D., & Sundriyal, R. C. (2012). *Forest Policy and Economics Utilization of non-timber forest products in humid tropics: Implications for management and livelihood.* 14, 28–40. <https://doi.org/10.1016/j.forpol.2011.07.008>
- Sani, R. R., Prasojo, E., & Atmoko, A. W. (2019). *SOCIAL SCIENCES & HUMANITIES A Model of Multi-Layered Collaborative Governance for the Management and Restoration of the Ciliwung Watershed Ecosystems.* 27, 217–239.
- Science, E. (2019a). *Environmental law enforcement in forestry crime: A disjunction between ideality and reality Environmental law enforcement in forestry crime: A disjunction between ideality and reality.* <https://doi.org/10.1088/1755-1315/343/1/012066>
- Science, E. (2019b). *The role of forestry police in the prevention and eradication of forest destruction The role of forestry police in the prevention and eradication of forest destruction.* <https://doi.org/10.1088/1755-1315/343/1/012130>
- Selden, M., Kloet, J. De, Heng, Z., Jinghai, L., Chaolu, B., Cunli, L., Ash, R., Edmonds, R. L., Smil, V., Liu, S., Liu, S., Carter, M. R., Yao, Y., Hu, W., Chen, J., & Wills, D. (2001). *Who Owns China 's Land? Policies , Property Rights and Deliberate Institutional Ambiguity * Peter Ho.*
- Sheppard, J. P., Chamberlain, J., Agúndez, D., Bhattacharya, P., Chirwa, P. W., Gontcharov, A., Cliffie, W., Sagona, J., & Shen, H. (2020). *Sustainable Forest Management Beyond the Timber-Oriented Status Quo: Transitioning to Co-production of Timber and Non-wood Forest Products — a Global Perspective.* 26–40.
- Sherpa, C. (2025). *Non-Timber forest products and their role in rural livelihoods: A case study from the Annapurna Conservation Area , Nepal.*
- Tchatchoua-djomo, R. (2018). *Improving local land governance? Exploring the linkages between land governance reforms , institutional pluralism and tenure security in.* 9113(January). <https://doi.org/10.1080/07329113.2017.1419403>
- Tesfaw, A. T., Pfaff, A., Golden, R. E., Qin, S., & Medeiros, R. (2018). *Land-use and land-cover change shape the sustainability and impacts of protected areas.* <https://doi.org/10.1073/pnas.1716462115>
- Thomas, F. B. (2022). *The Role of Purposive Sampling Technique as a Tool for Informal Choices in a Social Sciences in Research Methods.* 2(5).

- Tiamgne, X. T., Kalaba, F. K., Nyirenda, V. R., Takam, X., Kalaba, F. K., Nyirenda, V. R., Tiamgne, X. T., & Nyirenda, V. R. (2022). Annals of GIS Modelling areas for sustainable forest management in a mining and human dominated landscape: A Geographical Information System (GIS) - Multi-Criteria Decision Analysis (MCDA) approach Modelling areas for sustainable forest management in a mining and human Decision Analysis (MCDA) approach. *Annals of GIS*, 28(3), 343–358. <https://doi.org/10.1080/19475683.2022.2026469>
- Trends, F., & Series, R. (2013). *The Socio-Economic Context of Illegal Logging and Trade of Rosewood Along the Cambodian-Lao Border*. November.
- Turyahabwe, N. (2015). *An overview of history and development of forest policy and legislation in Uganda*. March 2010. <https://doi.org/10.1505/ifor.10.4.641>
- Ungureanu, M. (2012). *INTERNAL AUDIT AND ITS ROLE IN IMPROVING CORPORATE*. 14(1), 139–145.
- Unless, R., Act, P., Rose, W., If, T., & Rose, W. (2014). *This is a repository copy of What is a land grab ? Exploring green grabs , conservation , and private protected areas in southern Chile . White Rose Research Online URL for this paper : Article : Holmes , G (2014) What is a land grab ? Exploring green grabs , conservation , and private*.
- Usman, A. C., Al-hendawi, M., & Bulut, S. (2025). *Approaches to qualitative research : A narrative literature review*. 2(2), 81–95. <https://doi.org/10.5281/zenodo.128049>
- Van, L. N. (2025). *Management effectiveness evaluation of protected areas in Central Vietnam using the fourth version of the management effectiveness tracking tool*. 1–21.
- Vdovichen, V., Sokha, S., Radzikhovskiy, Y., Grytsyshen, D., & Zinevych, O. (2025). *Legislative Pillars of Administrative Bodies ' Functioning and Organizational Behavior Under recent Reforms*.
- Version, D. (2010). *Contemporary Discourses and Contestations around Pro-Poor Land Policies and Land Governance*. Cc.
- Waldt, G. Van Der. (2012). *Measuring the Goodness of Governance Macro , intermediate and micro perspectives*. 5(1), 83–96.
- Wily, L. A. (2021). Challenging the State : Devolutionary Tenure Transitions for Saving and Expanding Forests. *Human Ecology*, 285–295. <https://doi.org/10.1007/s10745-021-00231-2>
- Win, Z. C., Mizoue, N., Ota, T., Wang, G., Innes, J. L., Kajisa, T., & Yoshida, S. (2018). *Article Spatial and Temporal Patterns of Illegal Logging in Selectively Logged Production Forest : A Case Study in Yedashe , Myanmar*. 25, 15–25.
- Wolf, I. D., Sobhani, P., & Esmaeilzadeh, H. (2023). *Assessing Changes in Land Use / Land Cover and Ecological Risk to Conserve Protected Areas in Urban – Rural Contexts*.
- Zimmermann, M., Dressler, W., & Bibal, A. (2025). *Defending the Land : Filipina Activists amidst Authoritarian Rule in the Philippines*. 56(1), 137–171. <https://doi.org/10.1111/dech.12872>