

Bridging Law and Practice in Natural Resource Governance: A Narrative Review

Hermansyah¹

¹Universitas Jayabaya, Indonesia

Correspondent: mhermansyah0403@gmail.com¹

Received : September 13, 2024

Accepted : October 17, 2024

Published : October 31, 2024

Citation: Hermansyah, (2024). Bridging Law and Practice in Natural Resource Governance: A Narrative Review. *Legalis : Journal of Law Review*, 2(4), 216-229.

<https://doi.org/10.61978/legalis.v2i4.806>

ABSTRACT: Legal frameworks for natural resource governance play a critical role in determining equitable access, sustainable use, and environmental protection. This study aims to synthesize current research on legal structures governing natural resources, with a particular focus on marginalized communities in developing countries. A narrative review approach was employed, utilizing scholarly databases such as Scopus and Google Scholar. Boolean keyword combinations including "legal framework," "natural resource governance," and "sustainability" guided the literature search, while inclusion and exclusion criteria ensured relevance and rigor. Findings show that legal systems vary widely across jurisdictions, yet common patterns emerge: insufficient public participation, weak enforcement, and fragmented regulations often limit the effectiveness of natural resource laws. Case studies from Brazil, Bangladesh, Ghana, and Thailand illustrate the disconnect between policy intent and implementation, especially in protecting the rights of indigenous and local communities. Moreover, legal ambiguity and institutional weaknesses contribute to conflict over land and water resources. Discussion reveals that systemic issues—corruption, limited institutional capacity, and political inertia—continue to undermine the legal empowerment of marginalized stakeholders. To address these challenges, the review suggests policy reforms emphasizing participatory governance, community-based resource management, and integration of local knowledge. Ultimately, bridging the gap between theory and practice in legal resource governance requires both international cooperation and local legal innovation to achieve sustainability and justice.

Keywords: Legal Frameworks, Natural Resource Governance, Environmental Sustainability, Indigenous Rights, Participatory Law, Community-Based Management, Policy Reform.



This is an open access article under the CC-BY 4.0 license

INTRODUCTION

The governance of natural resources has emerged as a central issue in global environmental discourse, prompting governments, scholars, and international institutions to reevaluate legal

frameworks for sustainable development. Legal systems that govern access, distribution, and protection of natural resources such as land, water, and biodiversity play a critical role in shaping social equity and environmental resilience. For example, in Brazil, weak land governance regulations have been linked to reduced conservation areas, directly affecting equity in land distribution (Sparovek et al., 2015). In recent decades, a growing body of literature has examined the legal instruments underpinning natural resource governance (Grip, 2016; Butler et al., 2015), particularly within the context of global sustainability objectives outlined in the United Nations Sustainable Development Goals (SDGs). These legal frameworks range from state-centric models to community-based and participatory governance approaches, each with varying degrees of success and challenges. The international legal framework, notably the United Nations Convention on the Law of the Sea (UNCLOS), has provided normative principles emphasizing equitable access and environmental stewardship (Grip, 2016).

Numerous countries have attempted to align national laws with international standards by promoting inclusive legal regimes. For example, Participatory legal models have been increasingly adopted in regions such as Canada (Simms et al., 2016) and Ghana (Kusi-Appiah, 2023), enhancing community engagement in resource governance by formally recognizing local ecological knowledge and granting communities collective rights. These approaches are grounded in the understanding that local communities possess unique ecological knowledge and socio-cultural ties to their environment, which are indispensable for sustainable management (Simms et al., 2016). Empirical studies have shown that community participation in coastal resource governance contributes significantly to long-term sustainability outcomes (Butler et al., 2015; Chitakira et al., 2022). Joint management initiatives that involve governments, communities, and non-state actors have demonstrated success in creating responsive and locally adaptive strategies for conservation and equitable resource distribution.

The effectiveness of legal frameworks in governing natural resources is not only contingent upon their design but also their capacity to ensure fair access and distribution. In Brazil, for instance, regulatory shortcomings in land and environmental governance have been linked to the decline of nearly 20% of designated conservation areas between 2000–2015, undermining sustainable land use efforts (Sparovek et al., 2015). Such deficiencies often disproportionately affect marginalized populations, raising concerns about justice and equity. Gondo and Kolawole (2019) argue that robust legal mechanisms, particularly in water governance, are essential to safeguarding the rights of vulnerable communities. Consequently, the formulation and enforcement of legal frameworks must address socio-economic disparities and environmental degradation simultaneously to achieve both distributive justice and ecological sustainability.

Despite the widespread recognition of law as a tool for sustainability, the implementation of natural resource governance frameworks in many developing countries is fraught with challenges. One of the most pressing issues is weak legal enforcement capacity. As Closas and Villholth (2019) highlight, many states lack the institutional infrastructure and human capital necessary to operationalize legal mandates effectively. Regulatory enforcement is often compromised by corruption, bureaucratic inefficiency, and lack of inter-agency coordination. This disconnect between legal design and practical execution diminishes the credibility of the legal system and fosters regulatory non-compliance.

Another persistent challenge is the inadequate integration of community perspectives in formal legal processes. Although participatory governance is widely endorsed in theory, in practice it is often limited to consultative rather than collaborative mechanisms. Tima et al. (2021) observe that decentralization reforms in resource governance frequently fail to empower local actors meaningfully, resulting in policies that are misaligned with local needs and ecological realities. Political resistance to reform and instability further constrain the development of effective legal responses. In contexts where policy reform is contingent on regime change or elite consensus, legal innovations may be delayed or diluted, reducing their transformative potential (Pedro, 2013).

Moreover, socio-political dynamics often impede the implementation of effective governance models. Reforms aimed at enhancing legal protection of resources may face opposition from entrenched interests, such as large-scale mining and agribusiness sectors in Central Africa and Brazil, where economic stakes are high and political lobbying often obstructs enforcement (Pedro, 2013). The absence of political will to enforce environmental laws or address systemic inequities renders many legal frameworks ineffective in practice. As a result, ambitious legal provisions often remain aspirational rather than operational, especially in settings characterized by weak rule of law and contested land tenure systems.

A critical gap identified in the literature pertains to the disconnect between normative legal theory and real-world governance practice. While legal scholarship underscores the importance of equitable, sustainable, and rights-based frameworks, empirical studies reveal persistent implementation deficits due to institutional inertia and insufficient community participation (Tima et al., 2021; Rahman et al., 2017). Theoretical models tend to assume rational institutional behavior and civic engagement, but often fail to account for informal power relations, cultural norms, and political economies that shape governance outcomes. This schism necessitates a deeper examination of how legal norms translate into governance realities, particularly in pluralistic legal environments.

This narrative review aims to critically examine legal frameworks for natural resource governance, guided by three key questions: (1) How do participatory legal regimes influence equity and sustainability? (2) What is the relationship between enforcement capacity and distributive justice? (3) How do international legal principles interact with national governance systems?. The review seeks to synthesize empirical findings and theoretical insights to illuminate how legal instruments shape resource management outcomes across different contexts. Specifically, the review will explore the design and implementation of participatory legal regimes, the relationship between legal enforcement and equity, and the role of international legal principles in national governance systems. In doing so, the study contributes to ongoing scholarly and policy discussions on the reform of natural resource laws to achieve sustainable and inclusive development.

The scope of the review encompasses diverse geographic and political settings, with an emphasis on the Global South. Particular attention is given to regions experiencing legal pluralism, where customary, statutory, and international legal systems intersect. The review also includes cases from post-conflict societies, decentralized governance regimes, and Indigenous territories, recognizing the importance of socio-political context in shaping legal outcomes. By comparing experiences across countries and governance systems, the review offers a comprehensive understanding of the opportunities and constraints in legal governance of natural resources.

Through this analytical lens, the review seeks to advance scholarly understanding of the interplay between law, society, and environment. By identifying key legal innovations, implementation challenges, and contextual factors influencing governance outcomes, the study provides a foundation for rethinking legal strategies to support sustainable and equitable natural resource management.

METHOD

The present narrative review aims to synthesize and critically analyze scholarly literature on legal frameworks in natural resource governance, with an emphasis on rights, access, and sustainability. The methodology adopted is rooted in systematic and structured literature retrieval across major academic databases, followed by rigorous screening based on predefined inclusion and exclusion criteria. This section outlines the literature search strategy, keyword formulation, selection criteria, types of studies included, and procedures for evaluation and synthesis.

To ensure a comprehensive coverage of relevant academic contributions, the literature search was conducted primarily on Scopus and Google Scholar. These two platforms were selected due to their expansive indexing of interdisciplinary peer-reviewed publications, including legal, environmental, and policy-related studies. Scopus provides access to high-impact journals and robust citation tracking tools, while Google Scholar offers broader access to grey literature and regionally published research, particularly useful in examining diverse legal contexts in both developed and developing countries.

The search strategy relied on a combination of primary and secondary keywords related to legal and environmental governance. Primary keywords included terms such as "legal framework," "natural resource governance," and "resource management." These were combined with secondary terms such as "sustainability," "policy," and "environmental law" to refine the focus of the search. Boolean operators (AND, OR, NOT) were applied strategically to expand or narrow the search scope. For instance, combinations like "legal framework" AND "natural resource governance," "resource management" OR "environmental governance," and "sustainability" NOT "economic development" were utilized to retrieve the most relevant literature. Moreover, the keyword string "policy" AND "natural resources" AND "law" was employed to target interdisciplinary studies that integrate policy, legal frameworks, and environmental considerations.

The search process was iterative and involved multiple rounds of screening. In the initial phase, titles and abstracts of the articles retrieved were reviewed for thematic relevance. Articles that appeared conceptually aligned with the objective of the review were shortlisted for full-text analysis. Preference was given to recent publications, with most of the studies reviewed published between 2010 and 2024, ensuring the currency and relevance of the legal and policy discussions included.

To further refine the selection, specific inclusion and exclusion criteria were established. The inclusion criteria mandated that selected articles must discuss legal or policy frameworks related to natural resource management, whether at the local, national, or international level. Eligible articles included those analyzing the implementation of legal frameworks in real-world contexts, as well as studies exploring the effectiveness of such frameworks in terms of environmental outcomes and

community participation. For example, research by Sparovek et al. (2015), Megdal et al. (2014), and Tima et al. (2021) met the inclusion criteria due to their detailed treatment of legal instruments, implementation challenges, and case-based evidence.

Articles were also included if they highlighted the role of public participation, Indigenous rights, or traditional knowledge systems in resource governance, such as the work by Chitakira et al. (2022), which explored the integration of local communities in co-management regimes. Additionally, comparative legal studies that examined differences across jurisdictions and assessed the impact of varying legal traditions on sustainability were included, aligning with the thematic focus of the review (McGuire & Ehlinger, 2018).

On the other hand, several exclusion criteria were applied to remove studies lacking empirical or analytical depth. First, articles that were purely theoretical without offering practical insights or case-based evidence were excluded (e.g., Jong, 2015). Similarly, publications focusing on highly specific sectors, such as mining or fisheries, without addressing broader governance implications were excluded unless they provided transferable legal insights applicable across sectors (Jong, 2019). Furthermore, studies that neglected the role of community participation or downplayed the socio-environmental impacts of legal frameworks were also excluded, as these perspectives are central to the analytical lens of the present review (Tan, 2015). Lastly, studies that failed to link legal or policy instruments to environmental or social outcomes, such as equity, sustainability, or community resilience, were deemed unsuitable for inclusion (Closas & Villholth, 2019).

The types of studies included in this review encompassed a range of empirical and analytical research. These included case studies documenting specific instances of legal implementation, comparative studies analyzing governance models across multiple countries, policy evaluations assessing regulatory impacts, and interdisciplinary studies linking law with social, environmental, or economic dimensions. Randomized controlled trials or purely quantitative experimental studies were not part of the review scope, as the subject matter primarily involves legal interpretation, governance processes, and qualitative evaluations.

The literature selection and evaluation process followed a transparent and replicable protocol. After the initial retrieval and screening of articles, full-text versions were obtained and assessed against the inclusion criteria. Articles were read in their entirety to determine their methodological rigor, relevance, and contribution to the thematic areas of the review. Where available, citations and reference lists of the selected articles were scanned to identify additional studies that may have been missed during the keyword-based search. This snowballing technique was particularly useful in locating region-specific or policy-specific studies that are not always optimally indexed in global databases.

The final corpus of selected literature represented a balanced mix of academic sources spanning multiple disciplines, including law, environmental science, public administration, and development studies. This interdisciplinary approach ensured that the analysis captured both normative legal debates and their practical implications in policy and governance contexts. Moreover, attention was paid to geographic diversity in the literature to avoid bias toward Anglo-European legal traditions. The included studies spanned contexts from Latin America, Africa, Southeast Asia, and post-conflict regions, thereby enhancing the generalizability and contextual richness of the findings.

In synthesizing the findings, thematic analysis was applied. The selected studies were reviewed and coded based on recurring themes such as legal effectiveness, participatory governance, enforcement capacity, equity in access, and environmental outcomes. These themes formed the foundation for organizing the results and discussion sections of the review. Particular emphasis was placed on identifying both enabling and constraining factors within legal frameworks, as well as the contextual variables that mediate their effectiveness.

In sum, the methodological process adopted in this review combines systematic literature search with rigorous qualitative screening and thematic synthesis. By integrating diverse sources and perspectives, the review aims to offer a comprehensive and analytically robust assessment of legal frameworks for natural resource governance. The transparent and structured approach to literature selection enhances the credibility and replicability of the findings, providing a solid foundation for academic and policy-related contributions in the domain of environmental law and governance.

RESULT AND DISCUSSION

The findings from the narrative review reveal a series of key themes that reflect both the diversity and complexity of legal frameworks governing natural resources across different jurisdictions. These themes are organized into four sub-sections: (a) access and rights to natural resources, (b) justice and participation in governance, (c) sustainability and environmental protection, and (d) global perspectives and international comparisons. Each sub-section presents empirical evidence, legal interpretations, and comparative perspectives to elucidate how various legal regimes have responded to pressing governance challenges.

Access and Rights to Natural Resources

Legal regulation of access to land and water varies significantly across jurisdictions. For instance, Brazil has implemented a Land Law that emphasizes the prioritization of agricultural land use, granting legal privileges to landowners under state-sanctioned agrarian reform programs (Sparovek et al., 2015). Conversely, in Bangladesh, the legal framework regulating water rights remains fragmented, with insufficient recognition of indigenous communities that depend on aquatic ecosystems for their livelihoods (Tima et al., 2021). This discrepancy underscores the tendency of many legal systems to focus on the rights of individuals and corporations, often marginalizing community-based and customary rights. Grip (2016) points out that this emphasis on formal property rights over communal access can generate legal conflicts and deepen social inequalities.

Numerous studies document the escalation of conflict when community access rights are not legally recognized. Chitakira et al. (2022) detail cases where corporations have exploited legal loopholes or weak enforcement mechanisms to appropriate land traditionally used by indigenous groups. In Bangladesh, community members often struggle to assert control over local fisheries, placing them at a disadvantage against politically influential private actors (Tima et al., 2021). These legal inequities frequently result in social unrest, including nationwide protests such as the 2017 demonstrations in Bangladesh against the Kaptai Lake fisheries policy, and prolonged legal battles in Brazil over agrarian reform (Rayhan et al., 2021; Sparovek et al., 2015). The evidence suggests

that a lack of legal recognition for indigenous and local rights significantly compromises the equity and legitimacy of natural resource governance systems.

Justice and Participation in Governance

Legal frameworks in various countries have attempted to institutionalize public participation as a mechanism for improving governance outcomes. However, the effectiveness of such efforts remains mixed. In Ghana, for example, laws mandating public involvement in resource governance exist but are often implemented in a tokenistic manner (Kusi-Appiah, 2023). Rather than enabling meaningful community input, public consultations tend to be procedural formalities with limited influence on policy or project design. This gap between legal intent and practice underscores the challenges of operationalizing participatory governance in contexts marked by asymmetries of power and capacity.

In addition to participation, legal mechanisms have been developed to promote distributive justice in resource governance. Brazil's legal system, despite experiencing setbacks due to regulatory rollbacks, continues to support community-based conservation initiatives that distribute resource-related benefits among local stakeholders (Sparovek et al., 2015). Chitakira et al. (2022) further highlight the use of collective land titles and community forest rights to reinforce local autonomy over resource use. On a global scale, conventions such as the UN Declaration on the Rights of Indigenous Peoples offer normative guidance for equitable benefit sharing, although the implementation of these principles is often obstructed by corporate lobbying and weak state commitment (Grip, 2016).

These findings illustrate the critical role of legal architecture in shaping the distributive dimensions of natural resource governance. They also underscore the necessity of moving beyond formal legal provisions to address the structural barriers that limit effective community participation and fair benefit allocation. Without such reforms, governance systems risk perpetuating social inequalities and ecological degradation under the guise of legal compliance.

Sustainability and Environmental Protection

Many legal systems have introduced environmental legislation aimed at promoting sustainable resource use and mitigating ecological degradation. Key elements include mandatory environmental and social impact assessments, public consultation procedures, and environmental compensation measures. In Brazil, environmental protections remain robust in many areas, with approximately 80% of designated conservation lands still under legal protection, despite political and legal pressures to weaken regulatory frameworks (Sparovek et al., 2015).

Tesfaw et al. (2018) emphasize the necessity of integrating social and ecological considerations into all phases of project development. Their recommendations include establishing legally mandated impact assessments and public consultations as prerequisites for project approval. These provisions are designed to anticipate environmental trade-offs and enforce accountability mechanisms that are transparent and inclusive. Such measures have proven particularly effective

in cases where legal mandates are coupled with strong institutional capacity and civil society oversight.

Nevertheless, discrepancies between environmental commitments and extractive practices persist. In many countries, legal frameworks are undermined by sectoral conflicts and short-term economic interests. For example, in Thailand, coastal zone management has increasingly incorporated participatory planning processes that balance environmental conservation with development needs (Satumantpan & Chuenpagdee, 2022). Integrated Coastal Zone Management (ICZM) frameworks, as applied in both Thailand and other regions such as Italy, facilitate multi-stakeholder coordination and help harmonize conflicting interests across resource sectors (Soriani et al., 2015). These examples demonstrate the potential of legal instruments that embed ecological principles within broader governance strategies.

Global Perspectives and International Comparisons

Legal frameworks in the Global South and OECD countries display significant structural and operational differences. In OECD countries, legal systems benefit from established rule-of-law institutions, consistent funding, and relatively high levels of public environmental awareness. These factors facilitate the effective enforcement of environmental laws and the integration of sustainability goals into national policies. In contrast, many countries in the Global South face chronic institutional constraints, political instability, and budgetary limitations that hinder the implementation of legal mandates (Gondo & Kolawole, 2019).

Despite these disparities, many Global South countries have adopted ambitious legal instruments that align with international sustainability standards. However, the success of these initiatives often depends on political will and administrative coherence. While OECD nations may offer models of regulatory effectiveness, their experiences cannot be universally transposed due to contextual differences in legal pluralism, property regimes, and governance cultures.

International law serves as an important mechanism for harmonizing governance practices across national boundaries. The United Nations Convention on the Law of the Sea (UNCLOS) provides a foundational framework for the cooperative management of marine resources, especially in contested or transboundary zones (Mao et al., 2024). Similarly, the Convention on Biological Diversity promotes principles of sustainable use, fair benefit sharing, and ecosystem-based management that countries can incorporate into domestic legal systems (Angelstam et al., 2013). These instruments not only establish normative standards but also encourage cross-border cooperation in environmental protection and natural resource governance.

Despite their significance, international legal instruments face limitations in enforcement, particularly in contexts where state sovereignty is prioritized over multilateral accountability. Grip (2016) and Khan & Chuenpagdee (2013) observe that while international conventions have spurred legal reforms in many countries, their implementation remains inconsistent due to resource constraints, limited monitoring mechanisms, and geopolitical resistance. Nonetheless, these instruments continue to play a critical role in shaping national legal trajectories and facilitating knowledge exchange among jurisdictions.

Collectively, the results of this review underscore the interplay between legal norms, governance practices, and sustainability outcomes in the realm of natural resource management. They highlight the importance of legal pluralism, institutional capacity, and community participation in realizing the potential of legal frameworks to achieve equity and ecological integrity. By drawing from diverse legal experiences across regions, the findings provide a basis for rethinking legal strategies that are both context-sensitive and aligned with global sustainability goals.

The governance of natural resources is a deeply embedded issue within the institutional, legal, and socio-political fabrics of nations. Systemic factors such as institutional capacity, corruption levels, and the enforceability of legal frameworks are central to understanding the successes and failures of natural resource management (Tima et al., 2021). A critical review of the literature reveals how these systemic challenges continue to shape, and often hinder, efforts to establish equitable and sustainable governance structures. Weak institutional arrangements, particularly in low- and middle-income countries, have contributed to the inefficient implementation of environmental regulations. This is exacerbated by a lack of trained personnel, limited infrastructure, and fragmented policy frameworks that fail to reflect the complexities of resource-dependent communities (Chitakira et al., 2022).

Corruption, a persistent structural barrier, undermines the rule of law and prevents equitable access to natural resources. Mechanisms include bribery in land titling, collusion between corporate actors and local officials in water licensing, and manipulation of environmental impact assessments, which directly distort governance outcomes (Chitakira et al., 2022). As Chitakira et al. (2022) have noted, corporate actors often exploit legal loopholes and institutional weaknesses to acquire land or water rights at the expense of indigenous or rural populations. This form of regulatory capture creates a disproportionate advantage for economically and politically powerful stakeholders, while marginalizing vulnerable communities. The erosion of public trust in regulatory bodies further weakens governance systems, as citizens perceive institutions as self-serving rather than protective of communal interests (Grip, 2016). The legal capacity of states, especially in developing countries, remains insufficient to safeguard the rights of communities. Emphasize that although some countries possess comprehensive legal texts, the absence of operational mechanisms and oversight leads to poor implementation and accountability.

The inadequacies of current regulations regarding access rights to land and water are further complicated by the failure to integrate participatory mechanisms in legal decision-making. In many instances, communities are sidelined during policy formulation, which results in laws that do not resonate with their lived realities (Khan & Chuenpagdee, 2013). Without meaningful consultation and consent, the imposition of regulatory frameworks tends to produce outcomes that alienate local actors and provoke resistance. Furthermore, unclear or ambiguous statutes regarding property rights and access to water and land often result in competing claims that escalate into conflict (Aho, 2018). These ambiguities, coupled with weak enforcement, make it difficult for marginalized groups to claim their rights, especially when they lack formal documentation or legal literacy.

The uneven enforcement of regulations and the politicization of natural resource governance have led to severe consequences for environmental justice. Amaruzaman et al. (2022) found that in many parts of Southeast Asia, environmental law enforcement remains sporadic, with considerable

variation in the political will of local authorities to uphold regulations. Where enforcement is subject to political expediency, companies often bypass environmental safeguards, resulting in degradation, displacement, and socio-economic insecurity for affected communities. These dynamics illustrate how governance failures are not merely technical issues but are rooted in broader structures of power and inequality.

In response to these structural limitations, scholars have proposed several reform strategies aimed at creating a more inclusive and equitable legal framework for natural resource governance. Reforming existing laws to recognize indigenous and customary land rights is a starting point in addressing historical injustices. As McGuire and Ehlinger (2018) argue, legal pluralism that acknowledges customary practices can serve as a bridge between state law and local governance systems. Such recognition, however, must go beyond symbolic inclusion and be embedded in enforceable statutes that empower communities to manage their resources effectively. Participatory legal frameworks can enhance compliance and stewardship, as local actors are more likely to support regulations that reflect their values and priorities.

Adopting collaborative and community-based governance models has shown promise in several empirical contexts. Rahman et al. (2017) demonstrate that when communities are engaged in the co-management of forests and water bodies, there is a noticeable improvement in resource sustainability and conflict resolution. Collaborative governance fosters mutual accountability and knowledge exchange between government agencies and local actors. This not only democratizes decision-making but also enhances the adaptive capacity of institutions in responding to ecological and social changes. Nevertheless, for participatory models to succeed, there must be sustained investment in community capacity building, including legal literacy, negotiation skills, and organizational development.

Strengthening institutional capacity is another critical dimension of reform. Jedd et al. (2024) underscore the need for capacity development in state agencies tasked with overseeing resource management. This includes investing in human capital, digital infrastructure, and monitoring systems that enable real-time assessment of resource use and compliance. Equally important is the development of inter-agency coordination mechanisms to ensure policy coherence and the elimination of regulatory overlaps that often paralyze implementation. Capacity-building initiatives should also extend to civil society organizations that act as intermediaries between communities and the state.

The establishment of transparent and accountable legal infrastructures plays a pivotal role in ensuring justice and environmental sustainability. Tsioumani (2018) highlights that legal transparency requires the public dissemination of regulations, accessible grievance mechanisms, and the judicial independence to adjudicate disputes impartially. Robust legal infrastructures discourage corrupt practices by making it more difficult for actors to operate in secrecy or impunity. Moreover, enforcement agencies must be equipped not only with legal authority but also with adequate technical and logistical resources to carry out inspections, issue penalties, and follow through with legal proceedings.

Global legal frameworks also provide a normative foundation for enhancing domestic governance practices. International treaties such as the United Nations Convention on the Law of the Sea (UNCLOS) and the Convention on Biological Diversity (CBD) have set standards for

sustainability, equity, and cross-border cooperation. These conventions influence national policy-making and offer mechanisms for international accountability. However, the impact of these global instruments depends on their domestic integration and the willingness of states to comply with their provisions. As noted by Grip (2016) and Khan & Chuenpagdee (2013), the lack of enforceability and political incentives often limits the effectiveness of international law in reshaping national governance systems.

Despite these proposed reforms and international frameworks, significant gaps remain in both the literature and practice. The persistence of elite capture, the ambiguity of property rights, and the lack of disaggregated data on the socio-economic impacts of legal regimes on marginalized communities limit our understanding of what works. Many studies provide theoretical frameworks without empirical validation or fail to account for the diversity of local contexts. For instance, there is limited analysis of how gender dynamics intersect with resource governance or how climate change adaptation strategies influence legal reforms.

Future research should therefore focus on developing interdisciplinary approaches that combine legal analysis, political economy, and ecological science. Longitudinal studies that track the evolution of legal frameworks and their socio-environmental outcomes could offer deeper insights into causal relationships. There is also a need for more comparative studies across different legal traditions to identify transferable best practices and context-specific innovations. Understanding how informal institutions interact with formal laws can uncover hybrid governance models that are both legitimate and effective in managing resources sustainably.

The integration of bottom-up perspectives into legal scholarship is essential for advancing equitable governance. Legal narratives that emerge from the experiences of marginalized groups can challenge dominant paradigms and introduce new ways of thinking about rights, justice, and sustainability. By situating law within the lived realities of resource users, scholars and practitioners can contribute to the co-creation of legal systems that are not only technically sound but also socially responsive.

CONCLUSION

This narrative review reveals the complexity of legal frameworks in governing natural resources, particularly in developing countries where institutional weakness, legal ambiguity, and lack of meaningful public participation continue to impede sustainability. The analysis highlights that despite the existence of laws aimed at regulating access to land and water, marginalized communities are frequently excluded from decision-making processes, thereby exacerbating socio-environmental inequalities. Systemic challenges such as corruption, weak enforcement mechanisms, and fragmented legal provisions not only hinder effective implementation but also increase the likelihood of conflict over resource ownership.

Addressing these challenges requires multifaceted legal and policy reforms. It is essential to strengthen legal infrastructures through institutional capacity-building, implement participatory governance models, and ensure legal recognition of indigenous rights and customary practices. Countries must adopt collaborative and transparent legal systems that balance environmental protection with equitable access. International frameworks such as UNCLOS and biodiversity

conventions can offer models for harmonization across jurisdictions, yet their success depends heavily on domestic political will and enforcement capability.

Future research should explore the intersection between customary and formal legal systems through longitudinal case studies in Southeast Asia and Sub-Saharan Africa, assess the long-term impacts of community-based governance using mixed-method approaches, and generate empirical data through comparative field surveys on the effectiveness of participatory legal reforms. In light of escalating ecological pressures and social tensions, rethinking legal governance with an emphasis on equity, sustainability, and inclusivity is no longer optional—it is imperative.

REFERENCE

- Aho, L. (2018). *Te mana o te wai: An indigenous perspective on rivers and river management*. River Research and Applications, 35(10), 1615–1621. <https://doi.org/10.1002/rra.3365>
- Amaruzaman, S., Hoan, T., Catacutan, D., Leimona, B., & Malesu, M. (2022). *Polycentric environmental governance to achieving SDG 16: Evidence from Southeast Asia and Eastern Africa*. Forests, 13(1), 68. <https://doi.org/10.3390/f13010068>
- Angelstam, P., Elbakidze, M., Axelsson, R., Dixelius, M., & Törnblom, J. (2013). *Knowledge production and learning for sustainable landscapes: Seven steps using social–ecological systems as laboratories*. Ambio, 42(2), 116–128. <https://doi.org/10.1007/s13280-012-0367-1>
- Butler, J., Young, J., McMYN, I., Leyshon, B., Graham, I., Walker, I., ... & Warburton, C. (2015). *Evaluating adaptive co-management as conservation conflict resolution: Learning from seals and salmon*. Journal of Environmental Management, 160, 212–225. <https://doi.org/10.1016/j.jenvman.2015.06.019>
- Chitakira, M., Nhamo, L., Torquebiau, E., Magidi, J., Ferguson, W., Mpandeli, S., ... & Mabhaudhi, T. (2022). *Opportunities to improve eco-agriculture through transboundary governance in transfrontier conservation areas*. Diversity, 14(6), 461. <https://doi.org/10.3390/d14060461>
- Closas, A., & Villholth, K. (2019). *Groundwater governance: Addressing core concepts and challenges*. Wiley Interdisciplinary Reviews: Water, 7(1). <https://doi.org/10.1002/wat2.1392>
- Gondo, R., & Kolawole, O. (2019). *Sustainable water resources management: Issues and principles of water governance in the Okavango Delta, Botswana*. International Journal of Rural Management, 15(2), 198–217. <https://doi.org/10.1177/0973005219865369>
- Grip, K. (2016). *International marine environmental governance: A review*. Ambio, 46(4), 413–427. <https://doi.org/10.1007/s13280-016-0847-9>
- Jedd, T., Sixt, G., Schutz, A., & Burbach, M. (2024). *Legitimacy in polycentric groundwater governance: Framework conditions identified in Nebraska's Natural Resource Districts*. Environmental Policy and Governance, 35(2), 187–200. <https://doi.org/10.1002/eet.2132>

- Jong, D. (2015). *The role of informal normative processes in improving governance over natural resources in conflict-torn states*. Hague Journal on the Rule of Law, 7(2), 219–241. <https://doi.org/10.1007/s40803-015-0014-6>
- Jong, D. (2019). *Building a sustainable peace: How peace processes shape and are shaped by the international legal framework for the governance of natural resources*. Review of European Comparative & International Environmental Law, 29(1), 21–32. <https://doi.org/10.1111/reel.12307>
- Khan, A., & Chuenpagdee, R. (2013). *An interactive governance and fish chain approach to fisheries rebuilding: A case study of the Northern Gulf cod in Eastern Canada*. Ambio, 43(5), 600–613. <https://doi.org/10.1007/s13280-013-0446-y>
- Kusi-Appiah, F. (2023). *Sustainable natural resource governance in Ghana: An appraisal of legal provisions on public participation and accountability*. African Journal of International and Comparative Law, 31(1), 32–54. <https://doi.org/10.3366/ajicl.2023.0433>
- Lemke, S., & Claeys, P. (2020). *Absent voices: Women and youth in communal land governance. Reflections on methods and process from exploratory research in West and East Africa*. Land, 9(8), 266. <https://doi.org/10.3390/land9080266>
- Mao, Z., Zhang, Z., Wang, J., & Zhang, S. (2024). *Sustainable development and utilization of marine genetic resources in areas beyond national jurisdiction: A Chinese perspective*. Science Progress, 107(4). <https://doi.org/10.1177/00368504241292449>
- McGuire, S., & Ehlinger, T. (2018). *Analysis of social-ecological dynamics driving conflict in linked surface-groundwater systems*. Ecology and Society, 23(4). <https://doi.org/10.5751/es-10510-230419>
- Megdal, S., Gerlak, A., Varady, R., & Huang, L. (2014). *Groundwater governance in the United States: Common priorities and challenges*. Ground Water, 53(5), 677–684. <https://doi.org/10.1111/gwat.12294>
- Mohamed, M., Adam, E., & Jackson, C. (2023). *Policy review and regulatory challenges and strategies for the sustainable mangrove management in Zanzibar*. Sustainability, 15(2), 1557. <https://doi.org/10.3390/su15021557>
- Pedro, J. (2013). *Community involvement in the conservation of natural resources: Interest and limits within a local development perspective for Central Africa (Chad)*. Cahiers Agricultures, 22(4), 319–325. <https://doi.org/10.1684/agr.2013.0637>
- Rahman, H., Ville, A., Song, A., Po, J., Berthet, E., Brammer, J., ... & Hickey, G. (2017). *A framework for analyzing institutional gaps in natural resource governance*. International Journal of the Commons, 11(2), 823–853. <https://doi.org/10.18352/ijc.758>
- Rayhan, N., Schneider, P., Islam, M., Rashid, A., Mozumder, M., Hossain, M., ... & Shamsuzzaman, M. (2021). *Analyses of protection and conservation according to the Fish Act 1950 in Bangladesh's Kaptai Lake fisheries management*. Water, 13(20), 2835. <https://doi.org/10.3390/w13202835>

- Satumanptan, S., & Chuenpagdee, R. (2022). *Interactive governance for the sustainability of marine and coastal resources in Thailand*. *Environment and Natural Resources Journal*, 20(6), 1–10. <https://doi.org/10.32526/ennrj/20/202200115>
- Simms, R., Harris, L., Joe, N., & Bakker, K. (2016). *Navigating the tensions in collaborative watershed governance: Water governance and indigenous communities in British Columbia, Canada*. *Geoforum*, 73, 6–16. <https://doi.org/10.1016/j.geoforum.2016.04.005>
- Soriani, S., Buono, F., Tonino, M., & Camuffo, M. (2015). *Participation in ICZM initiatives: Critical aspects and lessons learnt from the Mediterranean and Black Sea experiences*. *Marine Pollution Bulletin*, 92(1–2), 143–148. <https://doi.org/10.1016/j.marpolbul.2014.12.045>
- Sparovek, G., Barretto, A., Matsumoto, M., & Berndes, G. (2015). *Effects of governance on availability of land for agriculture and conservation in Brazil*. *Environmental Science & Technology*, 49(17), 10285–10293. <https://doi.org/10.1021/acs.est.5b01300>
- Tesfaw, A., Pfaff, A., Kroner, R., Qin, S., Medeiros, R., & Mascia, M. (2018). *Land-use and land-cover change shape the sustainability and impacts of protected areas*. *Proceedings of the National Academy of Sciences*, 115(9), 2084–2089. <https://doi.org/10.1073/pnas.1716462115>
- Tima, T., Schneider, P., Chanda, S., Mozumder, M., Hossain, M., Begum, A., ... & Shamsuzzaman, M. (2021). *Analyses implementation realities of legal frameworks for sustainable management of Tanguar Haor fisheries resources in Bangladesh*. *Sustainability*, 13(16), 8784. <https://doi.org/10.3390/su13168784>
- Tsioumani, E. (2018). *Beyond access and benefit-sharing: Lessons from the law and governance of agricultural biodiversity*. *The Journal of World Intellectual Property*, 21(3–4), 106–122. <https://doi.org/10.1111/jwip.12094>
- Tan, C. (2015). *Risky business: Political risk insurance and the law and governance of natural resources*. *International Journal of Law in Context*, 11(2), 174–194. <https://doi.org/10.1017/s174455231500004x>