

International Environmental Law and Abandoned Land Frameworks Challenges and Policy Directions

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Abstract

Abandoned land presents complex challenges for environmental protection, sustainable development, and governance, intersecting with international environmental law. While states maintain sovereignty over land, international obligations on prevention, restoration, and sustainable use require coherent legal frameworks and proactive policies. This study examines normative foundations, operational challenges, and comparative practices for managing abandoned land, highlighting the role of the Public Trust Doctrine, international agreements, and domestic legal reforms. Policy recommendations emphasize integrated governance, financial and technical support, and participatory mechanisms to transform abandoned land into ecological and social assets, promoting sustainability and intergenerational equity.

Keywords: Abandoned Land; International Environmental Law; Public Trust Doctrine

1. Introduction

Abandoned land presents a complex challenge at the intersection of environmental protection, land governance, and international law. Although the regulation of land use traditionally falls within domestic jurisdiction, the environmental consequences associated with abandoned land—such as habitat degradation, soil erosion, and reduced ecosystem services—carry implications that resonate within the broader framework of international environmental law (Birnie, Boyle and Redgwell, 2009). As such, abandoned land is no longer merely a question of national land administration but is intertwined with global environmental responsibilities and sustainable development commitments.

In international legal doctrine, states retain permanent sovereignty over natural resources, including authority over land management. However, contemporary international environmental norms acknowledge that this sovereignty is limited by corresponding duties to prevent transboundary environmental harm, to sustainably manage ecosystems, and to protect the environment for present and future generations (Sands and Peel, 2018). This creates a normative tension: while land may lie abandoned under domestic law, the state may nonetheless bear international obligations to ensure that such land does not contribute to ecological degradation or undermine global environmental goals.

A useful analytical framework arises from the public trust doctrine, which has increasingly influenced both domestic and international environmental jurisprudence. Traditionally, the doctrine requires that certain resources be held by the state in trust for public benefit. Modern scholarship argues that an internationalized version of this doctrine may serve as a foundation for shared obligations regarding environmental protection, especially in the context of climate change, biodiversity, and sustainable land governance (Blumm and Wood, 2017). Within this framework, abandoned land can be conceptualized not merely as idle property but as a trust asset that must be managed in a manner consistent with environmental stewardship and intergenerational equity (Kotzé, 2019).

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From a policy perspective, abandoned land also interacts with international land governance and socio-environmental justice considerations. Idle or underutilized land undermines sustainable development objectives by limiting ecological restoration, restricting community access to land-based resources, and hindering equitable economic growth (Deininger and Feder, 2009). International institutions, including multilateral environmental agreements and global conservation frameworks, increasingly highlight the need for integrated governance approaches that connect land use, environmental conservation, and human rights (FAO, 2012).

However, despite its relevance, the governance of abandoned land within international law remains fragmented. First, there is a conceptual gap: international environmental law does not explicitly regulate abandoned land, leading to fragmented and reactive national approaches (French, 2020). Second, there is a policy gap, as international instruments typically address pollution, biodiversity, or climate change but rarely outline standards for identifying, restoring, or reassigning abandoned land. Third, states face political and economic constraints, including unclear land tenure, high restoration costs, and competing development priorities (Zoomers, 2010).

Given these challenges, there is an urgent need for a coherent set of policy directions that align abandoned land governance with established principles of international environmental law such as sustainable development, precaution, and intergenerational justice (Voigt, 2019). Strengthening global cooperation, integrating ecological restoration into land-use planning, and developing shared legal frameworks may help bridge current gaps and establish a more effective system for managing abandoned land in line with international environmental commitments.

2. Research Method

This study uses a doctrinal legal research method that focuses on analyzing the principles and norms of international environmental law as they relate to the governance of abandoned land. The research relies on primary legal sources, including international treaties, customary international law, and general principles, to understand the legal obligations of states.

It also examines secondary sources such as scholarly articles, legal commentaries, and policy reports to interpret and contextualize the legal framework. A comparative approach is employed to identify best practices from different jurisdictions and international bodies. The analysis is supported by qualitative content review, enabling the study to identify legal gaps and propose policy recommendations aligned with sustainable development and environmental protection.

3. Discussion

Abandoned land, defined as parcels left unused or unmanaged for extended periods, presents complex challenges for environmental protection, sustainable development, and governance. While land abandonment may initially appear as a local or domestic matter, its environmental consequences extend to international concerns, including soil degradation, biodiversity loss, desertification, and contributions to climate change impacts. Such effects often transcend national borders, necessitating coherent legal frameworks and policy instruments under international environmental law. The legal tension arises from the principle of permanent sovereignty over natural resources, which grants states exclusive control over land and resources within their territory while simultaneously imposing duties to prevent environmental harm and cooperate internationally on transboundary environmental matters. This duality underscores the importance of integrating international obligations into domestic governance frameworks for abandoned land (Sands and Peel, 2018).

Modern legal instruments such as the Convention on Biological Diversity (CBD), the United Nations Convention to Combat Desertification (UNCCD), and provisions under the UNFCCC provide normative guidance on sustainable land use, ecosystem restoration, and environmental protection, yet they do not explicitly address abandoned land. Nevertheless, their principles are relevant, obliging states to prevent land degradation, maintain biodiversity, and restore ecosystems. The principle of prevention in particular obliges states to act proactively, ensuring that neglected land does not become a source of environmental harm. Consequently, abandoned land represents a governance gap where international norms intersect with domestic law, highlighting the need for frameworks that reconcile sovereignty with environmental responsibilities (Voigt, 2019).

The Public Trust Doctrine (PTD) offers a conceptual bridge between domestic land governance and global environmental stewardship. Historically a common law principle requiring states to hold certain natural resources in trust for public benefit, PTD has been proposed in scholarship as a foundation for international environmental

responsibility. Applied to abandoned land, PTD reframes idle parcels not merely as abandoned private property but as assets with ecological and social significance. States, therefore, have a trustee obligation to manage such lands for biodiversity conservation, climate mitigation, and sustainable resource use. Courts and scholars increasingly invoke PTD to expand environmental protection mandates, demonstrating its potential as a normative tool in international law. Operationalizing PTD internationally would involve establishing norms requiring states to inventory, monitor, and rehabilitate abandoned lands of ecological significance, thereby reinforcing intergenerational equity (Orangias, 2021).

While multilateral environmental agreements (MEAs) such as the CBD and UNCCD provide foundational principles relevant to abandoned land, they remain indirect instruments. Their scope primarily targets biodiversity, desertification, or climate change, leaving abandoned land without specific regulation. Domestic implementation varies, producing fragmented approaches and governance gaps. Soft-law instruments, technical guidance, and reports from organizations like FAO, UN-Habitat, and IUCN offer practical frameworks for planning, restoration, and financing, though they are non-binding. These instruments influence domestic policy through incentives, technical advice, and international funding programs, helping operationalize international obligations without requiring treaty amendments (FAO, 2012).

Legal and operational challenges are manifold. Conceptual ambiguity remains a major obstacle: definitions of abandoned land differ between jurisdictions and sectors, ranging from duration of non-use to intent to abandon or environmental risk thresholds. Such definitional discrepancies complicate comparative analysis and obstruct harmonization efforts. Tenure and property complexities further hinder effective governance. Conflicts among private ownership, customary rights, concessions, and state claims can delay or prevent reclamation, particularly in cross-border or corporate ownership contexts. Restoration also requires substantial financial and technical resources, including soil remediation, reforestation, and infrastructure, which many states cannot provide independently. International financing mechanisms exist but often prioritize broader climate or biodiversity projects rather than specific abandoned-land initiatives (Xia, 2024).

Governance fragmentation adds another layer of difficulty. Responsibility for abandoned land is often divided across multiple ministries — environment, land affairs, planning, finance — while no international agency coordinates abandoned-land governance. Comparative experiences from the EU, Indonesia, and select Asian nations indicate that institutional mechanisms like land banks can enhance coordination and implementation. Policy interventions must also account for social equity: reassignment or restoration of abandoned lands may disadvantage customary users or marginalized communities if participation and rights safeguards are insufficient. Principles such as free, prior, and informed consent (FPIC), human rights norms, and transparent governance mechanisms are critical to prevent elite capture and ensure equitable outcomes (Subekti, 2023).

Comparative practices provide instructive insights. Land banks in Indonesia, the EU, and U.S. states acquire, manage, and repurpose abandoned properties for ecological, social, or economic purposes. Industrial and mining reclamation regimes demonstrate how liability rules, remediation bonds, and technical standards can enforce compliance and ensure effective restoration. Agricultural land abandonment in the EU highlights the efficacy of incentive-based mechanisms, such as agri-environment schemes, rewilding programs, and rural development funds, demonstrating how supranational coordination and policy instruments can influence national land outcomes (JRC, 2018).

From a policy perspective, several directions emerge. First, an international definition and typology of abandoned land — distinguishing agricultural, industrial, urban, and marginal lands — would enable standardized inventories and targeted interventions. Second, MEAs and international frameworks should integrate abandoned-land restoration into national commitments under biodiversity, climate, and land-degradation targets, unlocking access to international finance and technical support. Third, domestic legal reforms should establish transparent designation procedures, rights-respecting mechanisms for reallocation, liability and financial assurance rules, and participatory governance procedures aligned with international principles. Fourth, operationalizing PTD in practice could include procedural obligations for trusteeship assessments, substantive duties to restore ecologically significant land, and remedial powers to repurpose land for public benefit. Fifth, mobilizing finance and technical assistance through international organizations and development banks ensures implementation feasibility. Sixth, all interventions must safeguard human rights, community participation, and FPIC standards, preventing inequitable outcomes (LoPreiato, 2024).

Institutional mechanisms can enhance implementation. National land banks linked to international funding channels provide a practical model, consolidating fragmented parcels, financing restoration, and ensuring alignment with international environmental objectives. Cross-border technical hubs and knowledge platforms can disseminate best practices, protocols, and policy templates. Clear liability regimes and rehabilitation bonds further strengthen enforcement mechanisms, ensuring that restoration obligations are met and financial risks are mitigated. Anticipated

objections, including sovereignty concerns, financial feasibility, and risk of elite capture, can be mitigated through cooperative, rights-respecting, and incentive-driven approaches. Emphasizing soft-law instruments, technical assistance, and international support ensures that state sovereignty is respected while aligning domestic actions with global environmental norms (Sands and Peel, 2018).

In conclusion, abandoned land occupies a doctrinal and operational crossroads: nominally under state sovereignty yet functionally implicated in international environmental law. Current MEAs and soft-law guidance provide normative foundations but lack a coherent framework for abandoned-land governance. Addressing this lacuna requires: the development of international definitions and typologies; integration of abandoned land into MEA targets and national environmental commitments; domestic legal reforms operationalizing designation, remediation, and reallocation; mobilization of international finance and technical capacity; operationalization of public trust principles; and robust participation and rights safeguards. Together, these measures can transform abandoned land from a liability into an ecological and social asset, fulfilling both domestic and international obligations while promoting sustainable development and intergenerational equity (FAO, 2022).

4. Conclusion

Abandoned land poses significant environmental, social, and governance challenges that intersect with international environmental law. While states retain sovereignty over land, international obligations on prevention, restoration, and sustainable use require proactive legal and policy interventions. Integrating principles such as the Public Trust Doctrine, adopting clear definitions and typologies, mobilizing finance and technical support, and ensuring rights-based participatory governance are essential to transform abandoned land from a liability into an ecological and social asset. Coherent domestic and international frameworks can align land management with sustainable development and intergenerational equity.

Compliance with ethical standards

Disclosure of conflict of interest

The author declares that there is no conflict of interest to disclose.

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