

SUSTAINABLE DEVELOPMENT GOALS – SDG-15: LIFE ON LAND

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Abstract

This article examines the critical role of international law in achieving Sustainable Development Goal 15 (SDG 15), “Life on Land,” which focuses on protecting, restoring, and promoting the sustainable use of terrestrial ecosystems, managing forests, combating desertification, halting biodiversity loss, and reversing land degradation. It explores key international legal frameworks such as the Convention on Biological Diversity (CBD), the Convention on International Trade in Endangered Species (CITES), and the United Nations Convention to Combat Desertification (UNCCD). The article assesses the progress made towards SDG 15, highlighting significant challenges such as inadequate implementation, financial shortfalls, and conflicting interests. Through a case study on combating wildlife trafficking via CITES, it underscores the practical difficulties in enforcement and the need for enhanced international cooperation. Recent developments, including the outcomes of the Nineteenth Session of the UN Forum on Forests (May 2024), are discussed as steps towards accelerating progress. The article concludes by proposing solutions such as strengthening enforcement mechanisms, increasing financial support, integrating scientific data into policy-making, and fostering public participation. Ultimately, while international law provides a robust foundation, its effectiveness hinges on robust implementation, political will, and innovative approaches to address emerging threats.

Introduction

Sustainable Development Goal 15 (SDG 15), “Life on Land,” is a cornerstone of the 2030 Agenda for Sustainable Development, aiming to protect, restore, and promote the sustainable use of terrestrial ecosystems. This goal encompasses critical targets such as halting deforestation, combating desertification, reversing land degradation, and halting biodiversity loss. As we reach the midpoint of the 2030 Agenda in 2025, it is imperative to evaluate the role of international law in advancing these objectives. International legal frameworks provide the foundation for global cooperation and national action, yet their effectiveness is contingent on robust implementation, adequate funding, and political commitment. This article explores the key international legal instruments supporting

SDG 15, analyzes the progress and challenges in their application, and proposes solutions to bridge existing gaps.

The importance of SDG 15 cannot be overstated, given its direct impact on global biodiversity, climate regulation, and human livelihoods. Terrestrial ecosystems, including forests, wetlands, and mountains, are under increasing pressure from deforestation, land degradation, and biodiversity loss, driven by human activities such as agriculture, mining, and urbanization. International law, through treaties like the CBD, CITES, and UNCCD, seeks to address these issues by setting binding obligations for countries to conserve and sustainably manage these ecosystems. However, the effectiveness of these laws is often hampered by challenges such as weak enforcement, insufficient funding,

and conflicting economic interests. Recent reports, such as the *Sustainable Development Goals Report 2024* ([Sustainable Development Goals Report 2024](#)), indicate that progress on SDG 15 is alarmingly insufficient, with key indicators like the red list index showing a reversal of progress, signalling worsening biodiversity loss.

Understanding SDG 15 and Legal Obligations

SDG 15, titled “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss,” is a multifaceted goal that integrates ecological conservation with socio-economic development. Its targets include sustainable forest management (Target 15.2), combating desertification (Target 15.3), preventing species extinction (Target 15.5), and promoting access to genetic resources under the Nagoya Protocol (Target 15.6).

The legal foundation for SDG 15 is anchored in international agreements, notably the Convention on Biological Diversity (CBD) 1992, its Nagoya Protocol on Access and Benefit-Sharing, and the United Nations Convention to Combat Desertification (UNCCD). These treaties impose obligations on state parties, including India, to develop national strategies, integrate biodiversity concerns into sectoral policies, and ensure equitable benefit-sharing.

Domestically, India’s legal framework includes the Forest (Conservation) Act, 1980, the Biological Diversity Act, 2002, and constitutional provisions under Articles 48A and 51A(g), which mandate the state and citizens to protect the environment and forests. However, the fragmented nature of these laws and their inconsistent enforcement raise concerns about their adequacy in meeting SDG 15 targets. This underscores the need for a robust legal architecture that bridges international commitments with domestic action.

Domestic Legal Frameworks and Life on Land

The realization of SDG 15 in India hinges on the efficacy of its legal and policy instruments. This section examines key legislations and judicial contributions that shape the protection of terrestrial ecosystems.

The Forest (Conservation) Act, 1980

Enacted to curb the rampant diversion of forest land for non-forest purposes, the Forest (Conservation) Act, 1980 (FCA) is a cornerstone of India’s forest governance. Key provisions include:

- **Section 2:** Prohibits the de-reservation of forests or use of forest land for non-forest purposes without prior Central Government approval.
- **Compensatory Afforestation:** Mandates afforestation or payment to offset forest diversion.
- **Penalties:** Imposes fines and imprisonment for violations.

While the FCA has curbed illegal deforestation, its implementation is hampered by delays in approvals, inadequate compensatory afforestation, and exemptions for “strategic projects” (e.g., highways and dams), which often undermine ecological balance.

The Biological Diversity Act, 2002

Aligned with the CBD, the Biological Diversity Act, 2002 (BDA) aims to conserve biodiversity, promote sustainable use, and ensure equitable benefit-sharing. Notable features include:

- **National Biodiversity Authority (NBA):** Oversees biodiversity management and regulates access to genetic resources.
- **State Biodiversity Boards (SBBs):** Facilitate local conservation efforts.
- **Access and Benefit-Sharing:** Regulates the use of biological resources by foreign entities.

However, the BDA’s effectiveness is limited by poor institutional capacity, lack of awareness

among local communities, and weak enforcement against bio-piracy.

T.N. Godavarman Thirumulpad v. Union of India (1996 – continuing)

This ongoing Supreme Court case has revolutionized forest conservation in India. Initiated as a public interest litigation (PIL) to protect forest lands, the Court's rulings include:

- **Broad Definition of Forests:** Extended protection to all areas with forest-like characteristics, irrespective of legal status.
- **Constitutional Oversight:** Linked Forest conservation to Article 21 (Right to Life) and directed continuous monitoring of forest policies.
- **Ban on Illegal Felling:** Imposed restrictions on timber extraction and mining in forest areas.

International Legal Frameworks for SDG 15

The achievement of SDG 15 is underpinned by a network of international legal instruments that address various aspects of terrestrial ecosystems and biodiversity. Key frameworks include:

1. Convention on Biological Diversity (CBD)

Adopted in 1992, the CBD is a comprehensive agreement with three main objectives: conserving biological diversity, promoting the sustainable use of its components, and ensuring the fair and equitable sharing of benefits from genetic resources. The Nagoya Protocol (2010), a supplementary agreement to the CBD, enhances legal clarity for access to genetic resources and benefit-sharing. By 2025, 137 countries and the European Union had ratified the Nagoya Protocol, demonstrating growing commitment to its principles. The CBD is crucial for achieving targets like SDG 15.5 (protecting biodiversity) and 15.6 (access to genetic resources),

with the Nagoya Protocol ensuring fair benefit-sharing, aligning with international environmental justice principles.

2. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES, established in 1973, regulates international trade in wild animals and plants to prevent overexploitation. It categorizes species into three appendices based on their conservation status, with Appendix I species receiving the highest protection. CITES is crucial for achieving SDG 15.7, which calls for urgent action to end poaching and trafficking of protected species. The convention operates through a permit system, requiring exporting and importing countries to ensure trade does not threaten species survival, but enforcement varies widely across jurisdictions.

3. United Nations Convention to Combat Desertification (UNCCD)

The UNCCD, adopted in 1994, focuses on combating desertification, land degradation, and drought, particularly in Africa. It promotes sustainable land management through country-driven programs and international cooperation. The concept of Land Degradation Neutrality (LDN), adopted at COP12 in 2015, aligns with SDG 15.3, which aims to combat desertification and restore degraded land by 2030. The UNCCD emphasizes the integration of scientific data, such as remote sensing, into policy-making, highlighting the need for evidence-based legal frameworks.

4. Other Relevant Agreements

- **Ramsar Convention on Wetlands:** Protects wetlands, vital for biodiversity and ecosystem services, with over 2,400

designated sites covering 2.5 million square kilometers by 2025.

- **World Heritage Convention:** Safeguards natural and cultural heritage sites, including terrestrial ecosystems, with 252 natural World Heritage sites recognized by 2025.
- **International Treaty on Plant Genetic Resources for Food and Agriculture:** Ensures the conservation and sustainable use of plant genetic resources, supporting SDG 15.6 by facilitating access and benefit-sharing.

These legal frameworks provide a foundation for global efforts to achieve SDG 15, but their success depends on effective implementation and adaptation to emerging challenges, such as climate change and economic pressures.

Progress and Challenges

The latest data from the *Sustainable Development Goals Report 2024* ([Sustainable Development Goals Report 2024](#)) reveals alarming setbacks in achieving SDG 15. Globally, progress on SDG 15 is stagnant, with key indicators showing deterioration. For instance:

- The red list index (Indicator 15.5.1), which measures the proportion of species threatened with extinction, indicates worsening biodiversity loss, with the *Sustainable Development Report 2024* noting a reversal of progress since 2015, driven by habitat loss and climate impacts.
- Forest area as a proportion of total land area (Indicator 15.1.1) is not increasing at the required rate to meet sustainable forest management targets, with deforestation rates remaining high in tropical regions.
- Land degradation (Indicator 15.3.1), measured by the proportion of land that is degraded over total land area,

continues to be a significant issue, exacerbated by climate change and unsustainable land use practices, with the UNCCD reporting that 40% of global land is degraded by 2025.

Despite these challenges, some progress has been made. For example, Indicator 15.8.1, which tracks the proportion of countries adopting relevant national legislation and adequately resourcing the prevention or control of invasive alien species, shows moderate advancement, with 80% of countries incorporating such targets into their national biodiversity plans by 2025, though only 17% have national laws and 45% lack funding, as noted in recent studies.

Challenges include:

- **Inadequate Implementation:** Many countries struggle to translate international commitments into national action due to capacity constraints or lack of political will, with enforcement varying widely across regions.
- **Financial Gaps:** Achieving SDG 15 requires significant funding, yet current investments fall short of the estimated \$722–967 billion annually needed by 2030 (Kunming-Montreal Global Biodiversity Framework), with developing nations particularly affected.
- **Conflicting Interests:** Economic development often prioritizes short-term gains over long-term conservation, leading to deforestation for agriculture and mining, with corporate interests sometimes undermining legal protections.
- **Climate Change:** Rising temperatures and extreme weather events accelerate land degradation, desertification, and biodiversity loss, making it harder to achieve SDG 15 targets, with climate models predicting increased pressure on ecosystems by 2030.

Addressing these challenges requires not only legal frameworks but also effective governance,

public participation, and innovative financing mechanisms, as highlighted in recent UN reports and scholarly articles.

Case Study: Combating Wildlife Trafficking through CITES

Wildlife trafficking, a multibillion-dollar illegal trade, threatens numerous species protected under SDG 15.7, which aims to take urgent action to end poaching and trafficking of protected species. CITES is the primary legal instrument regulating this trade, listing species in three appendices based on their conservation status:

- **Appendix I:** Species threatened with extinction, trade permitted only in exceptional circumstances.
- **Appendix II:** Species not necessarily threatened but requiring controlled trade to avoid utilization incompatible with survival.
- **Appendix III:** Species included at a party's request for cooperative regulation.

However, enforcement remains a significant challenge:

- **Weak Law Enforcement:** Many countries lack resources or capacity to monitor and enforce CITES regulations, with the World Wildlife Crime Report 2024 ([World Wildlife Crime Report 2024](#)) noting increased illegal trade since 2017, peaking during COVID-19 (2020–2021), affecting 4,000 plant and animal species.
- **Corruption:** Corruption within law enforcement and government agencies facilitates illegal trade, particularly in regions with weak governance.
- **High Demand:** Demand for products like ivory, rhino horn, and tiger parts remains high, driven by cultural beliefs and economic factors, with consumer markets in Asia and Africa being key drivers.

- **Porous Borders:** Illegal trade exploits weak border controls and inadequate international cooperation, with trafficking routes spanning multiple jurisdictions.

Efforts to address these issues include:

- Strengthening law enforcement through capacity building and specialized training, with initiatives like the Wildlife Crime Tech Challenge by USAID ([Wildlife Crime Tech Challenge](#)) offering rewards for innovative techniques.
- Reducing demand through public awareness campaigns and stricter regulations on consumer markets, with NGOs like WWF leading efforts.
- Enhancing international cooperation via initiatives like the International Consortium on Combating Wildlife Crime (ICWC), which coordinates global enforcement efforts.
- Leveraging technology, such as DNA analysis and satellite tracking, to monitor trade and identify illegal activities, with remote sensing data supporting monitoring under SDG 15.

Despite these measures, wildlife trafficking persists, highlighting the need for more robust enforcement and greater political commitment, as evidenced by recent studies and UN reports.

Recent Developments

In May 2024, the Nineteenth Session of the UN Forum on Forests conducted a midterm review of the International Arrangement on Forests, assessing progress towards the Global Forest Goals and accelerating progress towards the SDGs. Key outcomes included:

- A High-Level Segment declaration reaffirming commitment to sustainable forest management, emphasizing the need for increased funding and governance reforms.

- An omnibus resolution outlining the new Quadrennial Programme of Work for 2025–2028, focusing on forest finance, law enforcement, and governance, with specific targets for reducing deforestation rates by 2030

Additionally, the Kunming-Montreal Global Biodiversity Framework, adopted in December 2022, sets ambitious targets for halting biodiversity loss by 2030, aligning with SDG 15. It includes four long-term goals for 2050 and 23 targets for 2030, with a financial target of mobilizing at least \$200 billion annually by 2030 for National Biodiversity Strategies and Action Plans. The UN Decade on Ecosystem Restoration (2021–2030), led by UNEP and FAO, further supports these efforts by mobilizing global action to prevent, halt, and reverse ecosystem degradation, with a focus on terrestrial and coastal ecosystems.

These developments reflect a renewed commitment to SDG 15, but their success depends on implementation at national and local levels, as highlighted in recent UN reports and scholarly analyses.

Proposed Solutions and Best Practices

To enhance the effectiveness of international law in achieving SDG 15, several strategies are essential:

1. **Strengthening Enforcement Mechanisms:** Improve national legislation, build law enforcement capacity, and establish specialized environmental courts to address violations, with examples like India's National Green Tribunal serving as a model.
2. **Increasing Financial Support:** Mobilize domestic and international resources through innovative mechanisms like payment for ecosystem services and green bonds, with the World Bank's \$225 million Amazon Reforestation-Linked Outcome Bond as a recent example.

3. **Integrating Scientific Data into Policy-Making:** Use advanced technologies such as remote sensing, big data, and artificial intelligence to monitor ecosystems and inform policy decisions, with studies like Zhang et al. (2023a) mapping forest cover in China demonstrating potential.
4. **Promoting Public Participation:** Engage local communities, indigenous peoples, and civil society in conservation efforts, recognizing their role in sustainable land management, as emphasized in the Kunming-Montreal Framework.
5. **Enhancing International Cooperation:** Strengthen partnerships between countries, international organizations, and NGOs to share knowledge, technology, and best practices, with initiatives like the ICCWC fostering global coordination.

These solutions aim to bridge the gaps in current legal frameworks and accelerate progress towards SDG 15, ensuring a future where terrestrial ecosystems thrive.

Conclusion

International law plays a vital role in the pursuit of Sustainable Development Goal 15, providing the necessary frameworks for protecting and sustainably managing terrestrial ecosystems. However, the persistent challenges and slow progress, as evidenced by deteriorating indicators like the red list index, highlight the need for stronger implementation, increased funding, and innovative approaches. Recent developments such as the UN Forum on Forests' midterm review and the Kunming-Montreal Global Biodiversity Framework offer hope for renewed momentum. By strengthening enforcement, increasing funding, integrating science into policy, and fostering public engagement, it is possible to bridge the gaps and accelerate progress towards a future where life on land thrives. As we approach the 2030 deadline, it is imperative that all

stakeholders—governments, international organizations, civil society, and the private sector—work together to turn the tide and ensure a sustainable planet for future generations.

Key Citations

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