

# The Dilemma of Multilateralism and the Adaptation and Transformation of International Environmental Law

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## Abstract

This article starts with the difficult problem of multilateralism and explores how multilateralism affects international environmental law in different ways, including the legal framework, implementation strategies and international cooperation. On this basis, the article explores how to rebuild multilateral cooperation, strengthen the rule of law, increase financial and technical assistance, and seek the help of non-state actors to adjust international environmental law. The conclusion of the article makes predictions on the conceptual changes of international environmental law, the integration of science and technology, and the development of multi-level governance models. In addition, the article also provides policy suggestions and theoretical support for global environmental governance.

**Keywords:** multilateralism, international environmental law, legal adaptation, legal transformation

## 1. Introduction

Nowadays, with the development of globalization, environmental problems have more obviously crossed national boundaries. Problems such as climate change, species reduction and resource shrinkage have gone beyond the scope of a single country. They threaten the future development of the world. These problems are complex and extensive. Solving these problems cannot rely solely on one country or region. The whole world must make joint efforts. International environmental law is an important tool for global environmental management. It formulates common legal rules through talks among many countries. Its main goal is to support the global public interest. It provides a way for all countries to cooperate in addressing environmental challenges. But this law relies to a large extent on multilateralism. Recently, changes in world politics have weakened multilateralism. A key issue now is how international environmental law can maintain its role and adapt to the environment under such an unstable political situation. This is a problem that needs to be solved urgently.

## 2. The Multilateral Foundation of International Environmental Law

### 2.1 The Theory and Practice of Multilateralism

Multilateralism is an important way for countries around the world to cooperate nowadays. The main idea is to solve global problems by establishing a fair and organized system, enabling countries to reach consensus through discussions. Qin Yaqing explained that multilateralism refers to “cooperation among countries through extensive talks, rather than merely acting alone or in pairs”. (Qin, Y., 2001) This has created a stable system for international cooperation. The value of multilateralism lies not only in establishing ways of cooperation. It also helps to formulate and enforce global rules. Multilateralism helps countries cooperate by formulating common rules that all countries must abide by. This method reduces disorderly competition among countries and makes international cooperation more effective and predictable. (Li, J., 2022) Regarding global environmental issues

such as climate change and species reduction, multilateralism has laid the legal foundation for the joint actions of all countries. It is a key system for global environmental management.

## *2.2 The Multilateral Underpinnings of International Environmental Law*

International environmental law clearly demonstrates the importance of multilateralism in formulating global rules. By bringing countries together for discussions, multilateralism ensures the fairness and wide acceptance of the rules. Its openness and organization provide strong legal and cooperative support for managing global environmental issues. International environmental law began with talks among many countries. These discussions have established environmental rules that all countries must abide by. The United Nations Framework Convention on Climate Change has introduced the principle of “common but differentiated responsibilities”. (Wang, C., & Jia, B., 2024) This principle demonstrates how multilateralism has successfully balanced the relationship between extensive participation and adjustable rules. It helps shape the future development of global environmental law. The Paris Agreement adopts a multilateralist nationally Determined contribution (NDC) mechanism, allowing each country to set emission targets based on its own circumstances. This takes into account both flexibility and global coordination. Multilateralism makes international environmental law fair and legal by involving numerous participants in open discussions. This fairness has enabled these rules to be more widely accepted globally and has established trust in how to enforce them. By balancing the interests of different countries, multilateralism has enhanced the authority and practical effectiveness of these environmental laws.

## *2.3 The Multilateralism Predicament Faced by International Environmental Law*

The fundamental reason for the challenges faced by multilateralism lies in today’s global political and economic system as well as the natural impact of globalization. Globalization has made countries more interdependent, but it has also widened the gap in economic interests. This imbalance is most evident in terms of how resources are allocated and responsibilities are assigned. Developing countries have never had a say in global environmental decision-making. Meanwhile, wealthy countries with advanced technologies and more funds often evade all their obligations to reduce emissions. (Wu, Z., & Liu, P., 2020) These imbalances in power have exacerbated the conflicts among countries regarding the fair sharing of environmental responsibilities.

The trend of world multi-polarization has increased the difficulty and cost of global cooperation. After a brief period of unity following the Cold War, competition among major powers has once again become a major feature of international relations. Meanwhile, the diffusion of power among more actors has weakened international rules and institutions. The lack of global leadership has brought significant challenges to the formulation and implementation of international environmental law. The multilateral system itself has structural flaws, making the problem of environmental governance even more serious. International environmental law mainly relies on voluntary compliance by countries with rules, without strong enforcement or punitive measures. When countries choose which rules to abide by, the effectiveness of this system will be greatly reduced. These flaws in the system, coupled with selective compliance, have caused serious implementation problems. Therefore, international law has lost its power to restrain all countries, and the trust in multilateral cooperation has also declined accordingly. (Xu, Y., & Cao, S., 2022)

## **3. Impact of the Multilateralism Dilemma on International Environmental Law**

The crisis of multilateralism creates fundamental problems for international environmental law while exposing deeper flaws in today’s global political and economic systems.

### *3.1 The Rise of Unilateralism and the Weakening of the International Legal Framework*

International Environmental Law depends on the joint efforts of all countries. However, an increasing number of unilateral actions have undermined this cooperation and weakened the global legal system. Some countries only focus on short-term economic interests or protecting sovereignty. They took solo actions or withdrew from the agreement, thereby weakening IEL’s power and recognition. For instance, when the United States withdrew from the Paris Agreement in 2017, it undermined global climate efforts and made other countries hesitant to comply with their emission commitments. This shows how such a move undermines the trust needed for international cooperation. (Pu, Y., 2020)

When facing economic or energy challenges, countries sometimes postpone or weaken their climate commitments. This inconsistent follow-up action has brought uncertainty to the implementation of environmental law and reduced its effectiveness. More importantly, such unilateral actions will have a “broken window effect” — the violations of one country will encourage other countries, thereby gradually undermining trust in the entire system. Since environmental law requires cooperation and trust among countries, even if one country undermines environmental law, it will trigger a dangerous trend of weakening the entire legal structure.

### *3.2 The Obstruction of Great Power Competition to the Implementation of International Environmental Law*

Competition among major countries has created serious obstacles to the implementation of international environmental law. For instance, the restrictions imposed by the United States on technology sharing have led to numerous difficulties in global cooperation. (Wu, Z., & Liu, P., 2020) The increasingly intensified technological competition between China and the United States has undermined the environmental technology sharing system, despite China's leading position in clean energy production. This kind of conflict not only delays cooperation, but also makes developing countries question whether this system is fair and open, intensifying the differences between rich and poor countries.

The rules of the carbon market have become another area of competition among major countries. The Carbon Border Adjustment Mechanism (CBAM) that the European Union plans to establish claims to prevent "carbon leakage", but many developing countries consider this a disguised form of trade protection. (Zou, Y., 2023) China has become a major leader in climate issues, but people still doubt whether China can ensure fair rules, equal cost-sharing and correct commitment fulfillment.

International environmental governance is increasingly shifting towards regional and bilateral agreements rather than global ones. Although regional efforts like the EU Carbon Market policy have worked well locally, they have caused conflicts and overlapped rules and weakened global cooperation. This divergence has greatly undermined the universality and authority of international environmental law, intensifying the disputes between developed and developing countries on issues such as who should do what and who can benefit from it. Therefore, as time goes by, international environmental law becomes increasingly difficult to enforce.

### *3.3 Deepening North-South Divides and Contradictions in Responsibility Allocation*

The North-South divide has deepened in the implementation of international environmental law, especially in terms of development needs and climate obligations. Rich countries have pushed emerging economic systems such as China and India to set stricter emission targets. Meanwhile, developing countries believe that industrialized countries must first achieve greater emissions reduction and fulfill their commitment to climate financing and technology transfer. A key hotspot is that developed countries demand international supervision of the emission efforts of developing countries. Although the framework of these supervisory suggestions is to ensure transparency, it has raised concerns regarding sovereignty. Developing countries insist that they have the right to determine their own climate actions and report progress through national systems rather than external verifications.

During the implementation of international environmental law, the differences between the North and the South have been continuously expanding, especially in terms of balancing the right to development and the responsibility for emission reduction. Developed countries are pushing developing countries (including major economies such as China and India) to set more forceful emission reduction targets. Developing countries believe that developed countries should take the lead in significantly reducing emissions and fulfill their commitments to provide financial and technological support. Developed countries have also proposed an emission reduction monitoring system, which has aroused controversy. This includes the requirement for international supervision of climate actions in developing countries to ensure transparency. Developing countries have raised the issue of sovereignty, insisting that they should determine their own climate measures and provide transparency through domestic reports.

Technology transfer remains a key North-South conflict. Developing countries need green technologies for their low-carbon transition. But developed nations often refuse to share critical technologies, citing intellectual property concerns. These restrictions hurt developing countries' ability and willingness to follow climate rules, making global environmental laws less fair and effective.

### *3.4 The Vulnerability of Multilateralism and the Insufficient Adaptability of International Environmental Law*

The weakening of multilateral cooperation has undermined international environmental law. The reason why international environmental law is facing problems is that it relies on voluntary rules, lacks strong enforcement, and excludes many non-governmental groups. With the reduction of global cooperation, these problems are becoming more and more serious. Most international environmental law agreements still lack solutions to disputes or penalties for violations, so countries that violate the rules can evade the consequences. When a country disregards its legal obligations, it usually does not face real punishment. This weakness makes international environmental law seem unreliable and undermines its fair and uniform application.

If non-state actors are insufficiently involved, the adaptability of international environmental law will be reduced. At present, with multilateral cooperation struggling, the international environmental law system relies too much on government agreements. It ignores what ordinary people, non-governmental organizations and enterprises can offer. These groups possess the technical knowledge, the ability to collect resources and the supervisory functions necessary to help the government better fulfill its commitments. However, the current setup of international environmental law fails to make good use of these advantages, preventing non-state actors

from making more efforts to protect the global environment.

#### **4. Adaptive Strategies to Overcome the Multilateralism Dilemma**

##### *4.1 Reconstructing Multilateral Cooperation Frameworks*

Multilateralism is the key to creating and applying international environmental law and helps all countries jointly solve environmental problems. Rebuilding the multilateral system is of great significance for enabling environmental impact assessment to play a better role. The United Nations is a major multilateral organization in the world. True multilateralism means respecting the leadership role of the United Nations. The global interests represented by the United Nations are more important than those of individual countries. (Liao, F., 2023) Giving developing countries more say in UN decision-making can better meet the needs of the global south. Due to the limitations faced by global cooperation, strengthening regional cooperation is also of crucial importance, as it provides practical and feasible ways of action. Rebuilding multilateral cooperation must focus on openness and inclusiveness to address current injustices. Some systems are like exclusive clubs, excluding certain countries and causing division and distrust. Future cooperation should welcome more non-governmental groups to participate in global decision-making in order to enhance support for international environmental law.

##### *4.2 Enhancing Legal Enforceability*

The weakening of global cooperation makes the implementation of international environmental law more difficult. To strengthen international environmental law, we need to shift from voluntary rules to binding laws and establish more powerful dispute settlement methods. Future international environmental law agreements should include strict requirements for important areas and formulate clear rules and punitive measures. Establishing a formal dispute settlement system is the key to prompting all countries to abide by the rules of international environmental law. The International Environmental Court can rule on conflicts and impose penalties. For instance, countries that violate the agreement may face trade restrictions or technological bans, thereby making international environmental law rules more effective. These systems also help to resolve the disputes over responsibilities between the North and the South fairly and build trust in global cooperation.

##### *4.3 Strengthening Financial and Technical Support*

Strong financial and technical assistance is the key to the good operation of international environmental law. This requires finding different ways to maintain the sustainability of funds, creating clearer and fairer ways of aid distribution, making aid more effective, and building trust in global efforts. It is also crucial to open up and share green technologies. International cooperation should contribute to the conclusion of technology transfer transactions while protecting intellectual property rights and technology access. Rich countries can use public funds to eliminate the patent costs of important technologies, making it easier for poor countries to access these technologies. Enabling technology to function better locally will improve its application in the real world. Helping developing countries research their own clean technologies can enhance their innovation capabilities and solve environmental problems. Rich countries should increase the sharing of funds and technologies. The global system must be improved to better manage these supports and meet the actual needs of poor countries. An effective financial and technological system is crucial for formulating fair and lasting environmental laws and strengthening global environmental protection.

##### *4.4 Activating the Role of Non-State Actors*

Nowadays, non-state actors such as local governments, non-governmental organizations and companies are very important in global environmental governance. To solve the world's environmental problems, it is necessary to utilize these groups to make up for the deficiencies of international environmental law and provide more support and new ideas for global governance.

Local governments, especially those in rapidly developing cities and regions with increasingly deteriorating environmental problems, tend to handle environmental issues more flexibly and effectively than the central government. They promote the achievement of sustainable development goals by collaborating with local enterprises and communities to formulate and implement specific environmental policies. Greater participation of local governments in global environmental governance helps align policies with local needs and adds practical examples to global efforts.

Non-governmental organizations utilize their extensive networks and resources to help achieve environmental justice, especially in poorer countries and regions. They offer technical assistance, funds and policy advice. Their free operation enables them to carry out work on an international scale, unite different groups and share new concepts of environmental management. These organizations also impart knowledge about global environmental issues to people and encourage them to make clearer and fairer policy choices.

As a powerful global economic force, enterprises are now playing a more important role in environmental governance. Many large companies now incorporate sustainable development into their plans and actively

assume social responsibilities. Enterprises help achieve environmental goals by creating green technologies and making full use of resources. They leverage the power of the supply chain to raise global awareness of the environment. In areas such as climate change, energy conservation and waste treatment, enterprises are playing an increasingly important role in environmental assessment through technological development and green project funding.

## **5. Transformation Directions for International Environmental Law**

### *5.1 Reshaping Global Environmental Governance Philosophies*

As multilateralism faces more and more challenges, international environmental law needs to rethink its core principles. Although unilateralism has attracted global attention, most countries still tend to favor multilateral cooperation. (*People's Daily*, 2019) China strongly supports this approach, is committed to reforming global governance, establishing a new type of international relations, and promoting a shared future for humanity. (Xi Jinping, 2018) The concept of “a community with a shared future for mankind” has introduced new thinking in global governance. It not only solves the theoretical problems in environmental cooperation, but also points out the practical direction for the future development of international environmental law. Facing challenges such as the resurgence of unilateralism, intensified competition among major powers, and deepening differences between the North and the South, this concept advocates global cooperation centered on extensive consultation, common contribution and shared benefits, in order to achieve the goal of global environmental governance that is clean, beautiful and sustainable. (Li, H., 2021)

The concept of “a community with a shared future for mankind” emphasizes that all countries should jointly confront transnational ecological crises, which basically cannot be resolved unilaterally. This concept enhances the diversity and inclusiveness of the governance system by incorporating non-state actors such as local governments, non-governmental organizations and companies into the framework. Furthermore, it advocates incorporating ecological civilization into the core value system of international environmental governance, thereby transcending the short-termism and economic centrism of the traditional framework. It takes the harmonious coexistence of human and nature as the governance goal and shifts environmental protection from the simple “pollution control” paradigm to a comprehensive sustainable development transformation. This concept emphasizes the “ecological priority” approach and integrates it into the formulation and implementation of international environmental law rules.

### *5.2 Constructing a Multi-Level Governance Model*

With the development of globalization, international environmental governance has become increasingly complex. Governance systems that work at the local, regional and global levels can make environmental management more inclusive and flexible.

The local level is the basis of this multi-level system. It is mainly responsible for the practical work of environmental governance. Local governments can more easily incorporate details for specific regions and formulate practical policies. For example, urban green building rules or local clean energy projects. Local actions usually bring about new ideas. All of these are conducive to improving international regulations through actual evidence.

The regional level plays a crucial connecting role. It helps countries jointly solve cross-border environmental problems and integrates environmental rules throughout the region. This kind of cooperation fills the gap in global governance. It enables international environmental law to function better and allows for closer monitoring within specific regions. Regional environmental protection organizations also offer assistance by providing technical support and funds to poor countries. This kind of support has enhanced the ability of these countries to abide by the rules and enabled the entire region to respond better to the requirements of international environmental law.

Global governance is the highest level of this system. Its main job is to formulate effective environmental rules on a global scale and enable countries to cooperate through international platforms. This ensures that international environmental law remains consistent and enforceable on a global scale. Global governance is a complex task, and every country, including China, needs to play a role. To do this job well, it is necessary to adhere to multilateral cooperation in the long term, pool resources from all sides, make ingenious use of important opportunities and deal with major challenges with caution. (Yang, J., 2020)

### *5.3 Integrating Law and Technology*

For international environmental law to be effective, solid technical support is needed. When we combine the legal framework with technology, we can significantly enhance the effectiveness, transparency and fairness of these environmental laws, while promoting global cooperation. This is conducive to the public management of environmental data. In terms of treaty implementation, blockchain provides a clear and reliable method for

monitoring international agreements. Artificial intelligence and big data make data more accurate and process faster, providing solid scientific support for the implementation of international environmental law. By combining satellite images, drone lenses and sensor readings, artificial intelligence helps make better decisions in global environmental management while making legal compliance more evident. These technologies can also conduct continuous review and improvement of policies. By studying past data and conducting simulations, artificial intelligence can predict how environmental policies will function, helping countries formulate more precise and effective emission reduction plans.

Looking ahead, the development of blockchain, artificial intelligence and big data must keep pace with the formulation of international environmental law rules. Only in this way can the common and normal development of technological progress and the legal system be ensured.

## 6. Conclusions

Facing the predicament of multilateralism and the challenges of global environmental governance, the adjustment and transformation of international environmental law is not only an inevitable choice to deal with the current crisis, but also an important way to build a sustainable future. By reshaping governance concepts, establishing multi-level cooperation models, and deepening the integration of law and technology, international environmental law has demonstrated its ability and potential to keep pace with The Times. Looking ahead, with the joint efforts of the world, international environmental law is bound to further enhance its fairness and enforceability, promote the establishment of a more inclusive, cooperative and effective environmental governance system, and provide a more solid legal foundation for achieving the goal of harmonious coexistence between humans and nature.

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