

# The Role and Challenges of Environmental and Resource Protection Law in Addressing Climate Change

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**Abstract:** With the increasingly serious problem of climate change, environmental and resource protection law plays an increasingly important role in dealing with climate change. This paper first analyzes the basic framework of environmental and resource protection law under the background of global climate change and clarifies its important functions in slowing down greenhouse gas emissions, promoting green development, and promoting sustainable resource utilization. Through a systematic review of relevant domestic and foreign laws and regulations, it is found that China's existing environmental and resource protection law has made some progress in addressing climate change, but it still faces many challenges in policy implementation, law application, and public participation. Specific problems include the conflict between the application of climate change and traditional environmental protection laws, the lag of relevant legislation, and the inadequacy of cross-sectoral coordination mechanisms. To address these challenges, the paper proposes to strengthen the coordination of law and policy, promote independent legislation of climate change law, improve legal monitoring and enforcement mechanisms, and enhance public participation. The research shows that only by improving the relevant legal framework can the government effectively promote the legal protection system of China's response to climate change and contribute to global climate governance.

**Keywords:** Environmental and resource protection law; Climate change; Legal challenges; Public participation; Global climate governance

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## 1. Introduction

Climate change is an increasingly serious problem, which has a significant impact on ecological, economic and social life, and has become a major global challenge. In this regard, environmental and resource protection law, as a key tool to mitigate the problem, promote green development, and sustainable use of resources, must meet new challenges. However, many countries, especially China, face implementation problems, limited legal

scope, and inadequate coordination mechanisms. Scholars have proposed solutions, including special legislation, strengthening legal supervision, and public participation. However, how to increase the coordination of laws and policies and solve the cross-departmental coordination still needs in-depth research. Therefore, this paper focuses on the role and challenge of environmental protection law in coping with climate change, puts forward suggestions to improve China's legal system of coping with climate change, and hopes to contribute legal support to strengthen China's position in global climate governance.

## **2. Overview of environmental and resource protection law**

### **2.1. Basic concept and development process of environmental and resource protection law**

As an important branch of environmental law, environmental and resource protection law has attracted wide attention worldwide in recent years<sup>[1]</sup>. Its basic concepts mainly include the rational use and protection of natural resources, the maintenance of the ecological environment, and the support for the sustainable development of mankind. This legal framework aims to protect and improve the environment through legislative means, prevent pollution and other environmental hazards, safeguard human health, and promote the sustainable use of natural resources. Since the middle of the 20th century, with the acceleration of the global industrialization process and the prominence of environmental problems, countries have generally begun to build and improve the legal system of environmental and resource protection. The 1970s of the last century is regarded as the founding period of modern environmental law, and the successive promulgation of various international environmental treaties and regulations marked a new stage in the development of environmental and resource protection law. In the 21st century, the law on environmental and resource protection has been further refined and enriched, covering such areas as climate change, biodiversity, and pollution prevention and control, and gradually forming a legal and normative system that emphasizes both protection and development. This legal framework has played an irreplaceable role in promoting international cooperation, coordinating national policies, and contributing to global ecological governance.

### **2.2. Legal framework in the context of global climate change**

The extensive impact of global climate change on human society and the ecosystem has prompted the international community to gradually form a set of legal frameworks to deal with climate issues. This framework, with the United Nations Framework Convention on Climate Change (UNFCCC) at its core, aims to mitigate greenhouse gas emissions and adapt to the effects of climate change through international cooperation. Important agreements within the framework, such as the Kyoto Protocol and the Paris Agreement, have established detailed emission reduction targets and long-term global warming limit targets, respectively, and stressed the importance of countries' intended contributions. The international climate legal framework also focuses on supporting the financial and technological needs of developing countries to achieve equitable and sustainable development<sup>[2]</sup>. To maximize the effectiveness of implementation, other international organizations and multilateral environmental agreements also play a coordinating and complementary role under this framework to promote legal and policy coherence among countries.

### **2.3. Main functions and objectives of environmental and resource protection law**

The main functions of environmental and resource protection law include the prevention and control of environmental pollution, the protection of ecosystems and biodiversity, the rational use and protection of natural

resources, and the optimization of the human living environment <sup>[3]</sup>. Its goal is to promote the harmonious development of the environment and the economy and ensure the sustainable progress of society. Through legal means, the environmental and resource protection law is committed to reducing environmental damage, preventing the misuse of resources, promoting cleaner production and green technology innovation, enhancing public awareness and participation in environmental protection, and realizing the construction of ecological civilization and the modernization of the environmental governance system. The legal framework provides an important institutional guarantee and action guide for the global response to climate change.

### **3. The role of environmental and resource protection laws in addressing climate change**

#### **3.1. Legal measures to mitigate greenhouse gas emissions**

The Environmental and Resource Protection Act plays a key role in mitigating greenhouse gas emissions. As an important legal tool to deal with climate change, its main focus is to force the reduction of major greenhouse gas emissions through legislation. Such legal measures include the setting of emission standards, the implementation of carbon emissions trading systems, and the combination of incentives and penalties. Emission standards are set to provide safe thresholds for greenhouse gas emissions from industries and ensure that industrial activities are carried out at sustainable levels <sup>[4]</sup>. As a market-oriented means, the carbon emission trading system promotes enterprises to achieve emission reduction targets at the lowest cost and stimulates enterprises' willingness to innovate in environmental protection through the trading of carbon credits. For different economic entities, the law also sets a variety of economic incentives to encourage the use of clean energy and energy efficiency. These statutory measures not only help control greenhouse gas emissions but also provide legal protection for the transition to a low-carbon economy and promote the development of industries in a green and sustainable direction. The effective implementation of these legal means is directly related to the mitigation of climate change and the effectiveness of global environmental governance.

#### **3.2. Legal guarantee for promoting green development**

Green development, as an important strategy to deal with climate change, depends on strong legal protection. The Environmental and Resource Protection Law encourages enterprises and society to transition to a low-carbon economy through mechanisms such as technical standards, industrial policies, and tax incentives. These laws provide incentives for green technology innovation and the development and use of renewable energy sources to reduce dependence on fossil fuels. By establishing a market access system for environmental protection industries, the law ensures efficient and sustainable use of resources and promotes the transition of consumption patterns to green products <sup>[5]</sup>. The Environmental and Resource Protection Law also effectively regulates land use and urban planning, prevents ecological damage, and provides institutional support for the construction of ecological civilization. These legal measures not only help to enhance the competitiveness of the green economy but also provide a legal guarantee for the coordinated development of the economy, society, and environment to promote the realization of global climate governance goals.

#### **3.3. Legal support for sustainable resource use**

Environmental and resource protection laws provide critical legal support in promoting sustainable resource use. The formulation of relevant laws and regulations to regulate the development, use, and regeneration of resources

effectively reduces the risk of resource waste and over-exploitation. The legal framework requires strict resource management policies to promote the development and use of clean energy to reduce dependence on non-renewable resources. The law also encourages and regulates ecological compensation mechanisms to maintain the integrity and sustainability of the ecosystem<sup>[6]</sup>. The implementation of regulations is not only committed to protecting natural resources but also to promoting the recycling of resources, supporting technological innovation and industrial transformation, and ultimately achieving a win-win situation of economic and environmental benefits, providing a strong guarantee for tackling climate change.

## **4. Comparison of the current situation of domestic and foreign environmental and resource protection laws in response to climate change**

### **4.1. International legal framework and practice of climate change**

The international legal framework on climate change mainly consists of a series of multilateral treaties and agreements, with the United Nations Framework Convention on Climate Change and the Paris Agreement as the core. The United Nations Framework Convention on Climate Change lays the foundation for the global response to climate change, with the goal of stabilizing greenhouse gas concentrations in the atmosphere<sup>[7]</sup>. The Paris Agreement defines the long-term goal of keeping global temperature rise below 2 degrees Celsius and working to limit it to 1.5 degrees Celsius, with countries developing and updating their nationally determined Contributions (NDCS). International legal practice emphasizes the common but differentiated responsibilities of States concerning mitigation, adaptation, and financial support.

### **4.2. Progress of China's environmental and resource protection law in addressing climate change**

In recent years, China has made a series of important steps in addressing climate change by using the environmental and resource protection law. Through the gradual improvement of the relevant legal framework, a series of targeted policies and measures have been implemented. The revision and implementation of environmental protection laws and regulations, such as the Air Pollution Prevention and Control Law and the Water Pollution Prevention and Control Law, have played a driving role in the control of greenhouse gas emissions and the optimization of the ecological environment<sup>[8]</sup>. The Environmental Protection Law clearly puts forward the promotion of green development and low-carbon transformation, which provides a legal guarantee for tackling climate change. The state has stepped up efforts in the field of energy structure adjustment, supported the development and utilization of clean energy through the Renewable Energy Law and other legislation, and effectively promoted the reduction of carbon emission intensity.

### **4.3. Differences and experiences between China and foreign countries**

There are significant differences in environmental and resource protection laws between China and foreign countries in dealing with climate change. Internationally, most countries have established a special climate change legislation system, emphasizing coordinated global governance and clear powers and responsibilities. In contrast, China's legal system mainly deals with climate change indirectly through relevant environmental laws and lacks an independent climate legal framework<sup>[9]</sup>. International experience has shown that comprehensive legislation and effective implementation are crucial to combating climate change. Drawing on international experience, China should focus on improving relevant legislation, strengthening enforcement, and strengthening international

cooperation to enhance the contribution of its laws in climate change governance.

## **5. Challenges faced by China's environmental and resource protection law**

### **5.1. Conflict between law application and climate change**

In response to climate change, environmental and resource protection law faces a significant conflict between the application of law and the needs of climate change. Traditional environmental protection laws mainly focus on local and regional pollution issues, and the targeted provisions mainly focus on pollution control and natural resource management <sup>[10]</sup>. As a global challenge, climate change has a wide and complex impact, which requires transnational and cross-sectoral cooperation and coordination. In particular, existing legal mechanisms are inadequate to address the scale of greenhouse gas emissions and their long-term effects.

### **5.2. Difficulties and delays in policy implementation**

China's environmental and resource protection law has difficulties and lags in the implementation of climate change policies, which are mainly manifested by regional differences in policy implementation effects, unreasonable resource allocation, and insufficient coordination among departments. Policies related to climate change often involve multiple fields and sectors, but the lack of a unified coordination mechanism, cross-functional or unclear responsibilities between departments has affected the efficiency of policy implementation. Some local governments have insufficient enforcement of environmental and resource protection laws, and there is a phenomenon that economic development is more important than environmental protection. Especially in economically underdeveloped areas, environmental protection policies are often weakened or circumvented due to local interests <sup>[11]</sup>.

### **5.3. Deficiencies of public participation and cross-field coordination mechanisms**

The inadequacies of public participation and cross-disciplinary coordination mechanisms pose significant challenges to the effectiveness of China's environmental and resource protection law in addressing climate change. The degree of public participation is limited, legal awareness and environmental awareness still need to be strengthened, and the actual influence of the public in the decision-making process is insufficient <sup>[12]</sup>. The lack of an effective cross-field coordination mechanism leads to poor information among departments, disjointed policy implementation, and low resource utilization efficiency. Unclear division of responsibilities and sector-driven interests weaken the enforcement of laws on complex climate issues, and more coordinated mechanisms are urgently needed to improve the overall response.

## **6. Legal challenges and improvement suggestions in addressing climate change**

### **6.1. Strengthen the coordination of laws and policies**

Strengthening the coordination of environmental and resource protection laws and policies is an important direction to address the legal challenges of climate change. In the existing legal system, the issue of climate change often involves the intersection of policies and laws in multiple departments and fields, and the fragmentation of the existing system and the lack of a coordination mechanism between departments have limited the efficiency of policy implementation. This problem is particularly prominent in greenhouse gas emission reduction policies, energy transition planning, and natural resource management <sup>[13]</sup>. A collaborative governance framework of law

and policy should be constructed with integrated thinking to avoid the disconnection between legal provisions and policy objectives.

## **6.2. Promote independent legislation on climate change law**

Promoting independent legislation on climate change law is a key way to address the legal challenges of climate change. Although the existing environmental and resource protection law covers the issue of climate change to some extent, its wide scope of application and traditional environmental protection objectives limit its effectiveness. The establishment of an independent climate change law can be more focused on greenhouse gas emission reduction and adaptation strategies to ensure that the law is precise and targeted. Independent legislation can also help streamline the distribution of legal powers and responsibilities and eliminate conflicts between regulations in the existing legal framework <sup>[14]</sup>. The new law should incorporate a future-oriented mechanism to address the rapidly changing global climate situation, improve policy flexibility and foresight, and provide clear legal guidance and compliance paths for governments and businesses at all levels.

## **6.3. Improve the legal supervision and enforcement mechanism**

Improving the legal supervision and enforcement mechanism is the key to enhancing the ability of the environmental and resource protection law to address climate change. In the process of implementation, the existing legal supervision system often faces problems such as lax law enforcement and insufficient supervision, which affect the effectiveness of the law <sup>[15]</sup>. To strengthen law enforcement, it is necessary to establish an independent and authoritative legal supervision body, increase the severity of penalties for environmental violations, and raise the cost of violations. Cross-regional and cross-departmental law enforcement coordination should be strengthened to ensure consistency and comprehensiveness of policy implementation. Through the introduction of modern technological means to improve the transparency and efficiency of law enforcement, to provide a solid legal guarantee for tackling climate change.

# **7. Conclusion and prospect**

## **7.1. Summarize the role and challenges of environmental and resource protection law**

Environmental and resource protection law plays a key role in addressing climate change, including mitigating greenhouse gas emissions, promoting green development, and supporting sustainable resource use. By building a systematic legal framework, such laws provide a strong legal basis and guarantee for the formulation and implementation of various climate policies. In the process of global environmental governance, these laws and regulations have formed guidelines for action at the national and regional levels, promoted international exchanges and cooperation, and jointly addressed the challenges brought about by climate change.

Despite some positive progress, the Environmental and Resource Protection Law still faces many challenges in its implementation. Conflicts between the application of the law and climate change occur from time to time, because existing laws are mainly based on traditional environmental protection, which is difficult to fully cover the emerging field of climate change. There are also difficulties in the implementation of laws and policies, especially at the local level, where the intensity and speed of implementation often lag behind rapidly changing environmental needs. Further complicating matters is the lack of public participation and inadequate cross-cutting coordination mechanisms that impede the implementation of laws and effective responses to climate change.

## 7.2. Legal contribution to promoting global climate governance

The law has an indispensable role to play in the global response to climate change. Environmental and resource protection law is not only the embodiment of domestic policy but also can be an effective tool to promote global climate governance. Through the implementation of strict environmental laws and regulations, the international community can promote the joint mitigation of greenhouse gas emissions, including strengthening the legal responsibility of countries in climate agreements and improving the enforcement of international environmental agreements. This legalized binding mechanism provides countries with a clear framework for action to prevent shirking their responsibilities and contribute to the achievement of global climate goals.

The Environmental and Resource Protection Law provides legislative support for green technology and renewable energy and provides a legal guarantee for transnational technology transfer and innovation cooperation. This support can help to break down technical barriers and reduce the cost of acquiring green technologies, thereby accelerating their adoption worldwide. Through foreign environmental legislation and agreements, the government will promote the formation of a community of interests for sustainable development among countries and enhance the awareness of cooperation and synergy in global climate governance.

## 8. Conclusion

This study explores the role and challenges of environmental and resource protection laws in addressing climate change, with a particular focus on greenhouse gas mitigation, green development, and sustainable resource use. Assess the performance of the legal system on climate change by collating domestic and international laws. The study found that although China has made some progress in climate governance, there are still problems such as lagging legislation, conflicts of laws, insufficient cross-field coordination, and difficult implementation. Four suggestions were put forward for improvement: enhancing the coordination of environmental protection law and climate policy, promoting independent legislation on climate change law, improving legal supervision and enforcement mechanisms, and increasing public participation and transparency in implementation. However, there are still limitations in this study, such as the need for in-depth empirical research on the effect of law enforcement and learning from international experience. In the future, the implementation effect of the environmental law system should be evaluated in combination with practice, and interdisciplinary research should be strengthened to optimize China's climate rule of law system to better provide legal protection for global climate governance.

## Disclosure statement

The author declares no conflict of interest.

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