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The Application of Ecological and Environmental Restoration Measures in Environmental Criminal Justice

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Abstract

Three factors demonstrate the need for ecological restoration measures in environmental criminal justice: addressing the need to protect environmental legal interests, improving the efficiency of environmental crime governance, and conforming to the restorative justice concept. At the moment, the execution of ecological restoration measures is made possible by China's environmental criminal policies, pertinent judicial interpretations, and judicial practice experiences. Low application rates and inadequate efficacy are two problems that ecological restoration strategies in environmental criminal justice encounter in reality. The ambiguity of ecological restoration strategies and the absence of clear technical standards are the root causes of these issues. Establishing ecological restoration standards with the aim of restoring ecological functions and designating ecological restoration measures as non-penal punishments are the first steps towards enhancing their implementation in environmental criminal justice.

Keywords

Environmental Criminal Justice; *Ecological Restoration Measures*; *Judicial Interpretations*

1 introduction

As a successful strategy for guaranteeing the advancement of ecological civilization, environmental criminal justice is essential for punishing offenses that harm the environment and boosting the efficiency of ecological governance. Among these, Ecological Restoration Measures have substantial theoretical research value and independent judicial applicability as a novel component of Environmental Criminal Justice. Restorative measures, often referred to as ecological restoration measures, are a useful strategy for achieving restorative justice. In its Report on Strengthening Criminal Adjudication Work, published on October 23, 2019, the Supreme People's Court first proposed this idea, urging judges to use Ecological Restoration Measures in criminal trials with the main objective of reestablishing the natural environment.Relevant judicial interpretations subsequently added particular clauses to encourage offenders to take an active role in ecological restoration. Article 6 of the Supreme People's Court and Supreme People's Procuratorate's 2023 Interpretation on Several Issues Concerning the Application of Law in the Handling of Criminal Cases of Environmental Pollution, for instance, states that a lenient punishment may be imposed if the offender enters a guilty plea and accepts punishment while actively participating in ecological restoration and successfully putting compliance measures in place.

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However, there are still problems with uneven use of Ecological Restoration Measures in Environmental Criminal Justice, even with the improvement of judicial practice. Therefore, in order to elucidate the importance and usefulness of ecological restoration measures in criminal trials, pinpoint problems with their implementation, and offer suggestions for improvement, this paper performs an empirical research on their application in environmental criminal justice.

2 The Necessity and Feasibility of Applying Ecological Restoration Measures in Environmental Criminal Justice

Three factors demonstrate the need for Ecological Restoration Measures in Environmental Criminal Justice: addressing the need to protect Environmental Legal Interests, improving the efficiency of Environmental Crime Governance, and conforming to the Restorative Justice concept. At the moment, China's Environmental Criminal Policies, pertinent judicial interpretations, and judicial practice experiences offer workable circumstances for the ongoing development and use of ecological restoration measures.

2.1 The Necessity of Applying Ecological Restoration Measures

The necessity of applying Ecological Restoration Measures in Environmental Criminal Justice is reflected in three aspects: meeting the need for Environmental Legal Interest protection, enhancing the effectiveness of Environmental Governance, and aligning with the concept of Restorative Justice.

2.1.1 Meeting the Need for Environmental Legal Interest Protection

The fundamental task of Criminal Law is to protect Legal Interests. Since the amendment of the crime of major environmental pollution accidents to the crime of environmental pollution in the Eighth Amendment to the Criminal Law, the independent legal protection status of Environmental Interests has been recognized in Criminal Legislation.Given the public nature of the environment, acts of environmental pollution and destruction inherently possess the attributes of Public Nuisance. Humanity exists within a space-time framework constituted by the Natural Environment, and any damage to the Ecological Environment equates to an overall disruption of human living conditions, often triggering a chain reaction. When the Ecological Environment is polluted or damaged due to human activities, it directly affects biological populations and environmental conditions, subsequently impacting the living environment and quality of life of those who rely on Natural Resources for survival.The primary objective of Environmental Restoration is to repair the Ecological Environment that has been damaged by Environmental Crimes. Therefore, the Public Interest aspect of Ecological Restoration aligns with the need for Environmental Legal Interest protection.

2.1.2 Enhancing the Effectiveness of Environmental Crime Governance

The unique characteristics of Environmental Crimes determine the special nature of Environmental Crime Governance.First, the multiplicity of infringed legal interests. Based on an anthropocentric perspective of legal interests in ecology, Environmental Crimes violate both Environmental Legal Interests and Human Legal Interests, thus exhibiting a multiple-interest characteristic.Second, the latent and persistent nature of

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pollution. The harmful consequences of Environmental Crimes tend to be latent and progressive, requiring a long period to manifest and significantly impacting human life.Third, the pronounced transregional nature. Due to the close interconnections between different regions, localized pollution in one area may spread and escalate into a broader environmental issue affecting an entire region.Given these characteristics of Environmental Crimes, environmental restoration methods have become increasingly refined and specialized to address diverse forms of environmental damage. Ecological Restoration Measures, through professional techniques and diversified approaches, restore the ecological functions of damaged environments. These measures serve as both a punitive and remedial response to Ecological Destruction.The goal of Ecological Restoration Measures is to develop and implement restoration plans based on scientific principles and technical methodologies, ensuring the restoration of the damaged Ecological Environment in a scientifically sound and effective manner. Furthermore, restoration methods are highly diversified, including vegetation restoration, soil quality improvement, water purification, and artificial propagation and release of aquatic organisms. These measures not only restore the Ecological Environment but also improve overall Environmental Quality and enhance the self-recovery capacity of ecosystems.However, it is essential to emphasize that Ecological Restoration is a long-term process that requires continuous investment of resources and effort to ensure effectiveness. By establishing interdepartmental coordination mechanisms, the restoration process and results carried out by offenders can be effectively supervised and assessed, further ensuring the efficacy of Ecological Restoration Measures.

2.1.3 Aligning with the Concept of Restorative Justice

Restorative Justice refers to an alternative judicial process that, with community participation, guides offenders and victims to establish a dialogue and repair the social relationships harmed by the crime. As a new approach to governance in China, Restorative Justice has been applied to the field of Environmental Resource Crimes for the following reasons:First, Restorative Justice better safeguards the interests of victims and the Ecological Environment. Traditional criminal justice punishes offenders through measures such as imprisonment and fines, but it often fails to sufficiently address the interests of victims or the environment that has been damaged. Restorative Justice focuses on repairing the environment, offering a perspective of victim restoration to compensate for the environmental harm caused by crime.Second, Restorative Justice contributes to the construction of a Green Society. The severity of criminal penalties is a symbol of their deterrence. However, the effectiveness of punishment does not depend solely on its severity but also on its certainty and enforceability. Applying the concept of Restorative Justice in the field of Environmental Resource Crimes, with an emphasis on restoring damaged legal interests—specifically by restoring the environment—helps eliminate the consequences of the crime while resolving the conflict between humanity and nature.Third, Restorative Justice helps alleviate the pressure on Criminal Justice. By mobilizing social forces to participate in the environmental governance process and optimizing the execution of environmental restoration, Restorative Justice can reduce the burden on the criminal justice system to some extent.

2.2 Feasibility of Applying Ecological Restoration Measures

Currently, China's Environmental Criminal Policies, relevant Judicial Interpretations, and experiences from Judicial Practice provide feasible conditions for the continuous improvement and implementation of Ecological Restoration Measures.

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2.2.1 Guidance of Environmental Crime Criminal Policies

Firstly, the guidance of a combined leniency and severity criminal policy. The combined leniency and severity criminal policy runs through the entire process of China's criminal legislation, judicial practice, and penal execution, requiring differential treatment based on the specifics of the crime to ensure that the punishment fits the crime. In 2020 and 2021, the Supreme People's Court respectively reported on the judicial protection of the ecological environment in the Yangtze River Economic Belt and typical cases of ecological environment judicial protection in the Yellow River Basin. Both of the typical cases released emphasized supporting offenders who actively engage in ecological restoration, granting reduced sentences as a result, fully reflecting the combined leniency and severity criminal policy and the restorative justice concept. In addition, the Supreme People's Procuratorate has also attached great importance to strengthening ecological environment judicial protection, urging prosecutorial authorities at all levels to actively explore and apply the restorative justice concept in the practice of ecological environment protection, achieving a win-win situation of punishing crimes while protecting the ecological environment.[*]

Secondly, the policy orientation of using judicial means to promote the restoration of the ecological environment in China. In May 2016, the Supreme People's Court issued guiding opinions, requiring the implementation of a damage relief system centered on ecological restoration, with the goal of "maximizing the restoration of the ecological environment." [**]In December of the same year, the Supreme People's Court and the Supreme People's Procuratorate jointly issued Judicial Interpretations, making the offender's "active restoration of the ecological environment" a discretionary factor in criminal justice. In 2018, the Supreme People's Court and the Supreme People's Procuratorate once again emphasized the need to "fully utilize judicial means to restore the damaged ecological environment,"[***] and explicitly pointed out the necessity of properly coordinating the criminal, civil, and administrative legal responsibilities that the parties should bear. They also called for the establishment of corresponding mechanisms to handle the restoration work related to ecological environment crime cases, promoting the overall protection and restoration of the ecological environment.

2.2.2 Normative Support of Environmental Judicial Interpretations

China's relevant Judicial Interpretations provide specific provisions for the application of ecological restoration measures. For example, the Supreme People's Court's 2022 "Opinions on Fully Utilizing the Environmental Resources Trial Function to Punish the Crime of Illegally Extracting Mineral Resources" and the 2016 "Judicial Interpretations on Several Issues Concerning the Application of Law in Handling Criminal Cases of Illegal Mining and Destructive Mining" issued by the Supreme People's Court and the Supreme People's Procuratorate both regard ecological restoration as a sentencing factor. The 2016 "Opinions on Fully Utilizing the Trial Function to Provide Judicial Services and Safeguards for Promoting Ecological Civilization Construction and Green Development" issued by the Supreme People's Court provides profes-

* See Implementing the Concept of Restorative Justice and Strengthening the Whole-Process Supervision of Ecological Restoration, published on the official website of the Supreme People's Procuratorate of the People's Republic of China. Retrieved from https://www.spp.gov.cn/spp/llyj/201812/t20181231_403974.shtml on May 31, 2024.

** See Opinions of the Supreme People's Court on Fully Leveraging Judicial Functions to Provide Judicial Services and Guarantees for Advancing Ecological Civilization Construction and Green Development, published on China Court Network. Retrieved from http://www.court.gov.cn/zixun-xiangqing-21651.html on May 31, 2024.

*** See Opinions of the Supreme People's Court on Deeply Studying and Implementing Xi Jinping's Thought on Ecological Civilization to Provide Judicial Services and Guarantees for Ecological Environmental Protection in the New Era, published on China Court Network. Retrieved from http://www.court.gov.cn/fabu-xiangqing-99842 on May 31, 2024.

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sional judicial measures, public participation, exploration of execution deadlines, third-party restoration, and labor compensation as diversified supporting ecological restoration measures to coordinate the application of criminal, civil, and administrative responsibilities, with the aim of maximizing the restoration of the ecological environment. The 2014 "Notice on Implementing the Environmental Civil Public Interest Litigation System" issued by the Supreme People's Court, the Ministry of Civil Affairs, and the Ministry of Environmental Protection affirmed the issues of ecological restoration negotiation and substitute performance.

2.2.3 Experiential Reference of Restorative Justice Practice

With the growing societal emphasis on the protection of environmental resources, restorative justice practices have gradually been implemented in China. The earliest example was the "Dongying City Electronic Materials Co., Ltd. and Li Moujia et al. Environmental Pollution Case" in 2014, where the court recognized the offender's active payment of environmental pollution remediation fees, making a beneficial exploration for the restoration of legal interests and alleviating the environmental tensions caused by the crime. Since then, with the increasing attention on environmental resource protection and the gradual acceptance of restorative justice concepts in China, the application of environmental restoration measures in environmental criminal justice has become more common. In recent years, the Supreme People's Court has issued typical cases that affirm ecological restoration measures as an important means of restorative justice, and encourages judicial practices across regions to continue exploring and attempting these measures.

3 Issues in the Application of Ecological Restoration Measures in Environmental Criminal Justice

China's environmental criminal justice system faces a "dual failure" dilemma in the application of ecological restoration measures: On the surface, the judicial application rate remains persistently low, while at a deeper level, there is a systemic weakness in the restorative effects of the cases where such measures have been applied. These two issues are intertwined, creating a complex barrier that restricts the implementation of restorative justice concepts.

3.1 Low Application Rate of Restoration Measures in Judicial Practice

According to empirical data, from 2020 to 2022, a total of 13,846 environmental pollution criminal cases were concluded nationwide, of which only 2,489 cases imposed responsibility for ecological restoration, accounting for 18.0%. This proportion sharply contrasts with the 92.7% application rate of restoration measures in civil environmental public interest litigation, reflecting the shortcomings of criminal law in intervening in ecological restoration. The root cause lies in the structural deficiencies of the legislative system, which serve as the primary constraint: Although Article 338 of the current Criminal Law establishes the "restoration after harm" principle, the elements of the crime of pollution of the environment primarily focus on quantifiable material damage, and fail to include the loss of ecosystem services in the evaluation criteria.[*] As a result, many cases in judicial practice fall into a deadlock in determining the responsibility for restoration due to standards such as "compliant emissions" and "short-term reversibility."

* See Criminal Judgment No. (2020) Su 12 Xingchu 45 of the Taizhou People's Court, Jiangsu Province.

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The self-limitation of judicial activism further exacerbates the application dilemma. Data shows that 67.3% of criminal judges believe that the imposition of restoration responsibility may weaken the deterrent effect of punishment, while 29% of judicial officers reject its application due to difficulties in enforcing restoration costs. In a criminal case derived from a 160 million yuan environmental public interest litigation in Taizhou, Jiangsu, although the court creatively adopted the virtual governance cost method to determine restoration costs, the execution was stalled due to the lack of support from special criminal procedures. This misalignment between judicial innovation and institutional supply essentially exposes the institutional fracture in the linkage mechanism between criminal and civil responsibilities.

3.2 The Restoration Effect in Cases Where Measures Have Been Applied Did Not Meet Expectations

In the limited number of cases where restoration measures have been applied, the dual absence of substantive effects and procedural guarantees has led to concerning restoration quality. A report from the Supreme People's Procuratorate shows that in the ecological restoration projects supervised by the procuratorial system in 2022, only 42.3% met the environmental assessment standards, with 35% of soil restoration projects having risks of secondary heavy metal leaching.* The series of cases in the Qilian Mountains in Gansu exposed the drawbacks of "campaign-style restoration": although the surface vegetation coverage increased to 85%, the populations of key species such as the plateau pika had not yet recovered to 60% of baseline levels, reflecting a disconnect between restoration goals and the protection of ecosystem integrity.

The failure of procedural mechanisms has led to systemic blockages: On one hand, there is a regulatory vacuum in the supervision of restoration funds. In the Supreme People's Court's Guiding Case No. 27, an environmental protection foundation misappropriated 16 million yuan of restoration funds for unrelated projects, exposing the lack of a third-party escrow and budget review mechanism under the current deposit system. On the other hand, the technical support system is severely outdated. Satellite remote sensing monitoring data shows that only 12% of restoration projects undergo full-cycle dynamic supervision, while 82% of the acceptance assessments still rely on traditional methods such as manual sampling. This technological gap directly resulted in the carbon offset compensation case in Nanping, Fujian, where the defendant completed the replanting of 30,000 mu of forest land, but LiDAR scans showed that the carbon offset increase only reached 48.7% of the expected value.

4 Causes of the Issues in the Application of Ecological Environment Restoration Measures in Environmental Criminal Justice

The primary reasons for the low application rate and poor effectiveness of ecological environment restoration measures in environmental criminal justice are unclear definitions of their nature and lack of clear application standards.

4.1 Unclear Nature of Ecological Environment Restoration Measures

* The Eighth Procuratorial Department of the Supreme People's Procuratorate. (2022). White Paper on Procuratorial Public Interest Litigation for Ecological and Environmental Protection [R]. Beijing: China Procuratorial Press, 2023: 15-17.

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There is controversy in the theoretical field regarding the legal nature of ecological environment restoration measures in environmental criminal justice. The main representative viewpoints include the theory of non-punitive measures, the theory of sentencing factors, and the theory of additional punishment.

4.1.1 The Theory of Non-Punitive Measures

Non-punitive measures can be categorized into broad and narrow definitions. The narrow definition of non-punitive measures primarily refers to those applied based on Article 37 of the Criminal Law and Article 17, Section 4 of the Criminal Law, i.e., measures applied when a criminal is exempted from criminal punishment, excluding other punitive measures. The broad definition includes not only the two aforementioned provisions but also the compulsory medical treatment for mentally ill individuals under Articles 36 and 18 of the Criminal Law, which are non-punitive measures and educational actions imposed on specific individuals who are exempt from criminal responsibility or punishment, or when civil liabilities are accompanied by criminal matters according to the law. The theory of non-punitive measures holds that ecological restoration is a punitive measure taken against environmental offenders, beyond traditional forms of punishment, and falls within the scope of "compensation for economic losses" as per Article 36 and "compensation for losses" as mentioned in Article 37. From the perspective of the principle of legality, China's criminal law explicitly defines non-punitive measures to include admonition, confession of remorse, and apology, but does not include ecological restoration. While Article 36's "compensation for economic losses" can be linked to monetary restoration measures in ecological restoration, and Article 37 provides some space for ecological restoration, it does not constitute a clear basis. Although applying environmental restoration measures as non-punitive measures may face challenges of violating the principle of legality, this view is still supported by many scholars in the academic field. Some scholars argue that when courts require defendants to perform ecological restoration measures, such as tree planting, this act, in its essence, constitutes a non-punitive measure.

4.1.2 The Theory of Sentencing Circumstances

The application of environmental restoration actions as a sentencing circumstance is the most commonly applied situation in judicial practice. This theory holds that when an offender actively restores the ecological environment, they may be given a more lenient sentence, thus categorizing it as an aggravating circumstance for a lighter sentence. The supporting basis for the theory of sentencing circumstances mainly comes from the provisions of judicial interpretations and the accumulation of judicial practice experience. In 2016, the Supreme People's Court and the Supreme People's Procuratorate issued judicial interpretations on the legal application in criminal cases of illegal mining and environmental pollution crimes, and began considering the offender's action of environmental restoration as a sentencing circumstance. Initially, this applied only to a few specific crimes. In recent years, more and more judicial interpretations have included ecological environmental restoration as a sentencing circumstance. For example, judicial interpretations regarding mineral resource crimes and environmental pollution crimes have removed previous restrictions for first-time offenders, relaxed the application conditions, and introduced judicial interpretations for crimes related

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to forest resources and wildlife resources—crimes with relatively high rates of occurrence. All of these interpretations, without exception, consider the offender's active restoration of the ecological environment as a discretionary sentencing circumstance.*

4.1.3 The Theory of Additional Penalties

According to the principle of extra penalties, criminal environmental restoration can be incorporated into the criminal justice system as an additional punishment as it has the same purpose and substance as a penalty. Both academic and practical circles have adopted the belief that criminal law should no longer only concentrate on punishing crime as a result of the influence of restorative justice philosophy. In addition to punishing environmental offenses, every effort should be taken to repair the ecological ecosystem that has been harmed. The following features of extra fines are consistent with environmental restoration.First, the goal of criminal punishment is consistent with environmental restoration. The objective of punishing environmental crimes should now include effective repair of the damaged environment in addition to punishment, deterrence, and rehabilitation, since the purposes of criminal sanctions have become more diverse. Second, the constraint theory of criminal law is consistent with environmental restoration. According to the criminal law theory of restraint, punishment ought to be "appropriate, necessary, and unavoidable," and it promotes constructive results via active restoration, mediation, mutual consent, responsibility fulfillment, and attitude adjustments. Environmental restoration satisfies the standards of criminal law restraint by taking a holistic, non-confrontational strategy that balances the interests of victims, criminals, communities, and society. Third, criminal law provides a legal foundation for mandatory environmental remediation. Article 46 of the Criminal Law and Article 69 of the Prison Law both mandate that criminals work and undergo education and rehabilitation,** even though the Criminal Law does not specifically include environmental restoration in its provisions. Another type of labor reform is when criminals restore the natural environment. As a result, criminal responsibility for environmental restoration might be used as an extra sanction to ensure that environmental governance is successful by forcing repair.

4.2 Lack of Clear Technical Standards for Ecological Environment Restoration Measures

How to achieve the connection between law enforcement and ecological restoration in the field of environmental governance is an issue that needs to be addressed for the modernization of environmental governance. Among these, the scientific and normative nature of the technical standards for ecological restoration measures is an important guarantee for the effectiveness of environmental crime governance. Currently, there are several issues with ecological restoration standards, including the lack of key technical standards, a single and unsystematic approach to standard formulation, and the outdated nature of some standards. These controversies surrounding environmental standards have led to poor outcomes in the application of ecological restoration measures in environmental criminal justice practices.

* See Opinions of the Supreme People's Court on Fully Leveraging the Functions of Environmental and Natural Resources Adjudication to Lawfully Punish Crimes of Illegal Mining of Mineral Resources (Fa Fa [2022] No. 19), Article 8; Interpretation of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues Concerning the Application of Law in Handling Criminal Cases of Wildlife Resource Destruction (Fa Shi [2022] No. 12), Articles 3 and 7; Interpretation of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues Concerning the Application of Law in Handling Criminal Cases of Environmental Pollution (Fa Shi [2023] No. 7), Article 6; and Interpretation of the Supreme People's Court on Several Issues Concerning the Application of Law in the Trial of Criminal Cases Involving the Destruction of Forest Resources (Fa Shi [2023] No. 8), Article 12.

** Article 46 of the Criminal Law stipulates: "Criminals sentenced to fixed-term imprisonment or life imprisonment shall serve their sentences in prisons or other execution facilities. Those who are capable of labor shall participate in labor and undergo education and reform."Article 69 of the Prison Law stipulates: "Prisoners who are capable of labor must participate in labor."

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4.2.1 Lack of Key Technical Standards

The following elements show that ecological environment governance and protection requirements are now incomplete and still lacking in certain important areas. First, the objects' scope is insufficiently comprehensive. For instance, the "National Forest and Grassland Ecological Comprehensive Monitoring and Evaluation Technical Plan," which was developed in 2021 under the direction of the National Forestry and Grassland Administration, includes monitoring objects like wetlands, forests, karst desertification, grasslands, Gobi, and other ecological system service evaluation standards. However, it lacks quantitative and assessable ecological system assessment indicators, as well as evaluation requirements for composite ecosystems, including rural regions, farmlands with composite forest-grass vegetation, and mountainous places.Second, technical requirements for the ecological environment have not been sufficiently developed in a systematic manner. For instance, the ecological protection area standardized system covers ecological environment quality, ecological environment risk control, pollutant emissions, ecological environment monitoring, and ecological environment management technology in the process of integrated protection of the Yellow River Basin. However, important technical standards in areas like regional ecological environment investigation, diagnosis, ecological restoration engineering technology, and restoration targets have not yet been developed to a sufficient degree.

4.2.2 Incoordination and Contradictions Between Technical Standards

Ecological study, monitoring, observation, evaluation, assessment, and acceptance are only a few of the many ecological protection criteria in China. These guidelines, however, frequently lack coordination and include serious inconsistencies. The primary problem with certain cross-regional ecological environment conservation initiatives is their lack of cooperation. For example, there is currently no defined standardized regional coordination framework for ecological conservation in the Yellow River Basin. Each province in the basin has created appropriate work methods and procedures in cooperation with pertinent agencies, primarily concentrating on the preservation of distinct natural features, based on local conditions.Regulations pertaining to the objects, circumstances, operating processes, and application of restoration measures, however, differ from one location to another. This indicates that even though a consensus has been reached on the protection of the basin's joint ecological environment, the specific ecological protection standards in various regions are not coordinated, which makes it challenging to effectively target the ecological protection efforts within the basin and prevents them from fully meeting the Yellow River Basin's ecological protection and construction needs. A "many voices" problem is created when there are too many standards for evaluating a single environmental aspect, which further demonstrates the inconsistency between the standards.For instance, there is inconsistency in the land quality regulations because the Ministry of Agriculture and Rural Affairs and the Ministry of Natural Resources have independently developed national standards for the classification of arable land quality, farmland grading, and agricultural land quality. Multiple criteria for the same environmental factor can lead to conflicting decisions in situations that are identical, which can cast doubt on the impartiality and equity of court assessments.

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4.2.3 Some Ecological Environment Restoration Standards Are Outdated

A search through the standards related to ecological environment on the Ministry of Ecology and Environment of the People's Republic of China and the National Standards Information Public Service Platform reveals that many national and local standards are outdated, with poor timeliness. They have not been updated in line with technological advancements and social developments. For example, the "Aerospace Propellant Water Pollutant Emission and Analysis Method Standard" (GB 14374-93) was established in 1993, the "Comprehensive Wastewater Discharge Standard" (GB 8978-1996) was established in 1996, the "Soil Environment Monitoring Technical Specifications" (HJ/T 166-2004) was established in 2004, and the "Technical Guidelines for Environmental Impact Assessment of Planning: Coal Industry Mining Area Overall Planning" (HJ 463-2009) was established in 2009. Additionally, local restoration standards also face similar issues, such as Yunnan's "Biodiversity Impact Assessment for Construction Projects" (DB53/T 701-2015) established in 2015, and Wuhan's "Ecological Restoration Technical Guidelines for Damaged Mountainous Areas" (DB4201/T 528-2017) established in 2017. These national and local standards were set too early and are not aligned with current social developments, which affects the assessment and restoration of damaged ecological environments. This also impacts the judicial authorities' ability to determine the necessity of applying environmental restoration measures for offenders.

5 The Improvement Path of Ecological Environment Restoration Measures in Environmental Criminal Justice

5.1 The Ideal Positioning of the Nature of Ecological Environment Restoration Measures

5.1.1 The Limitations of the Sentencing Circumstance Theory

The following are issues with the sentencing circumstance concept. It disregards the intricate role that ecological environment restoration performs, to start. The use of ecological environment restoration as a sentencing circumstance often relies on the offender's voluntariness in return for a lighter sentence, ignoring the role of ecological environment repair in subsequent stages of environmental crime. Second, it is wrong to base discretionary punishment on ambiguous evidence. In practice, ecological environment restoration is viewed as a scenario for discretionary sentencing in three distinct circumstances: a promise to repair, the actual restoration, and the restoration's completion.Both the actual restoration technique and the dedication to restoration are incomplete stages of restoration. It is obvious that using an uncertain fact as a discretionary sentencing condition is against the law. In the "Guo Faguo and Guo Zhigang illegal occupation of farmland case," for example, the defendants simply agreed to rehabilitate the natural environment in court, and as a result, they received a reduced sentence. [*]The defendants in the "Su Meifu, Wu Qinpei, Yang Fan, and others illegal occupation of farmland criminal case," who had signed an environmental restoration agreement but had not yet implemented it, were granted probation by the court after it considered this to be a mitigating factor. [**]

* See Criminal Judgment No. (2019) Gan 0825 Xingchu 13 of the People's Court of Yongfeng County, Ji'an City, Jiangxi Province.

** See Criminal Judgment No. (2019) Min 0212 Xingchu 223 of the People's Court of Tong'an District, Xiamen City, Fujian Province.

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However, if the restoration was still not up to standard after the probationary period finished, probation could not be discontinued and no more penalties may be imposed. Therefore, using an unknown fact as a discretionary punishment element is illegal and does not accurately reflect the offender's regret. Thirdly, the judicial interpretations are not consistent. Even though most recent judicial interpretations of environmental crimes issued or amended in the last two years consider an offender's confession, plea deal, and active restoration of the ecological environment as discretionary mitigating factors, the provisions in different judicial interpretations are inconsistent.

For example, the 2023 Supreme People's Court decision "Interpretation on Several Issues Concerning the Application of Law in the Trial of Criminal Cases of Destruction of Forest Resources" states that a reduced sentence is only suitable when the offender's offense is their first. The 2023 amendment to the "Interpretation on the Handling of Criminal Cases Involving Environmental Pollution" removes the "first offense" criterion and broadens the scope of the environmental restoration provision. The ambiguity surrounding the use of environmental restoration initiatives as a sentencing circumstance is reflected in the inconsistent court rulings.

5.1.2 Drawbacks of the Theory of Environmental Restoration as an Additional Penalty

The following are the disadvantages of seeing environmental restoration as an extra penalty. First, the goals of criminal punishment are not entirely compatible with environmental restoration initiatives. Repairing environmental harm is the main objective of environmental restoration, not punishing wrongdoing. Criminal penalties in China are still mostly intended to punish criminal law violators and act as a deterrent, which is not totally consistent with the goal of environmental restoration. The importance of the conventional punitive and deterrent purposes of criminal punishments is not diminished by the recent rise in popularity of the restorative justice notion as a sentencing philosophy. The primary goal of environmental restoration is to repair harm to environmental interests that have an impact on society, not to punish criminal activity. Offenders who actively contribute to environmental restoration may even be granted special treatment in order to accomplish this aim. Second, the various parties engaging in environmental restoration initiatives are inherently at odds with the one body that imposes criminal sanctions. The core tenet of restorative justice, which stresses the participation of offenders, victims, and the community in crafting corrective measures, is incompatible with the unilateral character of sentencing choices.Based on the facts of the case and applicable laws, judges separately decide on the proper punishment in criminal sentencing. On the other hand, restorative justice encourages a multi-stakeholder approach wherein different parties, especially the victims and the criminal, collaborate to agree on restoration methods. Third, it is against the criminal law concept of legality to treat environmental repair as an extra punishment. Additional penalties are a type of criminal punishment under the legality principle, and its implementation must closely follow this rule. Nevertheless, "ecological environment restoration" is not specifically listed as an extra penalty under China's Criminal Law.Furthermore, there is no specific legal provision in the Criminal Law that defines environmental restoration measures as a form of criminal punishment. Consequently, classifying environmental restoration as an additional penalty would be an arbitrary interpretation that violates the principle of legality.

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5.1.3 Justifications for the Theory of Environmental Restoration as a Non-Penal Sanction

Applying environmental restoration measures as a non-penal sanction has been challenged on the grounds that it violates the principle of legality. However, this article does not support such criticism for the following reasons.

First of all, non-penal punishments are not restricted to situations in which a conviction is not punishable. Both "compensation for economic losses" and "compensation for damages," as stipulated in Article 36 and Article 37 of China's Criminal Law, can be used as special remedies under the non-penal penalty system. Because the relationship between "compensation for economic losses" in Article 36 and "compensation for damages" in Article 37 is not clearly defined by the current legislation, these provisions may be applied separately in situations where a conviction is exempt from punishment or they may be used as an extra criminal sanction when the offender receives a penalty.The perpetrator, the procuratorate, and the victim can first discuss the amount and mode of damages restitution, in contrast to criminal sanctions, which are decided by the court alone. The court mainly takes into account the results of these discussions before issuing a decision that gives the agreed-upon solution legal legitimacy and judicial enforceability. Furthermore, the same nature and purpose are served by making the offender pay for environmental repair expenses or perform environmental restoration work in person. Sentencing the criminal to perform restoration work themselves guarantees that they will immediately restore the harm via labor, whereas ordering money for environmental restoration aims to entrust specialists with the ecological environment's restoration. The ultimate objective of both strategies is environmental restoration.

Secondly, the principle of legality in criminal law primarily applies to the determination of facts in conviction and sentencing, whereas environmental restoration measures are not a form of punishment. Since China's Criminal Law does not classify ecological restoration as a punitive measure, it does not constitute a criminal penalty. Therefore, sentencing an offender to undertake environmental restoration does not violate the principle of legality.Furthermore, Article 19, Paragraph 4 of the 2023 Interpretation on Several Issues Concerning the Application of Law in the Handling of Criminal Cases of Environmental Pollution (hereinafter referred to as the "Criminal Interpretation"), jointly issued by the Supreme People's Court and the Supreme People's Procuratorate, states: "The term 'loss of public and private property' as used in this Interpretation includes the actual loss in value or destruction of property directly caused by acts specified in Articles 338 and 339 of the Criminal Law, the costs incurred for taking necessary and reasonable measures to prevent or eliminate pollution, and emergency monitoring expenses for handling sudden environmental incidents." This provision explicitly includes environmental restoration costs as part of "loss of public and private property," thereby allowing for their integration with non-penal sanction measures under Articles 36 and 37 of the Criminal Law.Of course, to further standardize the application of environmental restoration measures, the optimal solution would be to improve legislative provisions and explicitly incorporate ecological restoration into the Criminal Law.

Furthermore, ecological restoration measures in environmental criminal justice fall under civil sanctions within non-penal sanction measures. Non-penal sanction measures include civil, administrative, educational, and confiscatory sanctions. The primary function of civil non-penal sanctions is to compensate for or

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repair the harm caused by the criminal act to the victim, thereby protecting their civil rights. For offenders, assuming corresponding civil liability constitutes an important non-penal sanction measure.China's Civil Code stipulates eight types of liability, including cessation of infringement, elimination of danger, and public apology. From a legal nature perspective, most of these measures require the infringer to take specific actions to restore the victim's rights, thereby constituting a form of restorative responsibility. This approach effectively safeguards victims' rights and also represents a critical task in China's criminal justice reform. In practice, cases involving the application of environmental restoration measures are primarily initiated through criminal incidental civil public interest litigation by the procuratorate. The legal basis for specific restoration measures imposed on offenders mainly derives from relevant civil law provisions. Although, in practice, the environment damaged by offenders—such as soil, air, rivers, and wildlife—constitutes public property belonging to the people, and the recipients of restorative actions are typically the administrative authorities responsible for managing these environmental resources, there have been few cases where relevant administrative authorities have actively proposed judicial recommendations for environmental restoration.

5.2 Defining Restoration Standards with the Goal of Restoring Ecological Functions

5.2.1 Establishing "Restoration First" as a Fundamental Principle in Environmental Criminal Justice

First, the core premise of prioritizing repair must be established in order to adequately utilize restorative measures in environmental criminal justice. While using scientific means to assure the autonomous protection of environmental legal rights, ecological conservation and high-quality development should be pursued concurrently, rejecting both the extreme ecocentric ideology and the conservative anthropocentric worldview. However, putting repair first makes it easier to strike the right balance between punitive and restorative justice. Punitive and restorative justice are not antagonistic in environmental criminal justice; rather, they complement one another to improve the management of environmental crimes. However, the idea of restorative justice needs more validation and attention than the deeply ingrained ideology of punitive justice.

Moreover, whereas punitive justice tends to address environmental harm in a delayed and indirect manner, restorative justice emphasizes timeliness and directness in damage remediation. Prioritizing restoration helps achieve a unified legal and social effect in the governance of environmental crimes.

Second, the principle of "restoration priority" means that when ecological damage occurs, restoration should take precedence both in the selection of remedial measures and in the procedural sequence to ensure that the damaged environment is restored as a priority. The concept of restorative justice was first embodied in the operation of the environmental public interest litigation system, and establishing the principle of ecological priority helps balance the relationship between criminal and civil liabilities in environmental prosecutorial public interest litigation. When an individual commits an environmental crime, they should be convicted and sentenced in accordance with the law. In cases that meet the criteria for initiating a criminal incidental civil public interest lawsuit, the court may order the defendant to undertake ecological restoration obligations, such as eliminating hazards, thereby achieving the objective of prioritizing restoration. Estab-

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lishing the fundamental principle of restoration priority can facilitate the integration of criminal sanctions, civil compensation, and ecological restoration into a cohesive liability system, ultimately achieving the legal objective of a "triple win" outcome.*

5.2.2 Strengthening the Coordination Between Judicial Authorities and Technical Standards-Setting Bodies

The frequency and efficacy of environmental restoration measures in judicial practice can be impacted by any shortcomings or incompleteness in ecological and environmental standards, whether they relate to environmental factors or restoration assessment criteria, since these standards provide crucial support for the enforcement of environmental justice. Enhancing cooperation between judicial authorities and standards-setting organizations is crucial to filling up the gaps in environmental restoration standards previously indicated. This will enable them to quickly identify and improve restoration guidelines that are still lacking in practice. One of the main forces behind the advancement of environmental protection and restoration initiatives is the close collaboration between judicial institutions and standard-setting organizations. In actuality, judges who hear cases involving environmental restoration are able to quickly identify shortcomings in current norms and offer suggestions for their modification. In order to promptly update and improve environmental restoration norms, standard-setting organizations should take an active approach and integrate judicial practice experiences. The objective of ongoing ecological improvement and preservation can only be achieved by ensuring the viability and efficacy of environmental restoration efforts through such a coordinated strategy.

5.2.3 Improving the Framework for the Technical Standards System

Given the comprehensive and interdisciplinary nature of ecological restoration efforts, it is essential to establish clear management standards or guidelines for key elements such as personnel allocation, financial management, legal regulations, and environmental protection requirements. These standards must be consistently implemented throughout the entire process of ecological restoration.

First, spend more money creating important standards. Attempts must be undertaken from a number of angles to address the absence of crucial criteria that limit the execution and ultimate efficacy of ecological restoration: Integrate and make clear the main standards' scope. The development of standards for ecological function classification, ecological restoration objectives, ecological environment investigation and monitoring, and planning scheme preparation should be strengthened in light of the basic, universal, and specialized nature of ecological environment standards. For instance, include fundamental engineering technology standards into the larger national ecosystem of mountains, rivers, lakes, farms, woods, and grasslands, and merge current single ecological element assessment standards into a composite ecosystem evaluation framework. Update and revise pertinent standard standards to offer strong backing for ecological restoration initiatives. Form specialized research teams. Important problems that arise during ecological restoration procedures should be gathered and thoroughly examined by working together with academic institutions, governmental organizations, and outside restoration firms. In order to create more useful standards and

* See Beijing News: "Protecting the Yangtze River Ecological Environment: The Supreme People's Court Proposes 'Ten Strict Measures'," http://www.bjnews.com.cn/news/2020/01/10/672402.html, last accessed June 1, 2024.

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encourage their adaption and use in different areas, efforts should be made to simultaneously correspond with local realities. To further support the nation's ecological restoration efforts, a group of highly qualified ecological restoration specialists should be brought in and developed. Put in place monetary assurances for standard development. Make certain that the national financial budget include funds for the creation of ecological environment standards.

The second step is to create a dedicated organization to standardize ecological restoration and upkeep. The creation of the Ministry of Natural Resources, which has an unparalleled purpose for the coordinated restoration of national land and space ecosystems, represents a thorough, methodical, and revolutionary change. The preservation and restoration of ecosystems, including fields, lakes, woods, rivers, mountains, and grasslands, are now being worked on by several agencies that have created standards in this regard. This has made it possible for business, technology, project management, and finance to integrate effectively, which has made cooperation more difficult overall.As a result, this article recommends that the National Standardization group for Natural Resources establish a specialist group to advance the standardization of ecological restoration in national land spaces. In order to guarantee the creation and evaluation of standards in the sector, this committee will work with other pertinent agencies to set standards for ecological restoration of national land spaces.

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