

Challenges and Solutions in the Judicial Determination of Environmental Monitoring Data Tampering

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Abstract: China currently faces the dual challenge of economic development and environmental protection. Accurate and reliable environmental monitoring data is crucial for environmental protection efforts; the harm caused by the “falsification” of automated monitoring data is greater than that caused by ecological and environmental pollution itself. In the face of a constant stream of cases involving the falsification of environmental monitoring data, China has been making continuous efforts to address the issue. The introduction of numerous targeted laws, regulations, and institutional rules reflects the Chinese government’s commitment to addressing data fabrication in the environmental monitoring sector. However, at the judicial level, challenges persist, including conflicts within the regulatory framework and difficulties in determining the authenticity, relevance, and admissibility of environmental monitoring data when used as evidence. It is necessary to conduct systematic research on judicial determination issues, moving beyond the traditional research focus on administrative supervision. By approaching the issue from the perspective of judicial determination, we can construct a four-dimensional analytical framework covering responsible parties, evidentiary validity, types of conduct, and causality. This framework will provide guidance for judicial adjudication that combines theoretical depth with practical applicability, thereby promoting the formation of a long-term mechanism that ensures people dare not, cannot, and do not want to fabricate data, and contributing to the construction of a Beautiful China. This paper focuses on the challenges in the judicial determination of fraudulent practices involving environmental monitoring data and is structured in three parts: Part One examines the causes of such fraudulent practices; Part Two addresses the challenges in their judicial determination; and Part Three outlines the normative approaches to determining such fraudulent practices.

Keywords: Environmental monitoring; Fraudulent practices; Judicial determination.

1. Introduction

The Fourth Plenary Session of the 20th CPC Central Committee clearly stated that the next five years will be a transitional phase and a critical period for advancing the construction of a Beautiful China from the current foundation toward higher goals and striving to achieve comprehensive improvements in ecological and environmental quality; we must therefore adhere to the overarching principle of building a Beautiful China. The recommendations for the 15th Five-Year Plan, reviewed and adopted at the plenary session, systematically outline the task of “accelerating the comprehensive green transformation of economic and social development and building a Beautiful China” in a dedicated chapter. This not only reflects strategic planning and forward-looking arrangements at the national level but also further highlights the unwavering attention and firm resolve of the Party Central Committee, with Comrade Xi Jinping at its core, toward ecological and environmental protection. At the same time, the compilation of China’s Ecological and Environmental Code has made breakthrough progress in 2025, with the draft code unveiled in its entirety. The compilation of the Ecological and Environmental Code marks the entry of China’s ecological and environmental rule of law into a new era of “codification.” The governance of falsified monitoring data has been incorporated into a more systematic and rigorous legal framework, providing a macro-level institutional context for judicial determination research.

Environmental protection is a critical task that cannot be overlooked in China’s development in the new era, and achieving a harmonious balance between market-oriented economic development and ecological and environmental protection is a major challenge facing the country in this new

era. As the fundamental pillar of environmental management, the quality of monitoring data not only directly affects public trust in the government’s environmental protection decisions but also has a far-reaching impact on the in-depth advancement of ecological civilization. The authenticity and accuracy of environmental monitoring data directly affect the scientific basis of government environmental management decisions and the credibility of its statutory functions, thereby exerting a profound influence on the overall progress of ecological civilization construction.

China has established a multi-tiered, systematic legal framework to regulate data falsification in environmental monitoring: At the legislative level, foundational laws such as the Environmental Protection Law, the Air Pollution Prevention and Control Law, and the Water Pollution Prevention and Control Law clearly define the regulatory requirements, primary responsibilities, and joint liabilities for monitoring activities, thereby establishing a comprehensive system of obligations spanning the entire chain from data collection to supervision; At the administrative regulation level, the Regulations on Ecological and Environmental Monitoring, which took effect on January 1, 2026, serves as the first national-level administrative regulation. It innovatively classifies monitoring into public and self-monitoring categories, establishes for the first time the legal obligation for enterprises and institutions to establish data quality management systems, and replaces the decentralized management model with unified supervision, thereby achieving institutional reform; At the level of normative documents and departmental regulations, the “Measures for the Determination and Handling of Falsification of Environmental Monitoring Data” systematically defines 27 types of falsification scenarios. Combined with the

“Administrative Measures for Environmental Monitoring” the “Measures for the Administration of Pollutant Discharge Permits,” the “Measures for Administrative Penalties in the Field of Ecology and Environment,” as well as relevant judicial interpretations and local regulations, it further refines the criteria for determination, penalty rules, and judicial coordination, thereby providing a comprehensive legal basis for the precise definition, attribution of liability, and punishment of acts of falsification of environmental monitoring data.

2. Causes of Fraudulent Environmental Monitoring Data

The causes of data falsification in environmental monitoring are multifaceted, driven by both subjective motives and objective conditions, and result from the interplay of multiple factors. Specifically, this can be analyzed from the following four perspectives:

2.1. Subjective Incentives Driving Corporate Environmental Data Fraud

If the fines imposed under environmental enforcement are significantly lower than the costs enterprises would incur for equipment investments and technological upgrades required to meet their environmental obligations, this objectively creates a perverse incentive—namely, that the cost of compliance exceeds the penalty for non-compliance. This imbalance in the cost structure constitutes an intrinsic incentive for enterprises to engage in data falsification.

2.2. Companies’ Objective Constraints and Local Governments’ Choice of “Shortcuts”

The reason why data falsification persists in the field of environmental governance lies in the fact that it aligns with the “cost-benefit” rationality of the actors involved: for enterprises, falsification allows them to avoid the high costs of operating pollution control facilities with minimal investment; for local governments, it enables them to meet the performance targets set by higher authorities through data manipulation. Although it is difficult to completely separate profit-seeking motives from the above, the deeper underlying cause is the reluctant compromise made by the actors under the pressure of the current system.

2.3. Opportunities for Data Fabrication Amid Regulatory Oversights and Conflicts of Interest

Currently, China’s corporate environmental monitoring primarily relies on two approaches: commissioned monitoring and supervisory monitoring. Under the commissioned monitoring framework, a cooperative relationship based on market contracts is established between enterprises and third-party operation and maintenance agencies. Since enterprises are often required to purchase monitoring equipment themselves, third-party agencies are effectively constrained at the operational level by the enterprises’ willingness to pay and contractual obligations. This dependency allows enterprises to exert control over the handling of monitoring data during the “price negotiation” process between the two parties.

As a routine regulatory tool used by environmental protection authorities to monitor key pollution sources, surveillance monitoring has revealed multi-layered

institutional shortcomings in practice. First, at the foundational level, insufficient financial investment has led to weak monitoring capabilities at the grassroots level, with data collection processes lacking standardized and professional support. Second, at the enforcement and control level, the absence of comprehensive quality control mechanisms, blind spots in higher-level oversight of monitoring procedures, and inadequate equipment protection measures have created opportunities for on-site operators to manipulate data generation. More critically, at the level of power allocation, local governments and environmental protection departments, due to their excessive access to monitoring equipment and data, effectively hold the dominant authority over data handling—station managers may privately retain keys to station facilities or obtain passwords to monitoring systems. Such high-level access objectively creates opportunities for data fabrication.

3. Challenges in the Judicial Determination of Fraudulent Environmental Monitoring Data

3.1. Ambiguity in the accreditation of environmental monitoring agencies

Environmental monitoring agencies fall into two categories: government-affiliated agencies and private third-party agencies. Their core functions involve carrying out specialized technical activities—such as on-site monitoring, sample collection, data processing, and the preparation of monitoring reports—as designated or commissioned by environmental protection authorities or polluting entities.

In the process of modernizing environmental governance, environmental monitoring agencies are playing an increasingly important role. However, due to shortcomings in current laws and policies, there are gray areas regarding the scope of functions and operational boundaries of some agencies. These institutional deficiencies not only compromise the consistency of monitoring data quality and the reliability of monitoring results, but also undermine the overall effectiveness of environmental governance to a certain extent. Within the realm of environmental monitoring, there is insufficient disclosure of relevant information regarding the specific scope of operations, technical capabilities, and certification status of monitoring agencies. Consequently, the public and stakeholders are unable to fully understand the true state of their operations. The existence of these information barriers not only hinders the effective functioning of external oversight mechanisms but also fosters data distortion and fraud, thereby triggering a crisis of public trust in environmental monitoring efforts.

In the practice of qualification management for environmental monitoring agencies, the current system still needs to be refined with regard to the division of responsibilities across different monitoring fields. Specifically, regarding monitoring categories such as emission sources, air quality, water quality, and soil, there is currently a lack of clear and specific regulatory guidelines regarding the scope of monitoring projects that agencies of various qualification levels are permitted to conduct, as well as the boundaries of their responsibilities and limitations on their capabilities. This gap in regulatory provisions objectively creates room for monitoring agencies to operate beyond their authorized scope, which may jeopardize the

objectivity and credibility of monitoring data.

3.2. Ambiguity in determining the “three characteristics” of environmental monitoring data as evidence

In recent years, with the deepening development of evidence law theory, the “authenticity, relevance, and admissibility” of evidence have become the mainstream theoretical framework for defining the fundamental characteristics of evidence. As a specific form of evidence, environmental monitoring data similarly possesses these three attributes: authenticity, relevance, and admissibility[1]. From the perspective of evidence law, objectivity (i.e., authenticity) constitutes the essential attribute of environmental monitoring data as evidence, and together with relevance, it forms the substantive content of the evidence; meanwhile, legality serves as a formal requirement of evidence, providing procedural safeguards for the realization of objectivity and relevance.

First, the challenge of establishing authenticity. In environmental monitoring matters, a monitoring report with comprehensive content and accurate, error-free data is the fundamental prerequisite for it to serve as valid evidence. In practical scenarios, if a monitoring report is to be used as evidence, it is essential to thoroughly document key information such as the origin of the assignment. More than ten items of information—including the origin of the task, the operating conditions of the pollution source, sampling and analysis parameters, monitoring results, and details of the three-tier review—must be fully documented to ensure both formal compliance and evidentiary validity. Among the monitoring reports excluded in judicial practice, the vast majority suffer from incomplete or inaccurate information, and omissions or errors in the signatures and seals of the three-tier reviewers also occur frequently, directly affecting the report’s evidentiary validity [2].

Second, the dilemma of determining relevance. The relevance of evidence—also known as materiality—requires a substantive connection between the evidence and the facts of the case to be proven [3]. Taking automatic monitoring data as an example, the determination of its relevance is based on technical compliance. First, it must be confirmed that the monitoring equipment is installed at a discharge outlet that complies with environmental protection regulations, and that the outlet is equipped with a complete set of automatic monitoring equipment and systems; second, the data transmission links between the monitoring equipment, the monitoring system, and the control center must be verified as stable and unobstructed. When all the above technical requirements are met, the data collected by online monitoring equipment establishes the legally required correlation with the enterprise’s discharge activities. Accordingly, the authenticity and reliability of the monitoring data are guaranteed, and it can be presumed that a correlation exists between the data and the facts of discharge to be proven[4]. In the practical application of environmental monitoring reports, a typical characteristic of a lack of such correlation is the presence of contradictions or inconsistencies in the recorded content. Such inconsistencies at the information level directly and substantially impact the determination of core facts, including the identification of pollutant types, the confirmation of the nature of discharge activities, and the inference of causal relationships regarding pollution. From the perspective of the information generation process, the raw

data upon which monitoring reports are based typically originate from multiple sources, including enterprises, operators of pollution control facilities, and environmental inspectors. Due to the complex and variable nature of on-site environments, raw information is prone to interference during collection and transmission, leading to data confusion or deviation. Consequently, the final monitoring reports inevitably suffer from inconsistencies, thereby undermining their evidentiary relevance [5].

Third, the challenges in establishing admissibility. When environmental monitoring data is used as evidence, its admissibility faces multiple challenges. First, there are doubts regarding the compliance of the monitoring entities’ qualifications. Some agencies face issues such as expired metrological certification, issuing data beyond their authorized scope, or employing uncertified personnel, which directly undermine the legal foundation of the evidence. Second, monitoring procedures lack standardization. Frequent occurrences—such as unreasonable sampling site selection, non-compliant sample storage and transportation, incorrect selection of monitoring methods, or inconsistencies with the methods referenced in evaluation standards—make it difficult for the data generation process to meet statutory requirements. Third, the validity of monitoring instruments is difficult to guarantee. Issues such as using equipment outside its calibration validity period, discrepancies between equipment models and calibration certificates, or expired calibration certificates result in monitoring data being excluded due to the illegality of the instruments. Fourth, formal requirements for monitoring reports are missing; omissions in the information of the preparers, reviewers, and issuers, or missing signatures—or even errors in the three-tier review process—directly affect the admissibility of the data as evidence. Furthermore, disputes regarding the legality of sampling procedures are particularly prominent. As the starting point of monitoring activities, violations during the sampling phase—such as improper sampling locations or inadequate sample storage—will result in subsequent data losing its evidentiary value. These challenges collectively lead to significant uncertainty regarding the legal recognition of environmental monitoring data in judicial practice.

3.3. Conflicts in the Standards for Determining Fraudulent Conduct

Article 2 of the “Measures for the Determination and Handling of Falsification of Environmental Monitoring Data” clearly states that acts of fraud must satisfy both objective and subjective criteria: objectively, the act must violate the legal provisions of relevant national environmental monitoring technical standards; subjectively, the perpetrator must act with “intent.” Specific forms of such conduct include personally tampering with or fabricating data, as well as instructing others to commit such acts. Article 4 employs an enumerative legislative approach, setting forth thirteen specific scenarios for the tampering of monitoring data, thereby categorizing common fraudulent practices observed in practice. This regulatory model helps enhance the provisions’ practical applicability and the consistency of law enforcement. It is worth noting that, in defining the subjects of fraudulent acts, the Measures specify that this includes not only environmental monitoring agencies but also fraudulent acts committed by enterprise employees acting on their own initiative.

On June 5, 2023, the Supreme People’s Court issued the

“Interpretation on Several Issues Concerning the Application of Law in the Trial of Cases Involving Ecological and Environmental Tort Liability Disputes” (hereinafter referred to as the “Interpretation”). For the first time, this Interpretation clarifies, from the perspective of judicial practice, the specific forms of fraudulent conduct by environmental service providers. Article 21 of the Interpretation stipulates the following regarding the joint and several liability of environmental service providers: Where an aggrieved party, pursuant to Article 65 of the Environmental Protection Law, requests that environmental impact assessment agencies, environmental monitoring agencies, and entities engaged in the maintenance and operation of environmental monitoring equipment and pollution control facilities bear joint and several liability with other polluters, the people’s courts shall grant such requests. It follows that the entities capable of committing fraudulent acts are not limited to environmental monitoring agencies but also include other environmental service providers, such as environmental impact assessment agencies. There is a significant difference between the Interpretation and the Measures: the former is a judicial interpretation document that provides typological definitions of fraudulent acts based on the distinct attributes of environmental service providers; the latter, as a departmental regulation, does not impose uniform restrictions on the scope of responsible entities.

The “Interpretation” specifies only the two types of fraudulent conduct listed above and explicitly states that environmental monitoring agencies are the entities responsible for these two types of fraudulent conduct. Therefore, the fraudulent conduct defined in the “Interpretation” is equivalent to that defined in Article 65 of the Environmental Protection Law. From the perspective of the “Measures for Handling,” while it adopts a method of enumerating specific acts of fraud, it does not restrict environmental monitoring agencies as the sole subjects of these three types of fraudulent acts. However, within the context of the Supreme People’s Court’s “Interpretation,” regarding whether acts other than the four scenarios specified in the ‘Interpretation’ constitute “fraudulent acts,” judicial practice still relies on the further discretion of judges.

Although the “Interpretation” issued by the Supreme Peoples Court sets forth general provisions regarding fraudulent conduct, the lack of supporting specific implementation rules may lead to inconsistent enforcement standards or even a regulatory vacuum at the application level. In contrast, while the “Measures for Handling” adopt a list-based approach to comprehensively define the specific manifestations of fraudulent conduct, they do not establish targeted regulatory provisions specifically addressing fraudulent acts committed by environmental monitoring institutions as a distinct category of entities. This structural disparity between the two sets of determination rules may lead to inconsistent enforcement standards in practice, thereby undermining the effectiveness of the regulatory framework [6].

3.4. Difficulties in applying joint and several liability between environmental monitoring agencies and clients

Article 65 of the Environmental Protection Law stipulates that if a monitoring agency engages in fraudulent practices—such as fabricating or tampering with data—while providing environmental services, and such actions thereby cause or

conceal the consequences of environmental pollution or ecological damage, the agency shall, in addition to receiving the corresponding penalties, bear joint and several liability for damages together with other parties responsible for the pollution.

Current legislation has not yet clearly defined the specific methods or types of liability under which environmental monitoring agencies bear joint and several liability. It is worth noting that quasi-joint liability has not been established as a statutory form of joint liability within China’s legal system. Consequently, the term “quasi-joint liability” rarely appears in practice; rather, it exists primarily in cases involving multiple tortfeasors [7]. Instead, it exists in legal theory and practice as a supplementary form of liability. Precisely for this reason, judicial rulings that directly invoke the concept of “quasi-joint and several liability” are relatively rare; this form of liability is typically implicit within the reasoning of judgments in cases involving multiple tortfeasors. Against this backdrop, the issue of liability allocation between environmental monitoring agencies and their clients remains a critical topic that urgently requires clarification.

4. Solutions for the Judicial Determination of Fraudulent Environmental Monitoring Data

4.1. Establish a unified procedure for the accreditation of environmental monitoring agencies

According to the provisions of the “Opinions on Deepening Environmental Monitoring Reform and Improving the Quality of Environmental Monitoring Data,” environmental monitoring institutions must obtain accreditation and establish a comprehensive quality control system. As a critical step in the accreditation process, on-site evaluations serve to verify the technical capabilities of these institutions through on-site inspections. Through these on-site visits, evaluators and experts can promptly identify various operational issues and urge the institutions to rectify them; this is precisely why on-site evaluations are regarded as the cornerstone of the accreditation process.

First, establish a periodic re-evaluation mechanism. The core of this mechanism lies in breaking away from the current path dependence in qualification certification—which emphasizes entry requirements over oversight—and transforming static licensing into dynamic, ongoing supervision, thereby curbing the potential for data fabrication at its source. The institutional value of this approach is primarily reflected in the dynamic tracking of monitoring agencies’ qualification status. Currently, the accreditation of environmental monitoring agencies often focuses on the initial review. Once certification is obtained, subsequent oversight tends to be relatively weak. This allows some agencies to continue undertaking monitoring projects based on their existing credentials even after equipment has become outdated, key personnel have left, or internal management has become lax. The introduction of a re-evaluation mechanism requires regulatory authorities to conduct comprehensive reviews of certified agencies at fixed intervals, focusing on whether their equipment performance continues to meet technical standards, whether their staffing of technical personnel complies with regulations, and whether their quality management systems are operating effectively. For

organizations found to have issues during the re-evaluation, regulatory authorities should promptly issue rectification notices specifying deadlines and acceptance criteria. For organizations that remain non-compliant after rectification or have a history of serious fraud, their accreditation should be revoked in accordance with the law. This dynamic adjustment mechanism can effectively prevent organizations operating with deficiencies from continuing to produce inaccurate data.

Second, establish a tiered and categorized accreditation system. Differentiated accreditation categories and entry standards should be established based on the scope of operations and areas of expertise of monitoring agencies. This tiered and categorized system requires setting different accreditation thresholds according to the technical characteristics of the monitoring targets. For the monitoring of different environmental elements—such as air, water quality, soil, and noise—there are significant differences in technical methods, instrumentation, and personnel competency requirements; therefore, separate accreditation subcategories should be established to prevent agencies from covering all monitoring fields with a single accreditation. For example, regarding the monitoring of volatile organic compounds (VOCs) versus routine water quality monitoring, the former imposes far higher requirements on sampling techniques, instrument sensitivity, and analytical methods than the latter. If the same institution applies for both types of qualifications, it must meet the corresponding technical criteria for each separately to prevent a mismatch in technical capabilities resulting from the “one license for multiple uses” practice.

4.2. Clarifying the Assessment of the Evidentiary Value of Environmental Monitoring Data

Different monitoring methods result in variations in the evidentiary nature of the data; therefore, the rules for assessing the evidentiary value of online monitoring data—which constitutes electronic data—and environmental monitoring reports—which constitute documentary evidence—should be discussed separately.

First, clarify the evidentiary value of online monitoring data. Online monitoring data refers to electronic data—such as automatic pollution source monitoring data, DCS system data, CEMS system data, and monitoring instrument operating parameters—generated during the operation of computer systems (including automatic pollution source monitoring systems, DCS systems, and CEMS systems) that reflect the circumstances of a case. According to the “Measures for the Review of the Validity of Automatic Monitoring Data from Pollution Sources at Nationally Key-Monitored Enterprises,” only real-time monitoring data provided by automatic pollution source monitoring equipment that has passed a validity review and is operating normally can be deemed valid data and, consequently, used as evidence in environmental litigation cases. The validity of online monitoring data primarily depends on the validity of the monitoring equipment and the validity of data transmission; therefore, the core aspects of determining its evidentiary capacity also revolve around these two factors. First, whether the online monitoring equipment possesses a metrological verification certificate or calibration certificate for the monitoring instruments; whether it is a product that has passed suitability testing conducted by an environmental monitoring instrument testing institution designated by the

national environmental protection authorities; and whether it bears the mark of passing the supervision and assessment for automatic pollution source monitoring equipment. Second, whether the automatic monitoring equipment is installed at a discharge outlet that meets environmental protection standards; whether data collection and transmission comply with national technical specifications regarding data transmission and interface standards for online automatic monitoring (surveillance) systems of pollution sources; and whether the automatic monitoring equipment can maintain a stable network connection with the monitoring center. Third, whether the extracted online monitoring data is incomplete; whether it is raw data, and whether there are signs of forgery, manipulation, or alteration; and whether it is obviously distorted.

Second, clarify the assessment of the evidentiary value of environmental monitoring reports. An environmental monitoring report refers to a data report produced by a qualified monitoring agency that, in accordance with relevant environmental monitoring technical specifications and using technologies such as physics, chemistry, biology, and remote sensing, conducts qualitative and quantitative analyses of the status of various environmental factors and pollutant emissions. As a documentary evidence, the assessment of the evidentiary value of an environmental monitoring report primarily focuses on two aspects: whether the report’s preparation process was standardized and whether its content is authentic and valid. This is specifically reflected in the following aspects. First, whether the entity preparing the environmental monitoring report possesses the appropriate qualifications, specifically whether the monitoring agency holds the necessary monitoring credentials and the China Metrology Accreditation (CMA) mark, and whether the personnel involved in sampling, testing, and other monitoring activities possess professional qualifications and valid certification. Second, whether the monitoring equipment is qualified and valid: specifically, whether the monitoring instruments and equipment used possess metrological verification certificates or calibration certificates; whether they are within their validity period; and whether the model numbers and serial numbers of the instruments and equipment listed in the monitoring report match the records in the verification certificates. Third, whether the monitoring processes—such as sampling and analysis—comply with relevant environmental standards and technical specifications. Specifically, whether the samples were secured in accordance with statutory sampling methods and procedures; whether different monitoring standards and methods were applied based on the specific pollutants being monitored; and whether the various chemical reagents used during the monitoring process meet the requirements of the corresponding technical specifications. Fourth, whether the monitoring report was prepared in accordance with established procedures, specifically: whether it bears the official seal of the monitoring agency; whether it has undergone the required processes of drafting, review, and issuance and been signed by the relevant personnel; and whether there were any circumstances requiring the monitoring personnel to recuse themselves.

4.3. Clarifying the Criteria for Defining Fraudulent Conduct

The preceding discussion examined the definitions of fraudulent conduct under the Interpretation and the Measures

for Handling, as well as the controversies between the two. The Measures for Handling systematically enumerates thirteen specific scenarios involving the tampering or falsification of monitoring data. Its strength lies in the comprehensiveness and practicality of the types of conduct it covers, but its weakness is that it does not specify the subjects of the conduct and lacks clear requirements regarding the requisite mental state. In contrast, while the Interpretation restricts the actors to specific entities such as environmental monitoring agencies and emphasizes the subjective element of “intentional concealment,” the types of conduct it specifies are relatively general. Therefore, in judicial practice, the two should be integrated: when the conduct of a monitoring agency falls within the specific scenarios listed in the Measures for Handling, it may be preliminarily determined that the objective basis for fraudulent conduct exists; on this basis, a further examination should be conducted to determine whether there is the subjective fault of “intentional concealment.” For fraudulent acts committed directly by polluting entities, a determination may be made directly based on the “Measures,” and general tort liability rules may be applied. This dual-determination model leverages the advantages of the typified provisions in the “Measures” while avoiding the tendency toward overbroad objective attribution of liability through the specification of subjective elements.

In summary, the criteria for defining fraudulent conduct should be approached from a comprehensive perspective, rather than treating them as mutually exclusive and dichotomous concepts. However, if an environmental monitoring agency commits acts of falsification listed in the “Measures for Handling” during the course of its professional activities, and if it subjectively meets the element of fault—specifically, “intentional concealment”—then such conduct may be classified as falling within the scope of falsification as defined in the “Interpretation,” and corresponding legal liability may be pursued accordingly.

4.4. Clarify the manner in which environmental monitoring agencies assume responsibility

First, external liability is explicitly defined as joint and several liability. Article 65 of the Environmental Protection Law stipulates that if an environmental monitoring agency causes environmental damage through fraudulent practices, it shall bear joint and several liability with the polluter in addition to receiving administrative penalties. The legislative intent behind this institutional design is to strengthen protection for victims and address the difficulties in obtaining redress caused by information asymmetry and the burden of proof. The joint and several liability borne by environmental monitoring agencies and polluting enterprises is based on the legal fact that their joint actions led to the harmful consequences. Although the fraudulent acts of monitoring agencies do not constitute direct environmental infringement, by tampering with or fabricating monitoring data, they provide a “veil of legitimacy” for the polluting enterprises’ excessive emissions, thereby essentially constituting a contributing cause of the damage. On the other hand, from the perspective of victim redress, the establishment of joint and several liability offers significant procedural advantages. Environmental pollution cases often involve complex scientific evidence and technical judgments, making it difficult for victims to accurately prove the specific contribution of each tortfeasor to the resulting harm.

Requiring victims to assert separate claims for proportionate liability against both the monitoring agency and the polluting enterprise would only serve to increase their burden of proof, which runs counter to the fundamental purpose of tort law to protect victims. The introduction of the external joint and several liability system allows victims to claim full compensation from any liable party, without concern for how liability is apportioned among the parties themselves, thereby maximizing the protection of victims’ rights to timely and adequate relief.

Second, it clarifies that internal liability is joint and several liability. The law stipulates that environmental monitoring agencies and polluting enterprises bear joint and several liability to third parties; the legislative intent behind this is to strengthen remedies for victims’ rights. In environmental tort cases, victims often find themselves in a disadvantaged position due to information asymmetry, making it difficult to accurately determine the specific degree of contribution each liable party made to the damage. The establishment of joint and several liability allows victims to claim full compensation from any liable party, thereby preventing them from being unable to seek redress due to the inability to apportion liability shares. However, external joint and several liability does not equate to an equal distribution of internal liability. Between monitoring agencies and polluting enterprises, the final liability shares should be determined based on the degree of fault and the proportion of causation for the damage; this is the inherent requirement of proportional liability. If the allocation of internal liability is ignored, and joint and several liability is uniformly applied with equal recovery permitted, this could result in two problems: first, entities with a lesser degree of fault might bear final liability disproportionate to their responsibility, violating the principle of fairness; second, the mechanism for allocating liability would fail to effectively sanction the true principal parties. The introduction of internal proportional liability enables monitoring agencies and polluting enterprises to clearly foresee the ultimate liability costs their actions may entail, thereby incentivizing them to strengthen compliance management in advance.

5. Conclusion

The objectivity and accuracy of environmental monitoring data are fundamental prerequisites for ensuring the scientific basis of environmental management decisions and the effectiveness of policy implementation. In practice, however, the falsification of environmental monitoring data remains a prominent issue. Its manifestations are becoming increasingly complex, characterized by the intertwined involvement of multiple parties, including polluting enterprises actively fabricating data, third-party agencies engaging in irregular practices, and administrative interference by local governments. Based on the above analysis, it can be concluded that the falsification of environmental monitoring data not only severely undermines the fairness and impartiality of environmental governance but also causes substantial harm to the public’s environmental rights and interests.

This paper examines the challenges in judicially determining acts of data falsification in the field of environmental monitoring. The study finds that current multi-tiered legal regulations suffer from insufficient coordination of legal effect and ambiguous standards of determination, leading to inconsistent judicial standards in areas such as liability attribution and the assessment of evidentiary validity

in judicial practice. Judicial determination also faces core challenges, including unclear delineation of the qualifications of liable entities and the allocation of joint liability, as well as practical difficulties in evidence review and conflicts in determination standards across different regulations. In response, this paper proposes unifying the standards for the qualification certification of monitoring agencies and the definition of their conduct, clarifying the allocation of liability, and establishing standardized rules for evidence review. Only by improving these approaches can the challenges of judicial determination be resolved, the legal binding force of monitoring data be strengthened, and a solid foundation be laid for judicial fairness in ecological and environmental matters.

In summary, only by clarifying the responsible parties, refining the rules of evidence, and standardizing the definition of relevant conduct can we resolve the challenges in judicially determining cases of falsification of environmental monitoring data, strengthen the legal binding force of such data, ensure judicial fairness in environmental and ecological matters, and contribute to the modernization of the environmental and ecological governance system and capacity.

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