

Direction for Improvement of Environmental Law System to Vitalize Governance

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ABSTRACT

Environmental problems have emerged as representative problems that threaten the survival of mankind. As environmental problems arose, environmental policies also went through the process of change and development. In terms of the legal system, numerous environmental laws were enacted and revised, starting with the Pollution Prevention Act in 1963. Currently, 78 environmental laws are in effect. However, environmental problems are intensifying, and climate change problems have begun to be recognized as climate crisis or disaster situations. In order to overcome the climate crisis, the international community has set a goal of achieving 2050 carbon neutrality and is seeking a major transformation into a decarbonized economic and social structure. Solving environmental problems and overcoming the climate crisis must ultimately find a solution through governance of participation and cooperation. In this study, by comparing and analyzing governance-related factors included in the five basic environmental laws, limitations and problems were identified and improvement measures were derived.

Key words: environment, climate crisis, participation and cooperation, governance, environmental law system

1. Introduction

Environmental issues have emerged as the most serious and urgent task that threatens the survival of mankind. The increase in greenhouse gases triggered global warming and climate change. The international community signed a climate change agreement in 1992 and launched a new climate system in 2021. The IPCC proposed the goal of suppressing the global average temperature rise to within 1.5°C and achieving carbon neutrality by 2050. However, the climate problem is intensifying as a pattern of disaster, and global citizens have begun to recognize it as a crisis situation.

As a result of rapid economic growth in Korea, environmental pollution and ecosystem damage have also progressed rapidly. In the 1980s, discourse on environmental preservation began to be formed, and in the 1990s, it emerged as a representative social problem with the growth of the environmental movement and the revival of the local autonomy system. The legal system has also developed rapidly. Starting with the Pollution Prevention Act in 1963, numerous laws were enacted and revised. As

of 2022, 78 environmental laws, including the Framework Act on Carbon Neutrality, are in effect.

In the process of developing environmental policies, governance has emerged as an alternative to solving environmental problems. In the mid-1990s, local 21 cooperation activities were carried out, and the National Council for Sustainable Development was launched in 2006. Civil society organizations and public-private partnership organizations have developed governance systems by creating numerous cases. From the perspective of crisis management, governance solutions are also being emphasized. Governance has emerged as a powerful means for overcoming the climate crisis, realizing carbon neutrality, and sustainable development and green transition, but it has still remained in the experimental stage and has not settled into the system. After the declaration of carbon neutrality, environmental laws such as the Framework Act on Carbon Neutrality and the Framework Act on Sustainable Development were newly reorganized. It is necessary to consider whether governance is properly reflected and what is to be supplemented.

In this study, we will examine the development process of environmental policy in Korea and examine the governance-related contents included in

environmental laws. The limitations and problems will be identified by comparing and analyzing governance-related regulations of five representative basic environmental laws. Based on this, it is intended to derive a direction for improving the legal system to revitalize environmental governance.

2. Theoretical Review

2.1. Environmental Problems and Climate Crisis

Humans achieved convenient and rich modern civilization, but they worked in the direction of constant exploitation, damage, reduction, and renovation of nature and the environment. The excessive use of fossil fuels has created the worst environmental crisis of global warming and climate change. The concentration of greenhouse gases, which did not exceed 280 ppm before the Industrial Revolution, has exceeded 400 ppm since 2015.

In the 1970s, the Roman Club first raised concerns about global warming. The United Nations Conference on Human Environment, held in Sweden in 1972, adopted the Declaration on Human Environment to solve environmental problems at a global level. Since then, the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP) have identified problems with the greenhouse effect due to the increase in carbon dioxide. In 1988, the IPCC (Intergovernmental Panel on Climate Change) was established, and the seriousness of climate change was raised through several reports. In 1992, the UN Environmental Development Conference in Brazil signed the Climate Change Agreement as a measure to regulate the artificial emission of greenhouse gases. The Climate Change Convention officially entered into force in 1994, with 196 countries joining.

In 1997, the third general meeting of the parties adopted the Kyoto Protocol as an implementation plan for reducing greenhouse gas emissions. Priority reduction measures were agreed on, focusing on developed countries (38 countries) with historical responsibility. The Kyoto Protocol went through the first pledge fulfillment period from 2008 to 2012, and then extended its effect to 2020. Consultations on the post-Kyoto system have been hampered. In 2015, the 21st General Assembly of the Parties signed the Paris Agreement containing the principles and directions of the launch of the new climate system. A flexible reduction plan was applied, in which both developed and developing countries participated but presented voluntary reduction targets (INDCs). Controversy continued over the validity of the goal of limiting the increase in global average temperature to within 2°C.

In August 2018, the IPCC General Assembly held in Songdo, Incheon, adopted a special report on global warming at 1.5°C. As a result of the simulation, it is reasonable to suppress the average temperature rise to within 1.5°C, and for this, the goal was to reach Net Zero by 2050. The period of 1.5°C increase was predicted between 2030 and 2052. The emission gap report released by UNEP in November 2019 predicted that the global average temperature could rise by 3.2°C within the 21st century, and stressed that carbon emissions should be reduced by 7.6% annually between 2020 and 2030 to achieve the 1.5°C suppression target.

Since 2018, the carbon neutrality goal has gained momentum as the flow of emergency actions in the climate crisis expressed from future generations has been combined. According to a government policy briefing, 134 countries declared and supported carbon neutrality in September 2021. But the outlook remains pessimistic. The report released by the National Institute of Meteorological Sciences in May 2021 on the 1.5°C rise is predicted to be 2028 to 2034, and the 6th IPCC report (group 1) published in August 2021 to 2040. It has been moved forward by about ten years. The IPCC reported that by 2020, the carbon dioxide concentration increased by 410 ppm, and the global average temperature rose by 1.09 degrees.

2.2. Theory of Sustainable Development

In 1972, the Rome Club reported the negative impact of economic growth on the environment through the limitations of report growth. In 1987, the World Environmental Development Commission (WCED) emphasized that poverty eradication is an essential condition for sustainable development in our common future. It also first defined the concept of sustainable development as development that meets the needs of the present generation without impeding the ability of future generations to meet their needs.

The United Nations Conference on Environmental Development held in Brazil in 1992 adopted the Rio Declaration on the Environment and Development and decided to promote Agenda 21 as an action plan for sustainable development. The United Nations Commission on Sustainable Development (UNCSD) was established, and three major environmental agreements, including the Framework Convention on Climate Change, were signed. The 2002 World Summit on Sustainable Development agreed on the main principles that all development should be environmentally, socially and economically sustainable. The 2012 United Nations Conference on Sustainable Development emphasized governance for the green economy and sustainable development in the future we wanted, and provided an

opportunity for the introduction of sustainable development goals.

In 2015, the 70th UN General Assembly adopted the Sustainable Development Goals (SDGs), which will be a long-term development framework. By 2030, it will serve as a new goal and guideline for the international community, consisting of 17 goals and 169 detailed goals. As a result, the ideology of sustainable development has become a core value of mankind seeking green transformation in the era of climate crisis.

Since the workshop on local agenda 21 was held in 1994, Korea has expanded nationwide in the mid to late 1990s. It can be said that the 21st local movement aimed at solving environmental problems through cooperative governance emerged at the forefront. In the era of governance, sustainable development needs to be approached from the perspective of realizing the rights and obligations of the people and basic rights.(Osu-gil, 2017: 257)

2. 3. Emergency and Crisis Management Theory

Humanity faces a complex crisis. It is in the midst of a pandemic crisis, a global economic crisis, and a climate crisis caused by COVID-19. A crisis refers to a situation in which something has deteriorated rapidly, or a crisis that is dangerous enough to face a catastrophe, or a situation that recognizes that it is in trouble under some threat. Defining it as a situation or situation in which the survival of an individual or state is seriously threatened by hostilities or large-scale disasters, decision-makers are subject to time constraints and have to make significant decisions in high uncertainty. 2007: 42). As the saying that crisis is an opportunity, the COVID-19 situation served as an opportunity for fundamental reflection and transformation for mankind.

In crisis management, crisis refers to a situation in which the universal value of human society is damaged. Therefore, crisis management refers to the process of trying to respect and implement human dignity. From a managerial point of view, crisis management can be defined as a process of planning, coordinating, and controlling resources necessary to prevent, prepare, and respond and recover before a crisis occurs (Lee Jae-eun, 2018: 22). A national crisis refers to a threat to the security of the people, territories, sovereignty, and core bases that make up the state. It can be defined as a state in which significant harm is likely or being inflicted on the lives, health, property of the people, territory and sovereignty of the state, and key elements or values of the political, economic, social, and cultural systems that make up the state. According to this definition, a national crisis can be classified as a disaster crisis that threatens people's safety, a traditional military security crisis that threatens territorial and sovereign security, and a national core-

based crisis that threatens core-based security (Lee Jae-eun, 2018:20).

From a managerial point of view, national crisis management can be defined as a process in which the state plans, coordinates, and controls available resources to effectively prevent and prepare for national crises and respond and recover efficiently when they occur (Lee Jae-eun, 2006: 22). National crisis management presupposes governance. This is because in modern society, it is impossible for the government to decide and enforce all policies by itself. Crisis management is unlikely to succeed without active participation and cooperation from citizens, NGOs, local governments, companies, central governments, and global communities. The subjects who perform national crisis management include not only the state, but also social members and components such as individuals, organizations, and companies, all of which become policy actors and beneficiaries (Lee Jae-eun, 2018: 24).

In the reality that the number of disasters and the scale of damage are expected to increase due to changes in the global environment and social environment, local administrative agencies, residents, and NGOs must cooperate with each other. This cooperation should be made not by creating an organization but by concrete activities, administrative agencies and civic groups can understand each other's territory and characteristics and build a voluntary and equal network, creating a new local governance model in the disaster recovery process(Lee Eun-ae, 2006: 74).

One of the biggest challenges facing humanity and governments around the world is the response to serious consequences of climate change, environmental pollution, ecosystem destruction, and resource depletion caused by human reckless activities. This impact is more powerful than anything humanity has ever experienced, and if left unchecked, it will have irreversible consequences for all living things on Earth (Seo Yong-seok, 2012: 272). Recent natural disasters and disasters caused by humans demand reconsideration of the existing crisis management system(Seo Yong-seok, 2012: 100).

2. 4. Governance Theory

Governance is a new paradigm of governance and is also called 'cooperation' in that various actors participate and cooperate in governance. It refers to a changed way of governance in which the government views the people in a partnership relationship and various social groups voluntarily participate in state administration. It also refers to a method of solving problems through the participation and cooperation of various stakeholders. It is also defined as an alternative government operating system or cooperative problem-solving method that seeks to

solve common problems together by sharing experiences and knowledge and building trust through participation and communication process beyond traditional roles (Kim Byung-wan, 2019: 72).

Solving the increasingly chaotic and evil problems in modern society requires a convergent and integrated approach through chain-combination strategies, along with a cooperative governance method between subjects with various values and interests. It is inevitably impossible to solve complex problems with the power of any one of the government, market, and civil society, which are the three main agents of solving social problems. In particular, in a situation where inefficiency or policy failure of the government bureaucracy is more severely recognized, interest in alternative problem-solving methods that can overcome the limitations naturally shifted to interest in the necessity and possibility of governance-type problem-solving (Kim Byung-wan, 2021: 69).

Governance has something in common that it is a cooperative system to pursue common interests through joint efforts. At a time when the issue of climate change has an important impact on daily life, it is very important to recognize it as a problem of cooperation and to have an institutional framework to solve it. Research on how the government and civic groups can collaborate and what institutional support is needed to establish bottom-up policies can give various implications. For example, it is necessary for the government to establish a framework to form cooperative governance between the government, citizens, and companies by assisting the regional climate change consultative body (Hong Young-sik, Lee Deok-ro 2019: 39-40).

Participation, expertise, autonomy, trust between groups, information sharing, resource mobilization ability, and regional influence are presented as key components of governance (Sehun Kim, 2007:53). Environmental governance is applied to environmental issues such as participation, partnership, democracy, openness, and mutual cooperation, and appears in various forms depending on the scope and level of participation, partnership, strength of interaction, and network connectivity (Ko Jae-kyung, Lee Mi-hong, 2010: 152).

3. Analysis of Environmental Law Status and Improvement of Governance

3.1. Changes and Development of Environmental Policy

Korea's environmental problems arose in the process of economic growth in the 1960s and 1970s. The Pollution Control Act was first enacted in 1963,

and the Environmental Conservation Act was implemented and replaced in 1980. The administrative organization, which began in 1967 as a pollution system of the Environmental Hygiene Department of the Ministry of Health and Social Affairs, was expanded to the Environment Agency, an external office, in 1980. Social discourse on environmental preservation began to form in the process of democratization in the 1980s, and emerged as a representative social problem with the growth of environmental movements and the revival of local autonomy systems in the 1990s. Since then, environmental policies have also changed and developed through previous governments.

The Roh Tae-woo government independently promoted the Environment Agency to the Ministry of Environment in 1990, and enacted six environmental laws, including the Framework Act on Environmental Policy. In 1991, the Nakdonggang River phenol pollution occurred, and there were major changes in domestic and foreign conditions, such as the hosting of the United Nations Environmental Development Conference and the signing of the Climate Change Convention in 1992. With the establishment of the Environmental Movement Union in 1993, the environmental movement began in earnest and influenced the government's environmental policy.

The Kim Young-sam administration promoted the Ministry of Environment to the Ministry of Environment in 1994. In 1996, a garbage allowance system was implemented based on the polluter burden principle, and World Environment Day was designated as a national anniversary on June 5. By creating and distributing local 21 guidelines, conditions for cooperative activities for sustainable development were created. In 1995, the local autonomy system was revived, and the first local government of the popular election was launched, and conflicts over regional development and environmental conservation were amplified.

Kim Dae Jung Starting with the Han River in 1999, the government enacted the Special Act on Water Management of the Four Major Rivers, including the Geumgang River, Nakdonggang River, and Yeongsangang River in 2002. It was positively evaluated in that it was a preventive water management policy based on the principle of win-win up and downstream. On the other hand, the lifting of the development restriction zone (green belt) caused conflicts with environmental groups. On Environment Day in 2000, the National Environment Vision for the Millennium was declared, followed by the launch of the Presidential Committee on Sustainable Development. By scrapping the Donggang Dam construction plan, which faced public opposition, it set a historical precedent for suspending large-scale national projects to preserve the national environment.

Roh Moo Hyun The government made efforts to ease overcrowding in the Seoul metropolitan area by creating an administrative-centered complex city. However, the Saemangeum reclamation project, which has been a controversial issue for a long time, caused conflict with civil society. There was a conflict over the construction of the Gyeongbu High Speed Railway Tunnel and the preservation of the habitat of the Cheonseongsan Mountain salamander. However, with the launch of the Sustainable Development Council in 2006, public-private cooperation activities have gained momentum. Institutional progress has been made, including the enactment of the Framework Act on Sustainable Development in 2007 and the launch of the National Committee for Sustainable Development in 2008.

Lee Myung Bak The government triggered resistance from the people from the beginning with the idea of the Great Canal on the Korean Peninsula. In 2008, in the face of the candlelight protests against mad cow, the Korean Peninsula canal project was suspended, changed to the four-river project, and the project was carried out amid confrontation and conflict. In 2008, the National Vision for Low Carbon Green Growth was declared and the Framework Act on Green Growth was enacted in 2020, but only the pattern was criticized for being green. Eventually, the algae phenomenon in the four major rivers intensified and the national greenhouse gas generation increased significantly.

Park Geun Hye The government caused conflict by promoting the extension of the life of old nuclear power plants and the construction plan of new nuclear power plants at a time when awareness was heightened due to the Fukushima nuclear explosion in 2011. The problem of humidifier disinfectant damage has also emerged. In 2014, in response to the sinking of the Ferry Sewol, he put the people in anger and shock. In 2015, the UN Sustainable Development Goals and the Paris Agreement were established, but they failed to take the lead in responding to international trends. In 2016, the Framework Act on Resource Circulation was enacted. In 2017, angry at the state affairs manipulation scandal, the people confronted the super-dispute and impeached the president.

Moon Jae In The government began to restore environmental policy. Naturalization of the four major rivers, integrated water management, de-nuclear energy conversion, and fine dust response policies were promoted. Although the Framework Act on Water Management was enacted in 2018, it was criticized for being lukewarm in the treatment of underwater reservoirs in the four major rivers. Through the 2020 COVID-19 incident, the Korean version of the New Deal was promoted and 2050 carbon neutrality was declared, joining the international trend to overcome the climate crisis. In 2021,

the Framework Act on Carbon Neutrality was enacted and the President's Carbon Neutrality Committee was formed. The Framework Act on Sustainable Development was enacted in 2022. In other words, the foundation for green transformation has been established at the national level.

Environmental policy has changed from command and coercion to economic incentives, precautionary measures, and voluntary environmental creation, and the temporal dimension is evolving from post-suppression to pre-suppression and future-oriented creation (Moon Tae-hoon, 2022:7). It is the domain of governance that this trend of environmental policy has emerged as a powerful means to solve environmental problems while interacting with environmental movements.

3.2. Enforcement Status of Environmental Law in Korea

The first environmental law was the Pollution Prevention Act of 1963. The Environmental Conservation Act was enacted and supplemented in 1977 and implemented in 1980. In 1980 and 1987, the constitution was revised to guarantee the people's environmental rights. In 1990, six environmental laws were enacted, including the Framework Act on Environmental Policy, the Environmental Pollution Damage Dispute Mediation Act, the Air Conservation Act, the Noise Vibration Control Act, the Water Environment Conservation Act, and the Hazardous Chemicals Management Act.

Environmental laws have changed and developed through numerous enactment and revision processes. In effect in June 2022, there are 1,580 laws in Korea, of which 78 are under the jurisdiction of the Ministry of Environment. Among the laws under the jurisdiction of the Ministry of Environment, four basic laws are the Framework Act on Environmental Policy, the Framework Act on Resource Circulation, the Framework Act on Water Management, and the Framework Act on Carbon Neutral and Green Growth. The Framework Act on Sustainable Development, which was implemented as an alternative law to the Sustainable Development Act, was changed to the jurisdiction of the Cabinet Office, but it can be said to be the Framework Act on the Environment.

<The Framework Environmental Act in force>

	Legal name	government department
1	The Framework Act on Carbon Neutrality	Office for Government Policy Coordination, Ministry of Environment
2	The Framework Act on Water Management	Ministry of Environment
3	The Framework Act on Resource Circulation	Ministry of Environment

4	Sustainable Development Act	Ministry of Environment
→	The Framework Act on Sustainable Development	Office for Government Policy Coordination
5	The Framework Act on Environmental Policy	Ministry of Environment

3.3. Enforcement Status of Environmental Law in Analysis of Regulations related to Governance of Environmental Framework Act

1) Overview and Status of Environmental Framework Act

In this study, five laws of the Framework Act on the Environment were set for analysis. There are five laws: the Framework Act on Environmental Policy, the Framework Act on Resource Circulation, the Framework Act on Water Management, the Framework Act on Carbon Neutralization, and the Framework Act on Sustainable Development. It is a law that relatively reflects recent issues and governance issues in Korean society, which are seeking to overcome the climate crisis, realize carbon neutrality, sustainable development and green transition.

① Overview of the Framework Act on Environmental Policy

The law under the jurisdiction of the Ministry of Environment (Green Transition Policy) was enacted on August 1, 1990 and came into effect on February 2, 1991. It presents the basic ideology and direction of the national environmental conservation policy and is the oldest law among the basic environmental laws. It consists of Chapter 1, Chapter 2, the establishment of environmental plans, etc., Chapter 3, legal and financial measures, Chapter 4, the Environmental Policy Committee, and Chapter 5, Article 61, etc. The purpose of this Act is to clarify the rights and duties of the people and the responsibilities of the state regarding environmental preservation, to prevent environmental pollution and environmental damage, and to properly and sustainably manage and preserve the environment so that all citizens can enjoy a healthy and pleasant life. A total of 52 revisions were made. It is scheduled to be partially revised on June 10, 2022 and implemented on June 11, 2023. The reason for the revision is to strengthen the stability and responsibility of the institution's operation by changing the name of the Environmental Conservation Association to the Korea Environmental Conservation Agency, changing its corporate status to a foundation, and laying the legal basis for state support, guidance and supervision.

② Overview of the Framework Act on Resource Circulation

The Framework Act on Resource Circulation is a law under the jurisdiction of the Ministry of Environment (Resource Circulation Policy) and was enacted on May 29, 2016 and implemented on January 1, 2018. It consists of Chapter 1, Chapter 2, Basic Plan for Resource Circulation, Chapter 3, Policies for Promotion of Resource Circulation, Chapter 4, Chapter 5, and Chapter 6 Penalties, etc. The purpose of this Act is to prescribe basic matters necessary for preserving the environment and creating a sustainable resource circulation society by efficiently using resources to suppress the generation of waste as much as possible and promoting the circulation and proper disposal of generated waste. It was partially revised on October 16, 2018, and implemented on April 17, 2019. The reason for the revision was to change the annual implementation plan established by the city and provincial governors in their jurisdiction to every five years, considering that it takes a considerable amount of time to approve the Minister of Environment.

③ Overview of the Framework Act on Water Management

As a law under the jurisdiction of the Ministry of Environment (General Water Policy Division), it was enacted on June 12, 2018 and took effect on June 13, 2019. Chapter 1 General Rules, Chapter 2 Basic Principles of Water Management, Chapter 3 Water Management Committee, Chapter 4 National Water Management Basic Plan, Chapter 5 Adjustment of Water Disputes, Chapter 6 Culture Development and International Cooperation, etc. The purpose of this Act is to establish a sustainable water circulation system and improve the quality of life of the people by presenting the basic principles of water management and defining basic matters necessary for water management. It was partially revised on January 5, 2021 and implemented on July 6, 2021, and the reason for the revision was to provide an explicit basis for the establishment of the UNESCO Water Security International Research and Education Center and state funding.

④ Overview of the Framework Act on Carbon Neutrality

The official legal name is the Framework Act on Carbon Neutral and Green Growth to Respond to the Climate Crisis. The laws under the jurisdiction of the Ministry of Environment (Climate Strategy Division) and the Office of Government Policy Coordination (2050 Office of the Carbon Neutrality Committee) were enacted on September 24, 2021 and came into effect on March 25, 2022. It was the

latest of the Basic Environmental Act and is also an alternative law to the Framework Act on Low-Carbon Green Growth. Chapter 1 General Rules, Chapter 2 National Vision and GHG Reduction Goals, Chapter 3 National Carbon Neutral Green Growth Plan, Chapter 4 2050 Carbon Neutral Green Growth Commission, Chapter 6 Climate Crisis Adaptation Policy, Chapter 7 Justice Change, Chapter 9 Carbon Neutral Social Transition, Chapter 11 Climate Change, etc. This Act aims to improve the quality of life, protect the current and future generations, and contribute to the sustainable development of the international community by strengthening measures to reduce greenhouse gases and adapt to climate crisis, addressing economic, environmental, and social inequality.

⑤ Overview of the Framework Act on Sustainable Development

It is a law under the jurisdiction of the Office for Government Policy Coordination (Office of the Office for Fiscal and Financial Policy) to include measures to implement the UN's Sustainable Development Goals, which will be enacted on January 4, 2022 and enforced on July 5, 2022. It is an alternative law under the jurisdiction of the Ministry of Environment. It consists of Chapter 1 General Rules, Chapter 2 Basic Strategy and Promotion Plan for Sustainable Development, Chapter 3 Sustainability Evaluation, Chapter 4 Sustainable Development Committee, Chapter 5 Sustainable Development Policy, Chapter 6 Auxiliary Rules, etc. The purpose of this Act is to achieve sustainable economic growth, inclusive society, climate, and environmental crisis through the balance and harmony of economy, so that future generations as well as current generations can enjoy better lives, and sustainable development of human society.

2) Analysis of Governance-related Content of Environmental Framework Act

The conditions and factors necessary for the revitalization of governance are participation, cooperation, communication, sharing, consensus (consideration), practice, responsibility, authority, trust, and co-prosperity (community). Each law contains the conditions and factors of governance through regulations on purpose, basic principles, definitions, responsibilities, strategies and plans, organizations and policies. The governance-related factors of the Framework Act on the Environment were examined in five aspects: the principles of participation and cooperative governance, the contents and procedures of vision, strategy, and planning, policy-making (consultation) organizations, policy measures and policies, operation of intermediate support organizations and private activities

① Governance principles such as engagement and cooperation

It was examined whether the general rules of the law, i.e., the principles of governance, such as purpose, basic principles, basic ideology, justice, and responsibility, are specified in the provisions. It is about whether participation, cooperation, information provision, and collection of opinions are guaranteed to the public, related experts, stakeholders when enacting, revising laws, ordinances, and rules or establishing and implementing policies. All five laws specify governance principles in the general provisions. The Framework Act on Carbon Neutrality and the Framework Act on Sustainable Development clearly stipulate, and the Framework Act on Resource Circulation briefly stipulates only the responsibilities of business operators and the people. The Framework Act on Carbon Neutrality and the Framework Act on Sustainable Development also specify the responsibilities of the state and local governments for participation and cooperation.

Law	Degree	Governance-related regulations
Environmental Policy	++	- Article 2 (Basic ideology) - Article 5 (Responsibilities of Business Operators), Article 6 (Rights and Obligations of the People)
Resource Circulation	+	- Articles 6 (Responsibilities of Business Operators) ③ and 7 (Responsibilities of the People) ②
Water Management	++	- Chapter 2 Article 19 of the basic principles of water management (participation in water management policies) - Articles 4 (Rights and Obligations of Water Use) ② and 6 (Responsibilities of Business Operators) ②
Carbon Neutrality	+++	- Article 2 (Definitions) No. 12 - Article 3 (Basic Principles) No. 7 and No. 8 - Articles 4 (Responsibilities of the State and local governments) ⑦, ⑧ and 5 (Responsibilities of public institutions, business operators, and the people) ①, ②, ③
Sustainable Development	+++	- Article 3 (Basic Principles) No. 6 and No. 7 - Articles 4 (Responsibilities of the State and Local Governments) ④, ⑤ and 5 (Responsibilities of the People and Business Operators) ①, ②

② Contents and procedures of vision, strategy, and planning

It looked at whether governance elements were reflected in procedures and contents for vision, strategy, or planning. Whether participation, collection, and reflection of opinions are stipulated for the people, experts, and stakeholders. The Framework Act on Environmental Policy, the Framework Act on Water Management, and the Framework Act on Carbon Neutralization specified the procedure for collecting opinions of policymaking bodies, but the Framework Act on Resource Circulation and the Framework on Sustainable Development did not specify related regulations. The Framework Act on Water Management and the Framework Act on Carbon Neutralization also specified regulations on reflecting opinions. The Framework Act on Resource Circulation stipulates that matters related to the division of roles are reflected in the contents of the basic plan.

Law	Degree	Governance-related regulations
Environmental Policy	++	- Article 14 (Establishment of Comprehensive National Environmental Plan, etc.) ②, Article 18 (Establishment of Environmental Plan, etc.) ②, Article 19 (Establishment of Environmental Plan, etc.) ④
Resource Circulation	+	- Article 11 (Establishment and implementation of a master plan for resource circulation) ②
Water Management	+++	- Article 28 (Establishment of a comprehensive plan for watershed management) ① No. 7 - Article 31 (Holding a public hearing) ①
Carbon Neutrality	+++	- Articles 7 (National Vision and National Strategy) ③ and 8 (Medium-term National Greenhouse Gas Reduction Goals, etc.) ⑥ - Article 10 (Establishment and implementation of the Basic Plan for Carbon Neutral Green Growth) ② No. 8 - Article 11 (Establishment of City/Province Plans, etc.) ② No. 5, 6 and 7
Sustainable Development		No regulations for collecting opinions

③ Configuration and availability of policymaking bodies

Most laws stipulate that organizations (committees) for policy decisions (consultations) are organized and operated. Four laws, including the Framework Act on Environmental Policy, the Framework Act on Water Management, the Framework Act on Carbon Neutral, and the Framework Act on Sustainable Development, stipulate that a dedicated

committee should be established to conduct deliberation and advisory functions on policy and plan. However, the Framework Act on Resource Circulation stipulated that there is no separate organization and that it is replaced by the Central Environmental Policy Committee under the Framework Act on Environmental Policy. The Framework Act on Water Management and the Framework Act on Sustainable Development stipulated that the majority of non-public officials are members, and the Framework Act on Carbon Neutralization stipulates that social representation is reflected by the recommendation and listening to opinions of various social classes. The Framework Act on Carbon Neutrality and the Framework Act on Sustainable Development specify the contents of information dissemination, education, communication, public relations, and conflict adjustment in the functions of the committee.

Law	Degree	Governance-related regulations
Environmental Policy	+	- Article 58 of the (Commission on Environmental Policy) paragraph ① and ②
Resource Circulation		- No regulations related to the Committee
Water Management	++	- Article 20 (Establishment of the National Water Management Committee and the Basin Water Management Committee, etc.) ① - Article 21 (Composition of the National Property Management Committee, etc.) ③ and Article 22 (Function of the National Property Management Committee) No. 6 - Article 23 (Composition of the watershed management committee) ③ and Article 24 (Function of the watershed management committee) No. 4
Carbon Neutrality	+++	- Article 15 (2050 Establishment of the Carbon Neutral Green Growth Committee) ①, ⑤ - Article 16 (Function of Committee) No. 11 and No. 12 - Article 22 (Composition and operation of the Local Carbon Neutral Green Growth Committee, etc.) ①
Sustainable Development	+++	- Article 17 (Establishment of the National Committee for Sustainable Development), Article 18 (Composition of the National Committee, etc.) ①, ⑤ No. 5, Article 19 (Function of the National Committee) 9, 10, 11, and 12 - Article 20 (Composition, etc. of the Local Committee for Sustainable Development) ①, ② No. 9, 10 and 11

④ Policies related to governance activation

Policies such as education, public relations, and culture creation, information data provision, sharing and communication, domestic and foreign exchanges and cooperation can be said to be a powerful policy tool for revitalizing governance. We looked at how these policy measures are defined. All five laws specify regulations on education, publicity, and cultural creation for the people. In particular, the Framework Act on Carbon Neutralization and the Framework Act on Sustainable Development emphasized the spread of public awareness and practice culture and presented specific contents. The Framework Act on Resource Circulation presented the abstract content of the dissemination of resource circulation culture.

All five laws specify regulations on the dissemination of related information and the establishment of a system for collecting and providing information. Among them, the Framework Act on Resource Circulation and the Framework Act on Carbon Neutralization specified a comprehensive information management system, and the Framework Act on Sustainable Development specified a plan to designate and operate a research center for information system construction, operation, investigation, and research. The Framework Act on Carbon Neutrality presented a policy proposal platform as a way to guarantee public participation, and the Framework Act on Sustainable Development presented a deliberative public makeup as a specific way to collect and communicate public opinions.

All five laws specify regulations on domestic and foreign exchanges and cooperation. In particular, the Framework Act on Environmental Policy stipulated the designation of inter-Korean exchanges, cooperation, and international environmental cooperation centers, and the Framework Act on Water Management emphasized cooperation in the basin and stipulated agreements between local governments. The Framework Act on Carbon Neutrality stipulated the practical solidarity of carbon-neutral local governments to promote solidarity and cooperation between local governments. The Framework Act on Sustainable Development emphasized stakeholder cooperation.

Law	Degree	Governance-related regulations
Environmental Policy	++	- Article 25 (Education on environmental conservation, etc.) - Articles 24 (Publication of Environmental Information, etc.) ①, ② - Articles 27 (International Cooperation and Global Environment Conservation) No. 1, 2, 3, Articles 27-3 (Exchange and Cooperation in the Environmental Sector between North and South Korea),

		and Article 27-2 (Designation of the International Environmental Cooperation Center, etc.) ①
Resource Circulation	+	- Article 8 (Creating a Culture for the Development of a Resource Circulation Society) ① - Article 25 (Building and Operation of Resource Circulation Information System) ①, ② - Article 28 (International Cooperation for the Transition to a Resource Circulation Society) ①, ② No. 1, 2 and 3
Water Management	++	- Article 35 (Fostering of Water Culture, etc.) ① - Article 41 (Informationalization of Water Management Data, etc.) ①, ② - Article 36 (Promotion of International Cooperation in Water Management), Article 37 (Cooperation in Water Management between South and North Korea), and Article 38 (Water Management Agreement) ①
Carbon Neutrality	+++	- Article 67 (Support and Education and Public Relations for Green Living Movement) ④, ⑤, ⑥ - Articles 36 (Establishment of a Comprehensive Greenhouse Gas Information Management System) ① and Articles 51 (Support for Ensuring Public Participation) ① - Articles 65 (Composition of the Carbon Neutral Local Government Practice Solidarity, etc.) ①, ③ No. 2, 3, 4, 5, and Articles 75 (Promotion of International Cooperation) ①, ③
Sustainable Development	+++	- Article 28 (Education and Public Relations on Sustainable Development) ①, ②, ④, ⑤ - Articles 27 (Spreading of Sustainable Development Information, etc.) ①, ④, and Articles 29 (Collection of Public Opinions, etc.) ①, ③ - Article 26 (Cooperation of Interested Parties, etc.) ①, ③, ④

⑤ Operation of intermediate support organizations and supporting private activities

The operation of intermediate support organizations and support for private activities can be said to be the most active policy tool among governance-related policies. All five laws specify regulations on the establishment and operation of intermediate support organizations and support for private activities, but the content difference is large. The Framework Act on Environmental Policy and the Framework Act on Water Management specify regulations for promoting private activities and revitalizing private participation. The Framework Act on Environmental Policy has strengthened the role and function of environmental conservation activities

by changing the existing Environmental Conservation Association to the Korea Environmental Conservation Agency. The Framework Act on Resource Circulation stipulates regulations for the circular resource information center that performs the function of managing and providing resource circulation information. The Framework Act on Water Management stipulates regulations for the establishment of organizations, and newly established regulations related to the UNESCO Water Security International Education Research Center. The Framework Act on Carbon Neutrality stipulates regulations on three support organizations: the National Climate Crisis Adaptation Center, the Justice Transition Support Center, and the Carbon Neutrality Support Center. The Framework Act on Sustainable Development included provisions on cooperation and support for public-private partnerships such as the Sustainable Development Research Center and the Sustainable Development Council in the contents of other provisions.

Law	Degree	Governance-related regulations
Environmental Policy	++	- Article 26 (Promotion of environmental conservation activities of private environmental organizations, etc.) ① - Article 59 (Environmental Conservation Association→ Korea Environmental Conservation Agency) ①, ⑤ No. 1 and 6
Resource Circulation	+	- Article 24 (Establishment and operation of a circular resource information center) ① - Article 18 (Establishment of business organization) ①
Water Management	++	- Article 36-2 (Establishment of UNESCO Center for International Research and Education, etc.) ①, ③ No. 1, 2, 3, and 4 - Article 40 (Enhancing Private Participation) - Article 43 (Establishment of Organizations) ①
Carbon Neutrality	+++	- Article 46 (Designation and evaluation of national climate crisis adaptation centers, etc.) ① - Article 53 (Establishment of a Just Conversion Support Center, etc.) ① - Article 67 (Support and Education and Public Relations for Green Living Movement) ①,②,③ - Article 68 (Establishment of the Carbon Neutral Support Center) ①
Sustainable Development	+	- Without any special provisions, - Article 26 (Cooperation, etc.) ③, Article 27 (Publication of Sustainable Development Information, etc.) ④, and Article 28 (Education and Public

		Relations on Sustainable Development) ④
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3.4. A Study on the Improvement of the Legal System for the Revitalization of Governance

1) Measures to Improve Governance of Environmental Framework Act

① Implications for Developing Improvement Measures

The governance-related regulations of the five Framework Act on the Environment were examined, compared, and analyzed, and as a result, the following implications were derived.

Indicator	Measure to improve the law
① Governance principles of engagement and cooperation	State governance in basic principles, basic ideologies, terminology definitions, and accountability provisions Principles of participation, cooperation, communication and sharing between the public and stakeholders Mandatory public participation and collection of opinions on the responsibilities of the State and local governments
② Contents and procedures of strategy and plan formulation	Compulsory collection of opinions from the public, experts and stakeholders when formulating a plan Reinforcement of the procedure for collecting opinions when formulating a plan (deliberation agenda, public forum) In the contents of the plan, participation, cooperation, conflict adjustment, and win-win measures are specified
③ Composition and function of the policy-making body	Expansion of the ratio of members other than public officials of the policy-making organization (the majority) Innovation in the method of recommending members of the policy-making organization (enhancing private sector recommendations)
④ Various policy measures and policies	Reinforcement of education and public relations to improve awareness and spread the culture of practice Establishment of an information management system to provide and share information and to collect, manage, and supply information Strengthen inter-regional, regional, regional and national, inter-Korean and international exchanges and cooperation Measures to reconcile disputes and conflicts, and measures to deal with damages and marginalized groups

⑤ Interim support organizations and civic activities	Systematic support by expanding the intermediate support organization to local governments Establishing and supporting a wide range of practical cooperation systems (councils, networks) Expansion of support for civilian activities
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② A Study on the Improvement of the Framework Act on Environmental Policy

Governance-related regulations have also been strengthened after a total of 52 revisions of the law. Governance principles and policy measures for environmental preservation are relatively comprehensive and specific. Improvement measures to further expand and deepen environmental governance are as follows. First, the function of the Environmental Policy Committee, which is limited to the role of deliberation and advisory on passive environmental preservation plans, should be expanded and strengthened. In addition, when forming members, a majority of non-public officials should be set up and representation should be reflected through recommendation from various social classes. Second, the concept of environmental crisis and disaster should be strengthened, and regulations on resolving socioeconomic inequality, preventing damage to the environmentally vulnerable, and countermeasures should be specified from the perspective of environmental justice. Measures should also be prepared to expand intermediate support organizations such as environmental conflict adjustment centers or environmental civil service support centers. Third, it is necessary to establish a system and prepare active support measures to revitalize private environmental conservation activities. It is necessary to further expand the functions of the Environmental Conservation Association (Conservation Officer) limited to administrative agency functions or to reflect a wide range of environmental cooperation systems (councils, networks) and residents' participation-type environmental management activities.

③ A Study on the Improvement of the Framework Act on Resource Circulation

Governance principles and policy measures for resource circulation are specified, but they are relatively insufficient compared to other laws. Improvement measures to further expand and deepen resource circulation governance are as follows. First, the principles of participation and cooperative governance should be specified in detail in basic principles. Second, when establishing a basic plan for resource circulation, regulations on collecting and reflecting opinions on the public, related experts, stakeholders, etc. shall be specified. Third,

regulations on the composition and operation of the Resource Circulation Policy Committee shall be newly established as a dedicated policy-making (consultation) organization that will perform the functions of advisory and deliberation on resource circulation policies and plans. In addition, when forming a member, a majority of the members who are not public officials should be appointed, and representation should be reflected by the recommendation of various social classes. Fourth, there are regulations on creating a culture for the development of a resource circulation society, but since it is abstract, regulations on education and publicity for improving public awareness of resource circulation and spreading a culture of practice should be specified in detail. Fifth, regulations on the establishment and operation of resource circulation centers (upcycle centers) should be newly established as a support organization that can perform comprehensive functions for resource circulation education, promotion, spread of practice culture, policy discovery and industrial support, and recycling. Sixth, it is necessary to establish a system to revitalize private resource circulation activities and prepare active support measures for it. In particular, the establishment of a wide-scale resource circulation practice cooperation system (council, network) and residents' participation-type zero-waist activities should be reflected.

④ A Study on the Improvement of the Framework Act on Water Management

The governance principles and policy measures for water management are relatively comprehensive and specific. Improvement measures to further expand and deepen water management governance are as follows. First, regulations on education and public relations for the spread of a culture of public awareness and practice on water conservation and environmental conservation should be strengthened and the contents should be specified. Second, in the informatization of water management data, regulations on the establishment of an information system for collecting, managing, and providing various water environment information should be strengthened, and a policy proposal platform for expanding public opinion and communication should be prepared. Third, for efficient water management, exchanges and cooperation between local governments in the basin and various social classes in the basin should be strengthened to restore win-win communities as well as international cooperation and inter-Korean cooperation. Fourth, regulations shall be newly established to establish and operate watershed management centers for each unit basin as an intermediate support organization for efficient water management and water environment preser-

vation by specifying the provisions for the establishment of the organization. In connection with the Water Security International Research and Education Center, activities such as water-related education and publicity, the spread of civic practice culture, residents' participation in river management activities, exchange and cooperation shall be shared. Fifth, it is necessary to establish a system to revitalize water environment conservation practice activities and prepare active support measures for it. In particular, the establishment of a wide-scale water environment conservation practice cooperation system (council, network) and residents' participation in river basin management activities should be reflected.

⑤ A Study on the Improvement of the Framework Act on Carbon Neutrality

As a recently legislated law, it was enacted in a gown where national interest and opinions from various sectors are concentrated, so the principles and policy measures of governance for carbon neutrality are very comprehensive and specific. Improvement measures to further expand and deepen green transition governance are as follows. First, regulations on the promotion of private activities and revitalization of public participation should be specified in more detail to realize carbon neutrality. Second, as intermediate support organizations, the National Climate Crisis Adaptation Center, the Justice Transition Support Center, and the Carbon Neutral Support Center are stipulated, but effective operational measures should be proposed. This is because the key is to derive citizens' participation and practice, and social group cooperation and practice. In particular, the carbon-neutral support center established and designated by each local government should provide conditions for the operation of civil society as well as administrative agencies and research institutes. Third, it is necessary to establish a system to revitalize carbon-neutral green practice activities and prepare active support measures for it. In particular, it should reflect measures to establish a wide-scale carbon-neutral green practice cooperation system (council, network) and support the pan-national green practice movement.

⑥ A Study on the Improvement of the Framework Act on Sustainable Development

The Framework Act on Sustainable Development is the most recent of the five laws and specifies the principles and policy measures of governance for sustainable development in a relatively comprehensive and specific manner. Improvement measures to further expand and deepen governance of sustaina-

ble development are as follows. First, in establishing a basic national strategy for sustainable development, regulations on collecting opinions and reflecting opinions on the people, related experts, stakeholders, etc. should be specified. Second, by expanding the functions of the National Center for Sustainable Development Research to disseminate information on Sustainable Development, it is necessary to switch to a Sustainable Development Policy Support Center that conducts comprehensive support activities such as research and research, educational program development, and exchange and cooperation. Fourth, it is necessary to establish a system to revitalize practical activities for sustainable development and to prepare active support measures for it. The Sustainable Development Council, which has already been in operation for a long time, should be formalized as a cooperative organization for Sustainable Development and related regulations should be strengthened.

2) Direction of Enactment of the Framework Act on Revitalization of Environmental Governance

In addition to expanding and deepening the governance-related content of individual laws, it is also possible to seek ways to enact the Framework Act on the Promotion of Valuable Environmental Governance, which can be the basis of all environmental laws. It is also possible to revise the Framework Act on Environmental Policy and the Sustainable Development Act or the Framework Act on Carbon Neutralization to specify governance-related regulations as a single chapter. This is because governance is a task that must be universally applied to all environmental fields such as water management, air environment improvement, natural environment conservation, resource circulation, carbon neutrality, and sustainable development. Some principles and directions to consider when enacting the Basic Law are as follows

First, the principles, directions, and values that environmental governance should pursue, such as overcoming the environmental crisis and responding to climate disasters, direction, participation, communication, practice, cooperation, win-win, harmony, sustainability, and green transition

Second, the concept of governance should be deepened from cooperation to the meaning of cooperation. Governance bodies (systems) must establish their expanded status and role from cooperative bodies (systems) to governance bodies (systems). Environmental governance should be established as a cooperative system that overcomes the environmental crisis and realizes green transformation and sustainable development.

Third, it is necessary to strengthen the function of a policy platform for sustainable development and spread a win-win community culture. It should play

a role in establishing and inspecting sustainable development goals of the state and local governments, discovering and reflecting green new deal policy alternatives, resolving environmental conflicts and disputes, and expanding social networks of win-win and cooperation

Fourth, it is necessary to establish a material foundation for green practice, establish a participatory cooperation system, and contain a central axis function that binds pan-national (citizens) practice activities. It is necessary to establish a wide range of practical cooperation systems (horizontal consultative bodies, networks) in which various institutions and organizations participate, communicate, cooperate, and implement platform-type civic practice movements. It should also include measures to establish a resident-participating environmental management system and conduct daily and continuous environmental management activities in the living site.

Fifth, measures should be prepared to link and integrate environmental governance capabilities that are separated and distributed due to disconnected government organizations and convenient administrative tasks. The issues of environmental justice, carbon neutrality, resource circulation, green transition and sustainable development are not separate agendas, and governance capabilities to solve them are not distinguished. In the mid- to long-term, innovation and integrated management measures of the relevant legal system should be reviewed, and first, a plan for linked and integrated governance management should be sought within the current legal system conditions.

4. Conclusion

This study compared and analyzed governance-related regulations included in Korea's five basic environmental laws. Based on this, measures to improve the Framework Act on the Environment to revitalize governance and the direction of legislation to revitalize environmental governance were derived and presented. The governance-related factors were examined in five aspects: governance principles of participation and cooperation, contents and procedures of vision, strategy, and planning, policy decision-making (consultation) organizations, policy measures and policies, operation of intermediate support organizations, and support for private activities,

It was confirmed that the Basic Environment Act comprehensively reflects the governance principles of participation and cooperation and policy measures to revitalize governance throughout the law. However, differences in specific procedures and contents are revealed, and improvement measures are needed to further expand and deepen

governance. The Framework Act on Environmental Policy should establish a practical cooperation system to revitalize private environmental conservation activities, the Framework Act on Resource Circulation should establish regulations related to the Resource Circulation Policy Committee and expand intermediate support organizations. The relatively substantial carbon neutrality basic law should also further strengthen measures to establish and support a system to revitalize a wide range of green activities. The Framework Act on Sustainable Development should come up with a plan to define the Sustainable Development Council, which is already in operation, as a practical cooperation system.

A plan was also proposed to enact the Framework Act on the Promotion of Environmental Governance, which can be the basis of all environmental laws. It is also possible to revise the Framework Act on Environmental Policy (or other Framework Act on Environment) and specify it as a single chapter. The principles and directions to be considered when enacting the law are as follows. First, the necessity of overcoming the environmental crisis and responding to climate disasters, the direction for realizing a sustainable win-win community, and the principles and values that environmental governance should pursue should be specified. Second, the concept of governance should be deepened from cooperation to cooperation and environmental governance from environmental cooperation to environmental cooperation. Third, it is necessary to strengthen the function of a policy platform for sustainable development and spread a win-win community culture. Fourth, it is necessary to establish a material base for green practice, establish a participatory cooperation system, and contain a central axis function that binds pan-national practical activities. Fifth, measures should be prepared to link and integrate environmental governance capabilities that are separated and distributed due to the promotion of administrative convenience with disconnected government organizations.

This study is the result of comparison and analysis targeting five basic laws out of 78 environmental laws. Research results may have limitations due to the fact that research techniques such as survey, statistical analysis, and in-depth interviews are not used. Objectivity was supplemented by reflecting the practical experience of environmental movements and governance activities and the recent in-depth discussion on the green transition agenda.

Despite these limitations and limitations, it is significant in that it raised the issue of the necessity and direction of improving the legal system to revitalize environmental governance. In the future, it will be a meaningful study to understand the trends and characteristics of environmental governance through an analysis of the entire environmental law.

It is also necessary to analyze the connection between representative examples of environmental governance and related laws. It will also be an important task to derive pros and cons and improvement measures through comparison and analysis with similar laws in other countries,

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