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A Study on the History of Environmental Policy in South Korea

Hyein WOO¹

1. First & Corresponding Author Post-Doctoral Researcher, Graduate School of Interdisciplinary Program in Environmental Education, Seoul National University, Korea. Email: woog7235@gmail.com

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Abstract

International negotiation and cooperation for sustainable development currently emphasize three themes on which environmental policies are developed. South Korea emphasizes two of the three themes; climate change and the 2030 Agenda for Sustainable Development. South Korea has taken a leadership role in the international arena regarding these topics, actively participating in the United Nations Framework Convention on Climate Change (UNFCCC) and the negotiations for the 2030 Agenda (Jung, 2018). South Korea has taken a number of steps to address climate change, both domestically and internationally. Domestically, it has implemented several policies and methods to lessen GHG emissions and transition to a low-carbon economy. It has implemented an Emissions Trading Scheme, the largest in the world, a renewable energy portfolio standard, and aimed at accomplishing carbon neutrality by 2050. South Korea is also actively involved in executing the Sustainable Development Goals (SDGs) and has established a national committee to ensure their successful implementation. The group is made up of representatives from the private sector, government ministries, and civil society organizations. It is focused on monitoring the progress of the SDGs and providing policy and financial support for their implementation.

Keywords: Environmental History, Environmental Policy, Sustainable Utilization

Major classifications: Environmental History

1. Introduction

International negotiation and cooperation for sustainable development currently emphasize three themes on which environmental policies are developed. Firstly, they advocate for climate change mitigation which focuses on reducing its influence by reducing emissions of greenhouse gases and other pollutants, as well as increasing how resilient ecosystems and people are to the effects of climate change (Fawzy et al., 2020). It also includes the development of international

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frameworks and agreements to facilitate cooperation among states in lessening emissions and developing strategies to mitigate climate change (Mi et al., 2019). Secondly, they call for resource management and conservation, which entails the sustainable management and conservation of natural resources, such as forests, oceans, and biodiversity. It includes efforts to develop international agreements and frameworks to promote the sustainable utilization of natural resources; lessen resource waste, pollution, and degradation; and increase ecosystems' resilience to climate change's impacts (Cooney & Dickson, 2012). Thirdly, they also advocate for sustainable development, which includes the establishment of sustainable development policies and strategies to promote social, economic, and environmental justice. This includes efforts to reduce poverty and inequality; promote gender equality; improve access to health care and education, and increase communities' capacity to participate in decision-making. In order to secure a healthy and productive future, it also includes efforts to ensure the appropriate use of natural resources and environmental conservation.

South Korea emphasizes two of the three themes; climate change and the 2030 Agenda for Sustainable Development. South Korea has taken a leadership role in the international arena regarding these topics, actively participating in the United Nations Framework Convention on Climate Change (UNFCCC) and the negotiations for the 2030 Agenda (Jung, 2018). South Korea has taken a number of steps to address climate change, both domestically and internationally. Domestically, it has implemented several policies and methods to lessen GHG emissions and transition to a low-carbon economy. It has implemented an Emissions Trading Scheme, the largest in the world, a renewable energy portfolio standard, and aimed at accomplishing carbon neutrality by 2050 (Jung, 2018). Additionally, it has implemented several energy efficiency measures, such as the Energy Efficiency and Conservation Promotion Act, and has invested heavily in renewable energy. South Korea has also taken many steps to support international climate initiatives, including signing the Paris Agreement, investing in the Green Climate Fund, and supporting the Sustainable Development Goals. Additionally, it has developed a number of international partnerships to promote climate action and has dedicated to helping emerging economies combat and adapt to climate change.

South Korea is also actively involved in executing the Sustainable Development Goals (SDGs) and has established a national committee to ensure their successful implementation. The group is made up of representatives from the private sector, government ministries, and civil society organizations. It is focused on monitoring the progress of the SDGs and providing policy and financial support for their implementation (Roh et al., 2021). Also, South Korea has implemented a broad range of initiatives to achieve the 17 SDGs through its five-year National Development Plan, including poverty reduction, climate change, gender equality, education, health, and economic growth. Ultimately, this paper seeks to examine the history of environmental policy in South Korea, which will demonstrate the nation's role in reducing global warming and promoting a more sustainable environment.

2. Literature Review

2.1. Environmental Issues in South Korea

Southeast The environmental issues in the nation are complex and multifaceted. South Korea is one of the most industrialized nations in the globe but has one of the worst environmental records. For instance, in 2019, South Korea was the eighth biggest emitter of carbon (IV) oxide. At the same time, their portion of renewable energy use was the second lowest in the Organization for Economic Co-operation and Development (OECD) nations.

Firstly, air pollution is a major environmental issue in South Korea. The country relies heavily on coal-fired power plants for energy, resulting in high levels of air pollutants such as particulate matter, sulfur dioxide, and nitrogen dioxide. Factories, vehicles, and residential buildings also emit these pollutants. According to the World Health Organization, South Korea has some of the worst air quality in the world, with fine dust particulates often exceeding the World Health Organization's recommended maximum level (Privacy Shield Framework, 2022). Also, the primary sources of air pollution in South Korea are industrial emissions and the burning of wood and other fuels. These pollutants have been linked to respiratory illnesses, heart disease, and other health problems. According to Yoo et al. (2016), chronic obstructive pulmonary disorder (COPD) is among the illnesses that leads to the most deaths in South Korea. Also, the nation has a commonness of allergic rhinitis (AR), rhinosinusitis, and asthma, a factor that has made the illnesses a significant health priority within the nation (Yoo et al., 2016). According to Yi and Hacking (2011), the government of South Korea has implemented several initiatives to reduce air pollution in the country, including the introduction of a nationwide air pollution control system, the adoption of tighter environmental regulations, and the development of renewable energy

sources. Also, it has implemented the Clean Air Zone (CAZ) program, which requires all vehicles in the country to meet specific emission standards. The government has also introduced incentives for the production of electric vehicles and has invested in renewable energy sources like wind power and solar (Lee et al., 2020). In addition to these initiatives, the government has also implemented several measures to reduce the amount of particulate matter in the air. These include the installation of air filters in factories and power plants, the introduction of strict regulations on the burning of coal and wood, and the construction of air-purifying towers in urban areas. These efforts have resulted in some improvements in air quality, but the country still has a long way to go to achieve WHO standards (Roh et al., 2017).

Moreover, South Korea is plagued by water pollution. Water pollution in South Korea has become increasingly problematic in recent years. In 2018, a report from the Ministry of Environment showed that more than 50% of the rivers in South Korea were contaminated with pollutants, including agricultural runoff, industrial waste, and sewage. According to Kim, the primary causes of water pollution include agricultural activities and industrial, with the former being the most significant contributor (2000). In particular, farm fertilizer and pesticide runoff have caused severe water pollution in South Korea, leading to eutrophication and the destruction of aquatic life (Lee, 2017). In addition, Min et al. claim that South Korea's rapid industrialization has led to increased industrial waste, including heavy metals, synthetic organic compounds, and other hazardous chemicals (2017). These pollutants have contaminated surface and groundwater, leading to health risks for those living near contaminated sites (Park & Kang, 2021). Furthermore, the country's aging sewage systems have caused untreated waste to enter the water system, leading to further water contamination (Jang et al., 2015). The South Korean government has implemented several measures to reduce water pollution in response to these issues. According to Shin, these measures include a ban on the discharge of untreated sewage, increased fines for violators, and investments in water treatment facilities (2019). Additionally, the administration has implemented a "Green Growth" strategy, which seeks to reduce the environmental impacts of industrial and agricultural activities. This includes promoting sustainable farming practices, adopting clean energy sources, and developing water management plans (Jung & Jung, 2018). Despite these efforts, water pollution remains a severe issue in South Korea. In order to protect the country's waterways from further degradation, it is essential that all stakeholders work together to develop and implement effective solutions (Lee, 2017).

Another environmental issue South Korea faces is the overuse of natural resources: South Korea has a large population and limited natural resources, leading to the overuse of resources such as forests and fisheries (Song & Glasson, 2010). This has caused a decrease in biodiversity and loss of wildlife habitat. Also, the high demand for timber and other resources has led to deforestation in South Korea. This has put a strain on the country's forests and has caused a decrease in biodiversity. Secondly, the over-reliance on fossil fuels including natural gas and coal to meet its energy needs has substantially reduced these resources (Shine et al., 2020). It has also caused an increase in greenhouse gas emissions and air pollution, further exacerbating climate change (Hille et al., 2019). The government is working to reduce resource consumption and promote conservation, but the problem remains a significant concern.

2.2. Research Gap

As demonstrated above, articles have focused mainly on examining the environmental issues that South Korea faces. This paper will take a different turn by analyzing the historical development of environmental policy in South Korea, starting from the 60s, when the first environmental policy was developed, to the 21st century. As part of the history analysis, this paper will provide the factors that encouraged South Korea to start developing environmental policies.

3. Results

3.1. Reason for Creation of Environmental Policies

From the 1960s, South Korea began to focus more on environmental issues, enacting several new laws and regulations due to various factors. Firstly, the country experienced drastic economic growth and industrialization during this period, resulting in rapid energy consumption and pollution (Harashima & Morita, 1998). Heo (2013) maintains that as South Korea's economy grew, so did public concern about the environment and health issues associated with it (2013). Second, due to climate change, the country began to face a series of natural disasters, such as floods and droughts. This led to greater public awareness of the need to protect the environment. Third, the South Korean government was under pressure from intercontinental environmental organizations like the United Nations Environment Programme (UNEP), to take action on environmental issues (Jeong & Jeong, 2002). In addition, South Korea was a signatory to the United Nations Conference on

Environment and Development (UNCED) in 1992, which further increased the pressure on the government to take action. Finally, South Korea's strong relationship with its neighbor Japan allowed it to learn from Japan's experience with environmental issues (York et al., 2002). This helped South Korea to recognize the importance of environmental protection and to develop policies and regulations to address environmental issues.

3.2. Brief Historical Evidences of Environmental (Green) Policy in South Korea

The Korean government first addressed environmental issues in the early 1960s with the passing of the PPA. Secondly, in the early 1990s, South Korea adopted the first comprehensive environmental policy, the Framework Act on Environmental Protection, which set out several environmental objectives and addressed air, water, and soil pollution (Myung-Rae, 2004). Thirdly, The Korean government also, in the 1990s, implemented numerous other environmental policies like NECA and EIAA. Further, in 2009, South Korea adopted the Green Growth Strategy, which was designed to reduce emissions and promote green growth (Cho et al., 2019). Fifthly, in 2011, the Korean administration approved the Low Carbon Green Growth (LCGG) Strategy, which was designed to promote green growth and reduce emissions (Park & Lee, 2014). Also, in 2012, the Korean government adopted the Green New Deal to reduce emissions and promote green jobs (Tao, 2016). Seventhly, in 2017, the government adopted the National Action Plan for Climate Change, which outlined a strategy for mitigating climate alteration and lower greenhouse gas emissions.

3.3. 1960s and 1970s Policies

Lee claims that the Pollution Prevention Act (PPA) of 1963 was a landmark piece of legislation passed by the South Korean government (2021). It established the first comprehensive framework for preventing and controlling water pollution in the country. The Act set out regulations on the use of water resources and imposed strict standards on wastewater discharges from industrial and agricultural activities. It also provided for the creation of a national system of water pollution control and monitoring (Kim, 2007). The 1970s saw the transition of PPA from a public hygiene policy to anti-pollution legislation. For instance, following the amendment in 1974, article 2 of the PPA Enforcement Decree required applicants to provide the pertinent documentation when requesting for a permit to develop pollutant-emitting infrastructure. This could be interpreted as requiring an Environmental Impact Assessment (EIA) report. As a result, in 1977, the Environmental Conservation Act was passed to achieve this. ECA was established as a primary environmental law in South Korea. It set the legal framework for environmental protection and conservation (Lee, 2021). The ECA set out the responsibilities of the government and citizens to protect the environment. Most importantly, ECA also established the legal framework for environmental impact assessments and the enforcement of environmental regulations (Article 5).

3.4. 1980s and 1990s Policies

The 1990 elevation of the Environment Administration to a Ministry sparked several changes to the EIA process. ECA was abolished during this alteration, and EIA was transferred to the Framework Act on Environmental Policy, with increased project types from 32 in 11 to 47 in 15 areas (Cho, 1999). A final assessment statement was also established, representing the views of inhabitants about a preliminary assessment statement and new processes including internal investigations and assessment consultation validation. In addition, post-management processes, such as re-consultation on changed project plans, compliance monitoring with the consultation content, and objections to the assessment consultation, were built. In 1992, the Enforcement Decree of the Framework Act on Environmental Policy was changed to delegate the EIA to the Provincial Environment Administration in an effort to promote local environmental evaluation (Cho, 1999).

3.5. FAEP

The Framework Act on Environmental Policy (1990) was a legal document enacted by the South Korean government to protect the environment from pollution and other problems. The South Korean government established the FAEP in 1990 to “ensure that the environment is maintained in a healthy state and that all citizens can enjoy a suitable environment (Park & Lee, 2014). The FAEP is the most comprehensive environmental legislation in South Korea, covering a wide range of topics, such as air and water pollution, hazardous waste, nature conservation, and marine and coastal management. The FAEP resulted from a long and arduous process of deliberation and consultation between the government, environmental experts, and civil society groups. In the late 1980s, South Korean society was becoming increasingly aware of the country's increasing environmental problems and the need for stringent action to address them (Park & Lee, 2014). This growing

awareness and demand for action led to the formation of the Environmental Planning Committee (EPC) in 1988 by the Ministry of Environment. The EPC's role entailed developing an overarching environmental policy. The EPC drew up a draft of the FAEP in 1989, which was then sent to the National Assembly for approval (Park & Lee, 2014). The National Assembly amended the draft and passed the FAEP in January 1990. The FAEP was then ratified by the President in February 1990 and took effect on April 1, 1990 (Park & Lee, 2014).

3.6. NECA

One of Korea's critical environmental is the Natural Environment Conservation Act (NECA) was designed to protect the natural environment of South Korea. The NECA is the primary legal basis for conserving South Korea's natural environment. It encompasses a range of measures, including protecting endangered species and habitats, resource management, and pollution control. The NECA was enacted in 1995 and is administered by the Ministry of Environment (Yun, 2017). Since then, NECA has been amended multiple times, with the most recent amendment being in 2020. In the beginning, NECA mainly focused on controlling air, water, and soil pollution, as well as preventing the exhaustion of natural resources (Yun, 2017). Since its inception, NECA has been expanded to include more ambitious goals, such as implementing environmental management systems and promoting sustainable development. In addition, NECA has also been amended to include the promotion of green growth and the reduction of greenhouse gases. The Korean government has implemented several measures to promote green growth, such as establishing the Green Growth Fund and the Eco-Friendly Industrial Complex Program (Yun, 2017). NECA is an essential part of South Korea's environmental protection policy and has helped the country to achieve significant progress in terms of environmental conservation

3.7. EIAA

In the 1980s, the EIA system was initiated with the establishment of the Environment Administration, the modification of the ECA, and the Law on the Drafting of EIA statement. This expanded the scope of the assessors and increased the number of project categories subjected to EIA. In addition, the Regulation on the Drafting of EIA statement stipulated 19 items in three assessment categories to concretize the EIA. It was in 1993 that the EIA act (EIAA) was established in South Korea (Jang et al., 2010). EIAA of South Korea was established in 1993 in response to the increasing environmental concerns of the country and provided clarity on EIA. The Act was created to ensure that all developmental projects conducted in South Korea abide by environmental regulations and that the environment is protected from any potential harm caused by these projects (Jang et al., 2010). The MOE implemented the policy to provide a systematic approach to reviewing any proposed projects in the country. The policy stipulated that any proposed projects must be evaluated for their potential environmental impacts before approval. This evaluation was to include an assessment of the project's potential air and water pollution, soil contamination, and other risks to the surrounding environment (Jang et al., 2010). The EIA Act also required that a public hearing be held in order to allow members of the public to provide their input on the proposed project. This hearing was to be held before the project could be approved and must be attended to by a representative from the MOE.

3.8. Century Policies

3.8.1. The Korean Green Growth Strategy in 2009

It was launched in 2009 to respond to the worldwide financial crisis and the need for more sustainable development. The strategy was intended to create new sources of economic growth and jobs through green investments while also addressing environmental and resource constraints (Moon, 2010). The strategy involved several initiatives to promote green growth, including establishing a Green Growth Fund and developing a Green Growth Index. The Green Growth Fund was intended to provide financial support for green investments, such as renewable energy, energy efficiency, and environmental protection. It was initially funded with 1 trillion won (about \$880 million) from the government and private sector sources (Mathews, 2012). The fund was also used to support green businesses, research and development, and public-private partnerships. Secondly, the Green Growth Index was developed to measure the progress of the green growth strategy. It comprises five indicators: energy efficiency, renewable energy, resource efficiency, green development, and greenhouse gas emissions (Mathews, 2012). By tracking these indicators, the government can monitor the strategy's progress and identify areas for improvement. The strategy also included several other measures to promote green growth, such as tax incentives for green investments, support for green businesses, and regulations to reduce greenhouse gas emissions. The government

also established a Green Growth Institute to coordinate and promote the strategy. Since its launch in 2009, the Green Growth Strategy has significantly impacted Korea's economy (Mathews, 2012). It has helped to create new jobs and industries, reduce energy consumption, and reduce greenhouse gas emissions. It has also been credited with helping the country recover from the global financial crisis.

3.8.2. Low Carbon Green Growth Strategy

Low Carbon Green Growth (LCGG) is a strategy that focuses on reducing carbon emissions while promoting economic growth. The LCGG strategy was first proposed in 2008 by the Republic of Korea as part of its Green Growth Initiative (Kim et al., 2014). The initiative aimed to reduce emissions while promoting economic growth. The strategy was implemented by establishing the Presidential Committee on Green Growth (PCGG) in 2009. The PCGG developed the five-year "Low Carbon, Green Growth" (LCGG) Plan, which the National Assembly approved in 2010 (Rhee et al., 2012). The LCGG strategy is based on five pillars: green energy, green industry, green transport, green buildings, and green consumption. The strategy has been implemented through various measures, including legislation, subsidies, and investments in renewable energy sources.

Table 1: Summary of Findings

Main Theme	Research Findings (17 Previous Works Found)
<p>*South Korea is a leader in environmental protection and green growth. The nation has implemented several laws and regulations to protect its environment and actively promotes green growth and sustainable development. South Korea is also a signatory to several international environmental treaties, including the Paris Agreement, the Stockholm Convention on Persistent Organic Pollutants, and the Kyoto Protocol. As the nation continues to focus on green growth and sustainability, its environmental policies will undoubtedly continue to evolve.</p>	<p>Harashima & Morita, 1998; Jeong & Jeong, 2002; York et al., 2002; Cho, 2004; Cho et al., 2019; Park & Lee, 2014; Tao, 2016; Lee, 2021; Kim, 2007; Park & Lee, 2014; Yun, 2017; Yun, 2017; Jang et al., 2010; Moon, 2010; Mathews, 2012; Kim et al., 2014; Rhee et al., 2012</p>

4. Conclusions

The Historical evidences of environmental policy in South Korea demonstrate the country's commitment to protecting the environment. South Korea has made efforts to promote green growth since the turn of the century, from 1960, when PPA was enacted, to 1990, when the Framework Act on Environmental Preservation was passed. This Act established the foundation for environmental protection and preservation. Since then, South Korea has implemented a number of policies, such as the Green Growth Plan and the Low Carbon Green Growth Strategy, to reduce environmental pollution and promote sustainable economic growth.

Additionally, In 2014, the government introduced a carbon pricing system to reduce emissions from power plants and other significant sources of pollution. In addition, the government has provided incentives for businesses to invest in renewable energy sources such as solar and wind power. Finally, South Korea has been a leader in the global fight against climate change, as evidenced by its participation in the Paris Agreement in 2016. South Korea has made strides in increasing the use of renewable energy sources, intending to achieve an energy mix of 20% renewable energy by 2035. Overall, the historical evidence of environmental policy in South Korea demonstrates the country's commitment to protecting the environment. By implementing targeted policies and investing in green growth, South Korea has made great strides in reducing its environmental impact and promoting sustainable economic growth.

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