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HISTORICAL CHANGES OF KOREAN ENVIRONMENTAL POLICY AND THEIR IMPLICATIONS ON THE AGRICULTURAL POLICY DEVELOPMENT

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I. Introduction

Along with rapid industrialization, Korean environmental policy has changed from a mere "sanitation" policy in 1960s to "anti-pollution" policy in 1970s, and then to a broader "environmental" policy in 1980s (Y. Koo, 1981). During the period, two important time periods are particularly noteworthy in Korea's environmental policy changes: the creation of environmental policy domain through the enactment of the Environmental Conservation Act and the creation of the Environmental Administration (EAD) in the latter half of 1970s, and the expansion of environmental policy domain through the establishment of the Environmental Agency (EAG) along with the enactment of six environmental laws in 1990.¹

These two events were closely related with the critical turns in the agricultural policy, too. That is, in the latter half of 1970s, the government had begun to pay more attentions to the agricultural pollution problems, for instance, by prohibiting the sale of toxic agricultural chemicals and strengthening restrictions on the levels of chemicals remaining in foods in March 1978. Also, in 1991, the Ministry

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¹ In this paper, *Hwankyungcho* will be translated into Environmental Agency, and *Hwankyungboo* will be called the Ministry of Environment (MOE). Also, the Environmental Agency will be abbreviated to EAG to distinguish it from the Environmental Administration, which will be abbreviated to EAD.

of Agriculture, Forestry, and Fishery created "Task Force for the Development of Organic Agriculture" marking the first public-level formal organization ever for the low input sustainable agriculture.

Such policy changes toward regulatory politics in this rapidly industrializing country appear paradoxical because, first, economic growth has been the national policy with top priority while environmental protection is often seen as being a constraint on economic growth, second, organized social pressures toward pro-environmental state policies were almost non-existent, at least until the mid-1980s, and last, the major expansion of environmental regulations took place at the very time when, arguably, it should have been least likely to occur. Also, as will be seen below, the changes, on the one hand, have been praised as progressive, while, on the other hand, environmentalists argue that the environmental achievements are not impressive, seeing the policy changes as little more than symbolic gestures.

This paper will focus on the following three relatively specific research questions in order to appreciate the above-mentioned paradox, and, by so doing, to derive some important implications on the policy study. First, with rapid industrialization being the clear focus of national policy, how did environmental issues come to increased prominence in policy arena? Second, how can one understand the complex combinations of symbolic and progressive aspects of environmental policy? Last, what are the implications of environmental policy changes on the agricultural policy?

In the next part, a brief introduction of the existing major works on public policy-making will be provided. And then, the next parts will examine the Korean experience in greater detail. The last part concludes by providing implications from the empirical evidences.

II. Perspectives on the Environmental Public Policy-making

Inspired in part by influential works such as Rachel Carson's *Silent Spring*, and Meadows et al's *The Limits to Growth*, environmental problems have frequently been under discussion. Only recently, however, have scholars begun to focus on issues such as the decision-making process of environmental policy, the role of environmental administrative agencies, and the impact of environmental regulation

on society. The growing number of studies on these issues have used various theoretical perspectives, but most have approached these topics on either a macro- or a meso-level. The macro-level perspectives in general focus upon the structural aspect of policy changes, while the meso-level ones have more to do with the political interactions within the policy arena among policy actors.

1. Macro-level Perspectives on the Environmental Policy

The symbolic politics perspective holds that the state generally seeks to avoid imposing tangible costs on those who are regulated by environmental policy. Policy thus has little or no impact on objective conditions, but serves the purpose of placating certain groups. Policy, as a governmental activity inspired by the public demands, is little more than a symbolic gesture (Edelman, 1977); the fundamental interests of those who are favored by the decision-makers remain untouched or are affected minimally, while broader public interests and demands are systematically distracted or diverted. Such a symbolism is achieved by diverse means, such as language forms, formal rituals, or manipulation of issues.

Capitalist state theory on environmental policy thinks the state policy is an instrument of capital domination and the environmental policy is the product of capitals' response to a crisis in accumulation and profit, caused by a capitalist production system (O' Connor, 1988; Schnaiberg and Gould, 1994). The environmental crisis represents the contradiction between capitalist production relations (and productive forces) and the conditions of capitalist production one of which is the natural environment. The growth of production for the market not only undermines the purchasing power of the working class, but destroys its own conditions of production, environmentally, by externalizing costs or depleting resources. The environment is cumulatively degraded through what Schnaiberg and Gould (1994) call the "treadmill of production."

Developmentalist perspectives consider environmental policies as effects of socio-economic growth and expansion. Environmental policy emerges as a certain degree of economic prosperity is attained. Grossman and Krueger's (1991) study shows that sulfur dioxide and smoke—the concentration of fine, dark matters—increase until the

pollution peak, where per capita GDP reaches about 5,000 dollars, and then decrease at higher national income levels. Inglehart's (1990) "postmaterialist value" thesis views that, in an advanced industrial society, people are more concerned about the quality of life, including environmental quality considerations, forcing the state to pursue environmental policies. Political pressure is represented by "new social movements" for peace, the environment, nuclear facilities, and women's rights.

These macro-level perspectives all try to answer the question: "what are the structural determinants of policy change?" It is difficult, however, to apply or test any of these models in examining specific, concrete episodes of change in policies or to predict when a policy change will appear on the national agenda and to tell why it will take a certain direction. For instance, every policy does not necessarily lead to the policy failure—there may be some "hidden products" from the regulations (Galloway, 1981; Calavita, 1983). Also, the so-called "environmental justice movements" have clear political characteristics, with both ideological and material goals, as contrasted with the post-materialist value perspective.

2. Meso-level Perspectives on Environmental Policy-making

Capture theory maintains that regulatory public agencies tend to become subservient to the industries they are expected to regulate. To use Wilson's (1980) term, environmental regulatory policy involves "entrepreneurial politics," which means that the benefits are widely distributed, while the costs from the policy or program are borne by a small segment of the society. Under such differential distributions of costs and benefits, a group can have ample reasons to organize itself to influence a regulatory agency. If the regulated groups include business interests with many resources and much power, the uneven distribution of costs and benefits would possibly lead to capture.

The network model implies that the policy interactions cluster according to issues, rather than involving a coherent policy elite, even though there can be institutionalized exchanges and transactions to fulfill the needs of the participants. According to this model, in other words, a plurality of competing pressure groups, often with conflicting interests, try to realize their individual beliefs and

interests, through diverse formal and informal networks surrounding a specific issue. Policy, therefore, arises out of a diverse array of networks among policy actors who seek to satisfy their interests by influencing public authorities (Laumann and Knoke, 1987). Their central assumption is that interest groups, including state organizations, freely seek to promote their own agendas, and as a result, what emerges is a fragmented, loosely knit structure [or network] rather than two strongly polarized camps.

The bureaucratic politics approach has more to do with the institutional interactions within the state between political supervisors and public agencies. It rejects the idea of the agency merely subordinate to political supervisors, characterizing the modern state as being shaped by bureaucratic initiative and power. Major empirical analyses have been done to show how politicians have failed to control and shift the preferences and interests of bureaucrats when shaping policy outputs, and to demonstrate the bureaucrats' successful pursuit of their interests in spite of opposition from the politicians (Kato, 1994).

These models reveal that they are in general concerned with the question: "who are the most crucial policy actors in policy-making, industry (capture theory), public bureaucratic organizations (bureaucratic politics model), or both (policy network model)?" The meso-level theories reviewed here are limited in offering plausible frameworks, and additional approaches are needed to better explicate the policy changes that occur in very diverse situations.

III. Creation of the Korean Environmental Policy Domain

1. Political Authoritarianism and Economic Industrialization

Under the President Park Chung Hee, the ideology of economic modernization was used for mobilizing and steering domestic resources to achieve economic goals. "Prosperity, it was hoped, would buy legitimacy and excuse the repressive policies imposed to achieve high-speed growth" (Bello and Rosenfeld, 1990: 13). The export-oriented industrialization remained a key economic policy, and heavy and chemical industries were the crucial sectors on which Korea has depended to boost exports. Industrial complexes were

designed for manufacturing export goods.

Continuous economic growth through heavy and chemical industrialization, however, began to dwindle starting in the end of the 1970s. The increased import of raw materials and production facilities resulted in high rates of inflation and trade deficits because of currency expansion. Foreign liabilities were so hugely piled that Korea became the third largest debtor in the world in the early 1980s. The inflation rates were so high that the average annual increase of wholesale price indexes between 1976 and 1980 was 18.1 percent.

The state violently suppressed the labor movement and labor unionization, and the environmental movement in this period was not exempt from such suppression. Under the ideology of reconstructing the country through economic growth, environmental protection was regarded as a luxury that had to be postponed.

In spite of a series of "Emergency Decrees" which banned even basic civil rights, however, anti-regime mobilization by the political dissidents increased in the latter half of 1970s. Reflecting the public distaste toward the Park regime, the National Assembly elections held in December 1978 gave the hitherto minor opposition party, the New Democratic Party, more elected seats than the ruling Democratic Republican Party.

2. The State's Policy of Pollution Prevention in the Early 1970s

Until the latter part of the 1970s, the Pollution Prevention Act (PPA), enacted in 1963, had been the only legislation for pollution control. It was, however, limited to regulating the effects of industrial activities on human health, excluding any consideration of the effects on property or on nature. Further, the PPA was never enforced until 1967 when the Ministry of Health and Social Affairs (MOHSA) devised the Presidential Decree and a small section with five public officials were assigned to do the task. The fund for implementing the Act was appropriated from the governmental budget for the first time in 1970 (Environmental Administration, 1982).

Despite several times of lawmakers' pressure and MOHSA's desire, the state did not seriously consider the creation of a separate agency responsible for pollution issues. It was argued that: ". . . we have to build up our economic strength first. It is as simple as that.

When we build our national wealth, we will turn our attention to such things as pollution. Until then, we just can't do very much" (from an interview with public officials in an economic agency cited by Cha and Moon, 1977: 259).

The state's disregard for the environment served to further the deterioration of environmental quality in Korea until the late 1970s. The average sulfuric acid gas concentration in Seoul went from 36 ppb (parts per billion) in 1969 to 94 ppb in 1980 (Korea Research Group on Pollution Problems, 1986). The biological oxygen demand in the Yeongdeungpo area in Seoul was 9.4 milligrams per liter in 1977, which substantially exceeds the 6 milligrams per liter recommended by the World Health Organization (S. Kwon, 1996).

In particular, the construction of industrial complexes and the heavy and chemical industrialization strategy of 1973 had serious negative impacts on the environment. Because of the concentration of pollution sources, the environmental effects of the complexes became multiplied in degree and scale.

The environmental effects of industrialization were not confined to the industrial sectors; the large number of low-wage laborers needed low food costs, and, coupled with the aim of attainment of food self-reliance, the increase of agricultural productivity was one of the principal goals of the state. A vast amount of fertilizers, herbicides, and pesticides were spread into wet and dry fields to increase agricultural productivity. During the period between 1970 and 1980, the amount of chemical fertilizers used increased from 563 thousand metric tons to 828 thousand metric tons, and about five times more herbicides and pesticides were spread in 1980 than in 1970.

The overuse and abuse of agricultural chemicals caused disasters for many farmers. Of the 478 farmers sampled by a Seoul National University professor, 44% experienced dizziness, vomiting, vision disorder, and respiratory ailments (cited by J. Chung and E. Hwang, 1983: 151).

3. Environmental Accidents

In 1977, the dreadful impact of industrial pollution on human body were at last revealed in the agricultural sector: a rice farm family in Damyang, South Cholla Province, suffered from general paralysis.

The incident caused the public to panic, particularly because the “strange disease” showed the same syndrome as “itai-itai” disease or Minamata disease, which plagued some of the Japanese community residents in the 1950s. Medical professors at universities suspected that the paralysis was caused by mercury poisoning after investigating the foods they ate, their blood, their hair, and the soil of their field. They found that the rice harvested from their field contained a large amount of mercury, which had accumulated from the use of chemical fertilizers.

In 1978, more than 700 Nakpo-ri residents in the Yochon complex suffered from eye and skin diseases caused by polluted air emitted from a fertilizer factory (Korea Research Group on Pollution Problems, 1986: 176). In May 1979, hundreds of children who lived near the Ulsan industrial complex suffered from severe skin itching. Within a week's span, hundreds of female workers in a Ulsan complex factory had to be treated after drinking water contaminated by hazardous chromium. The water was later found to contain 94 times the concentration of the heavy metal element allowed by the Environmental Conservation Act Implementation Rule as an environmental standard (50 ppb).

With the crisis in the political authoritarian regime and the economic stumbling in general, the sporadic accidents involving air, water, and soil contamination as well as human illness combined to force the dominant economic growth coalition to take at least some initial measures against the effects of industrialization.

4. The Legislation of Environmental Law and the Creation of Environmental Administration

4.1. Enactment of the Environment Conservation Act

In 1977, the state initiated two important changes—the state-initiated Nature Protection Campaign and the enactment of the Environment Conservation Act. In October, President Park ordered his cabinet to create organizations for waging the Nature Protection Campaign in all public and private sectors. The campaign was apparently a top-down mobilization: the campaign emphasized superficial projects, such as cleaning-up or manicuring public parks and mountaineering paths,

picking-up trash, or public education, and it never seriously challenged industrial activities (K. Park, 1993: 113). Yet in practice, the campaign provided a turning point: the massive society-forcing campaign contributed to the creation of a social atmosphere in which more people began to feel that the natural environment was problematic. It mobilized the masses by planting feelings of responsibility for the environment, and by contributing to the sense that everybody was to blame for its destruction. Also, because the state itself initiated the campaign and emphasized civil duty, it also had to do something to control pollution and prevent further environmental costs.

Faced with the demand from the opposition party and surprised by the ever-worsening environmental effects of industrialization, the majority party, the Democratic Republican Party, decided to reshuffle the structure of environmental law (*Daily Joong-ang Ilbo*, September 15th, 1977). The plan tried to extend the legal structural boundaries of environmental protection beyond the simple administration of pollution. The opposition New Democratic Party (NDP) also prepared its own Bill of Pollution Prevention and Environmental Conservation Act which included the establishment of the Environmental Agency with its independent status in the government system. The Committee Bill, however, did not modify in substance the government bill, which means that the NDP's effort to create the Environmental Agency had failed.

The enactment of the Environment Conservation Act (ECA) represented at least symbolically the transition of the focus of policy from anti-pollution to environment (Y. Koo, 1981). The concept of environmental standards was introduced for the first time in the form of governmental target levels to be achieved. ECA declared that it was the state's duty to make efforts to perform preventive measures for environmental protection, including the natural environment; to take into consideration the future generation's welfare through keeping a clean and safe environment; and to be actively involved in environmental conservation (Roh, 1996).

Related with the agricultural pollution issues, the Act provided that the governors were authorized to establish the quality standards for the water flowing into the agricultural fields within the specially designated areas. Also, in those areas, the governors were permitted to restrict the cultivation of agricultural products in case the soil or

water proved to be contaminated by harmful materials.

In May 1978, partly shocked by the Damyang family incident, the government banned the sale of toxic agricultural chemicals, and decided to strengthen the permission level of chemicals remaining in foods (Christian Institute for the Study of Justice and Development, 1981). The ECA amendment of 1979 authorized the head of the Environmental Administration to establish the standards for harmful chemicals remaining in the food products.

4.2. Creation of the Environmental Administration

As described earlier, critical pollution accidents had stirred the country, which made Park Chung Hee rush the creation of the agency, at least to suppress public fear. Just six days after the contaminated drinking water incident in the Ulsan factory, he ordered the Prime Minister to accelerate the formation of the Environmental Administration in May 1979. At that time, the offices in the Ministry of Health and Social Affairs (MOHSA) that were responsible for pollution issues were merely a bureau (the Bureau of Pollution Control) with three divisions (the Divisions of Air Protection, Water Quality Protection, and Environmental Planning).

At this time, the primary debate was over which level it would be: Ministry, Agency or Administration.² Politically, Administration was the most acceptable option at the time. First, it did not significantly affect the networks among preexisting functions which were dispersed throughout various governmental agencies. Second, MOHSA itself did not want to shrink its own organization and personnel, which would happen if the new agency became an independent body. In fact, MOHSA had long wanted to establish a new agency under its own supervision (Y. Koo, 1988: 13). Finally, the creation of a strong regulatory agency with an implementation capacity was not welcomed by the dominant economic growth coalition, although the coalition acknowledged the need for at least

² In the governmental hierarchy, the heads of Ministries and some Agencies become the member of the State Council which is the supreme decision-making body of the nation. Some Agencies and all Administrations are usually affiliates of other Ministries.

symbolic reform.

MOHSA managed to realize its interests by keeping the agency from being separated and independent from itself. Despite the demands for an independent public agency for environmental protection that had been made by scholars and members of the opposition political party, MOHSA proceeded to work without substantial input from them; there had been no public hearings held by the government and no official contacts with outsiders to solicit opinions from interested persons or experts (J. Kim, 1980).

In terms of jurisdiction, however, the Ministry of Health and Social Affairs' (MOHSA) interest was not realized. MOHSA wanted some duties to be transferred from other agencies: the control of air pollution and noise from vehicles, drinking water source protection and management of public water, standard-setting for agricultural chemicals and surveying of land contamination, marine pollution control, and so on (J. Kim, 1980: 57-58). The primary tasks conferred to the new agency were, however, confined to the management of media-related pollution—the management and control of air, water quality, soil, noise and vibration, malodor, and solid waste treatment—and establishment of mid-to-long-term basic plans for pollution control. Yet those were the regulatory functions that MOHSA had previously performed through its organization. Those which were under the control of other agencies—for instance, nature protection, management of national parks, and marine environment—remained there as usual.

It turned out that, in spite of the creation of the new environmental policy subsystem and legal structure, the administrative organization's jurisdiction was limited to coordinating pollution prevention tasks. Although the argument for creating an environmental agency arose from the necessity of integrating environment-related tasks, the outcome was a weak organization with minimal jurisdiction.

Although the new environmental agency was organized as the subsidiary of the existing ministry and the jurisdiction merely succeeded what MOHSA had so far performed, the creation of the Environmental Administration was the first step toward "environmental" policy as opposed to the previous "sanitation" or "anti-pollution" policy (Y. Koo, 1981). The Environmental Conservation Act demanded the state to extend its scope of concern from mere pollution control to natural

environmental protection. Also, the new Administration was able to perform various tasks, including policy formulation and partial implementation, such as monitoring polluting factories, as well as the coordination of environmental programs performed separately by more than a dozen existing governmental organizations.

In short, despite the state's reluctant commitment, its creation of the environmental policy domain implies that the environmental issues would become a subject of public policy for the first time. Also, once created, the environmental policy domain began to expand and develop itself thereafter.

IV. The Development of the Environmental Policy Domain

1. Receding Authoritarianism and the Lack of Political Legitimacy

1.1. Weakening State Authoritarianism

The first half of President Chun's eight year term (1980-1987) was a continuation of previous harsh repression and authoritarian rule and the incapacitated status of the political parties also continued. Political and social struggles against the regime, however, intensified through the mid-1980s. In the 1985 election, the new-born New Korea Democratic Party scored 29% of the vote. In 1987, the people's Great Resistance erupted. The ruling party was unable to have a working majority in the Assembly in 1988 general election. Parliamentary power to inspect and audit the executive branch was revived in 1988 after the sixteen year disuse begun by the *Yushin* Constitution in 1972. The authority of the ruling bloc was substantially weakened, forcing Roh to merge the ruling party with two opposition parties in 1990, creating a massive new party, the Democratic Liberal Party.

1.2. Economic Policy and Welfare

When Chun took power in 1980, the Korean economy was at its lowest level ever since rapid industrialization began in 1960s. The GNP growth rate in 1980 was recorded at minus 3.7% at 1985 constant prices, and trade deficit hit a high at 4.4 billion dollars. After 1986, the Korean economy recovered from stagnation, owing to the world

economic recovery and its effect on the heavy and chemical industries. In the 1990s, the economic situation was reversed from its previous boom. Overall Korea's entry into 1990s was crippled by a deterioration of balance of payments and inflation. The trade surpluses achieved in the years from 1986 to 1988 reverted to a 4.8 billion dollar deficit in 1990. Inflation, as measured by the consumer price index, reached nearly 10% in 1990 and 1991.

Besides economic recovery and the pressure for continuous growth, Chun's and Roh's regimes had the problem of the lack of political legitimacy. In order to regain political legitimacy, they presented policy on the social issue of welfare (Environmental Administration, 1982). The state's expenditures on social welfare rose steadily, and the Roh regime introduced a minimum wage system and the nation-wide medical insurance plan.

The state considered environmental protection as belonging to the social welfare. The Five-Year Economic and Social Development Plans began to include separate sectoral plans for addressing environmental issues. The Second Plan for Comprehensive Development of National Land for the period of 1982 to 1991 also designated as its primary purposes the goals of preserving the national land and natural environment, and of realizing local development potentiality (Yonsei University Research Institute of Environmental Pollution, 1985: 1103).

2. The State's Involvement in the Early 1980s (1980~1986) and Environmental Situations

2.1. The State's Involvement in Environmental Issues

The Fifth Republic's National Constitution stipulated that "Every person has the right to live in a clean environment, and the state and the people should make efforts to protect the environment" (article 33). It meant that the state had begun to acknowledge the seriousness of environmental problems and the necessity of taking measures to prevent or correct them. In 1981 a non-compliance charge began to be levied upon discharged waste water which exceeded a certain level; the collected fines provided funds for the government's pollution removal projects. The Environmental Administration (EAD) also set forth a Long-Term Environmental Improvement Plan with the goal of

cleaning up major rivers (Yonsei University Research Institute of Environmental Pollution, 1985).

The EAD had two important organizational changes in 1986. First, to enforce the Solid Waste Management Act of 1986, the Division of Solid Waste Management was upgraded to the Bureau of Solid Waste Management in 1986, and second, regional branches were created in Seoul, Pusan, Kwangjoo, Taegu, Taejon, and Wonjoo in order to more effectively implement regional environmental management.

2.2. Environmental Impacts of Industrialization and Agricultural Development, and Environmental Accidents

The state's commitment to the environmental protection, however, was too symbolic to alter the destructive results of several decades' worth of effects of industrialization upon the environment. The "environment has been devastated by the tacit technocratic assumption that some degree of environmental destruction is the price of economic growth" (Bello and Rosenfeld, 1990: 95). According to a governmental report, among nineteen points along the four major rivers selected for routine water quality check-ups, in 1990, only four recorded a biological oxygen demand level below the target (National Statistical Office, 1996: 91). The sulfurous acid gas concentration in municipal areas had been in overall decline, but was still higher than the national environment standard of 50 ppb, which itself was already higher than the U.S. and Japanese standards of 30 ppb. The acidity of rainfall in urban areas measured below pH 5.6 and had not improved at all throughout the 1980s (Environmental Agency, 1994).

As the use of agricultural chemicals and fertilizers increased, the soil and water contamination in the rural areas became a serious problem, too. One of the high yielding varieties, the *Tong-il* rice which had been planted since the latter part of the 1970s to increase the rice yields, exacted much higher environmental costs than the traditional *Il-ban* variety due to its need for additional applications of fertilizers and pesticides (Bello and Rosenfeld, 1990: 83). In the 1980s, as the agricultural profitability dropped while the price of rice remained constant, more and more farmers turned their rice fields into dry fields to cultivate plants that would be more profitable than rice-

plants such as various vegetables, fruits, or flowers. But as the plants grown in dry fields usually required greater amounts of agricultural chemicals than those grown in rice fields, and as the cultivators were trying to compensate for a worsening household economy through increasing productivity per area, the risk of chemical contamination of soil, as well as of the human body, increased. According to Oh et al. (1993), the amount of agricultural chemicals used in 1991 is about 3.2 times that used in 1975. Those chemicals may contaminate the ground water, the products, and the soil, which will again threaten the human health and the surrounding ecology. Also, although the effects of the fertilizers on the soil and water quality is not well-known yet, the harmfulness is presumed to be substantial in light of the high amount of use.

Since the “Act for Developing and Promoting the Income Sources in Rural Areas” was enacted in 1983, 1,355 industrial factories had been built for the next five years all over the country (J. Koo, 1989: 6). It aimed to create extra jobs for the rural people, but in some senses it also contributed to the further contamination of the rural environment; it was criticized that such agricultural-industrial complexes were even more harmful to the neighboring environment because those factories were usually small in scale so they were not able to operate the waste-treatment facilities.

Such conditions manifested themselves in frequent environmental accidents, such as a strange disease among Onsan residents in 1985 (Korea Research Group on Pollution Problems, 1986: 102-119). When the residents living near the Onsan nonferrous industrial complex showed unusual health problems—body pains, paralysis, and neuralgia—the exact cause was not immediately known. The water in Onsan Bay, however, was shortly found to be seriously contaminated by heavy metals such as cadmium and lead. The disease was named “Onsan disease” after the Minamata disease in Japan. It was finally decided that the residents were to relocate to other, cleaner areas, and were to be provided with financial compensation. Subsequently, in 1986 the Onsan complex was the first to be designated as “Special Pollution Treatment Area.”

Yet the Onsan disease was not Korea’s only case of an environmental accident in the 1980s. In 1988, five Seoul citizens living near a briquette manufactory were diagnosed as having coal

dust in their lungs. In the same year, a sixteen year old boy died of mercury poisoning after working at a thermometer factory. During the rainy season of 1991, a Yongin village near a golf-course construction site experienced property damage and the loss of lives in a landslide (Daily *Joong-ang Ilbo*, August 2nd, 1991).

Because of the increasing political demands of democratization and social mobilization since the mid-1980s, coupled with frequent environmental accidents and compensation protests, many environmental action organizations began to emerge. In 1982, the first specialized environmental movement organization, the Korea Research Group on Pollution Problems, emerged. To deal efficiently with a series of environmental issues, diverse kinds of *ad hoc* organizations were also formed, and professionals such as professors or medical people joined them. Since 1987 the number of environmental movement organizations has only continued to grow. In many cases, these movement organizations' concerns were so broad as to encompass not only opposition to pollutants, but also anti-nuclear issues, and protection of natural environments and habitats.

3. The State's Involvement in the Late 1980s (1987~1990)

3.1. Organizational Expansion to the Environmental Agency

When the state established the separate environmental agency in 1979, a major duty assigned to it had been to coordinate environmental policy and programs that were dispersed among as many as fifteen public agencies. For instance, the Ministry of Agriculture, Forestry, and Fishery regulated the use, import and export, and manufacturing of the agricultural chemicals, to prevent soil and water contamination. With the status of the Administration in the government hierarchy, however, it was argued that it could not fulfill the responsibilities of such a role (Environmental Administration, 1987: 9).

As soon as the Sixth Republic came into power in 1988, President Roh reorganized the Administration Reform Committee. The Committee diagnosed that, with the current status of the Environmental Administration (EAD), whose head was not a member of the State Council, the agency could not comprehensively respond to the demands of environmental conservation, because effective

inter-agency coordination was hard to attain. The Committee's prescription was the elevation of EAD to the Environmental Agency (EAG) so that environmental policy positions would be able to be spoken by the head of EAG rather than by the Minister of Health and Social Affairs (Administrative Reform Committee, 1989: 231-233).

The EAD, too, argued that its function of inter-agency coordination was rather limited because of the agency's low status in the administrative hierarchy (Environmental Administration, 1988: 7). The EAD officials proposed to expand their organization to the Ministry-level so that their organization should have at least the same status as other development-oriented agencies, such as the Ministry of Construction, in order to contend with them, or other agencies which performed parts of environmental tasks, such as the Ministry of Agriculture, Forestry, and Fishery. To effectively act upon the spirit of the Constitution, it was argued, complete organizational enhancement of the EAD was necessary. It was also pointed that environmental policy required its own unique and specific domains which were clearly different from other policy domains such as labor, agriculture, social welfare, national defense, etc. Separate domains were suggested for such things as air and water conservation, solid waste management, natural ecology protection, synthetic chemical management, environmental impact assessment, and international environmental issues. The administrative agency would preside over these domains at the same time as it consolidated under one roof the various duties of environmental protection which until that time being performed by many other agencies (Environmental Administration, 1988).

The government's Bill of Government Organization Act Amendment submitted to the National Assembly in November 1989, however, only succeeded in addressing the upgrading of the EAD to the EAG (National Assembly Committee of Public Administration, 1995: 90-91). The Minister of Government Organization explained to the National Assembly that the reorganization would have to be minimal, as any greater change would spoil the stability achieved amongst public officials (*Minutes of the Committee of Public Administration of the National Assembly*, December 6th, 1989).

Through the creation of the Environmental Agency (EAG), the environmental policy came to have an independent public authority, and the EAG became exclusively responsible for environmental

issues starting in 1990. The head of the EAG was minister able to participate in the State Council. With its launch, the Agency declared the year of 1990 to be the "Beginning of the Era of Environmental Protection" (Roh, 1996: 242).

3.2. Changes in Environmental Law Structure

In late 1980s, Environmental Administration (EAD) bureaucrats wanted to replace the Environmental Conservation Act with a basic law and multiple acts. The creation of basic law would materialize the environmental rights as they were proclaimed in the National Constitution by including declarative provisions regarding the state's duty for environmental protection. Additional acts would be included to deal with different media or sources of pollution, thus undergirding and concretizing the spirit of the basic law (Y. Koo, 1988: 179). Enactment of a variety of individual acts would also provide opportunities for the EAD to expand its organization. In order to institute the proliferation of the number of laws in which the EAD took primary roles, the organization would need more resources, and thus would be justified in its desire to expand.

The Bill of Basic Environmental Policy Act (BEPA) was submitted to the National Assembly in December 1989 along with five other bills: the Air Environment Protection Act, the Water Environment Protection Act, the Noise and Vibration Regulation Act, the Hazardous Chemicals Control Act, and the Dispute Resolution of Environmental Damage Act. The government bills were passed in the Special Session of the 150th National Assembly with minor modifications in July 1990. The passage was made, however, without the participation of the opposition representatives. They refused to attend the Committee and boycotted the voting to protest the ruling Democratic Liberal Party's strong-arm processing of another critical political issue—the compensation for the 1980 Kwangjoo incident victims. The ruling camp lawmakers pushed through the National Assembly 29 governmental bills, including BEPA and five acts, in the total absence of opposition legislators. Although the passage procedure of the environmental laws was very undemocratic, a new environmental law structure was established, about six months after the launch of the new EAG. Since then, various legislation has been

enacted to address different parts of environmental issues.

4. Jurisdictional Conflicts and the Establishment of the Ministry of Environment (1990~1994)

4.1. Troubled Waters–Drinking Water Contamination Accidents

Almost at the same time as the Environmental Agency was created and made public its ambitious plan, however, there occurred more dramatic events—a series of drinking water contamination which revealed conflicts among the administrative agencies.

In August 1989, four months before the creation of the EAG, the Ministry of Construction (MOC) announced that, in all of the examined water purification facilities, the water was found to contain heavy metal materials at levels which substantially exceeded the maximum standards. The Ministry of Health and Social Affairs (MOHSA), responsible for the sanitation of tap water, and the Ministry of Home Affairs, responsible for supervising the local governments that were managing the water purification facilities, both expressed doubts about the reliability of the evaluation methods used by the MOC.

Just after the incident, the Board of Audit and Inspection examined water purification facilities. The final report made in 1990 said that the water in seven out of seventeen facilities was contaminated by trihalomethane, a carcinogenic substance, in concentrations of nearly five times the maximum permitted level (100 ppb). The MOHSA again countered that, based on the results of its own inspection, the average amount of trihalomethane detected was merely a fifth of the standard, and therefore harmless to the human body.

Not only these repeated inter-agency discords provoked doubts about the objectivity and reliability of inspections, but also they brought to people's attention the necessity of simplifying the management functions of drinking water affairs that were currently dispersed under the jurisdictions of several agencies (Ko, 1995: 43).

In March 1991, an electronics factory, owned by a conglomerate Doosan Group and located in Kumi, inadvertently discharged 30 metric tons of undiluted phenol solution into a tributary of the

Nakdong River. The prosecuting authorities arrested the factory managers, and the Environmental Agency ordered 30 days' suspension of the factory's operation. Despite the seriousness of the accident, however, the state actually canceled the penalty after just fourteen days. The Ministry of Trade and Industry, on behalf of local business associations, asked the Environmental Agency to shorten the suspension (Ko, 1995: 83), and the Minister of the Economic Planning Board, granted the request and excused the factory, pointing out that the factory supplied over eighty percent of electronic parts to other assembly factories in Korea, who then exported the final products. Only five days after production resumed, another accident occurred; the promised repair proved to be unsuccessful, and another 1.3 metric tons of phenol solution leaked to the river. Being held responsible for the reoccurrence, the Minister of Environmental Agency resigned, and the tycoon of the Doosan conglomerate was forced to resign from the position of top manager.

Popular anger toward this phenol incident was much greater than in the case of the previous environmental accidents, and it greatly undermined the state's perceived ideological legitimacy. The state's early lift of its own ban on operations dramatically revealed its preference for economic growth over public safety and welfare. Even though it was the company that was directly responsible for the incidents, public opinion toward the state became substantially worse than it had ever been before, given that the state's negligence led quite directly to the second leakage. More crucially, however, the incident heightened the public's feeling that the drinking water would never be safe under the current management structure, and thus that jurisdictional reform was badly needed. There began to rise the necessity of rearranging and consolidating the jurisdiction of water management functions under a single governmental agency.

4.2. Jurisdictional Expansion in the Early 1990s

After phenol contamination, responsible management of water supplies in general came to the forefront of political issues. The bipartisan National Assembly subcommittee reported the necessity of constructing a centralized administrative unit that would coordinate and supervise water administration (National Assembly Committee of

Health and Social Affairs, 1992). The state began to reconsider the jurisdictional issue; it announced a plan called "Comprehensive Countermeasures for Improvement of Water Quality of Four Large Rivers," which aimed to improve the upper-stream water quality of the four major rivers until it reached the first-class level (Ko, 1995: 60). The plan called for the creation of an inter-agency "Committee of Environmental Management" in each water zone in order to coordinate implementation and inspection (Environmental Agency, 1994: 104-106). On the central government level, in 1991, the Prime Minister issued an administrative ordinance that made the Environmental Agency responsible for some water management functions that until that time had been under the control of the Ministry of Construction—duties such as the designation and management of Drinking Water Protection Zones, and installation and operation of public sewage treatment facilities—in the form of "trust" (Environmental Agency, 1992: 1317). Although it was not a complete transfer of those functions, however, the trust marked crucial progress for the Environmental Agency's goal of jurisdictional expansion.

4.3. Jurisdictional Arrangement and Establishment of the Ministry of Environment

Less than three years had passed since the phenol incident when hundreds of thousands of people in the cities of Masan and Changwon noticed a severe odor coming from their tap water. This January 1994 incident took place only one year after Kim Young Sam had been elected as the first civilian president, and had launched campaign for massive reform in various social and political sectors, and a revamping of governmental administration. It was later discovered that, for fear of a tremendous backlash, the Masan City Government and the North Kyoungsang Provincial Government concealed the facts, merely adding more purification substances to the water to ease the odor, and thus allowing for contamination of foods cooked with the tap water. The Pusan Local Environmental Administration was unable to discover the cause of the odor, which delayed appropriate responsive measures in areas under the jurisdiction. An official announcement about contamination was only made ten days after a local water purification facility discovered the problem. As the source

of the excessive levels of ammoniac nitrogen remained undetermined, southern Nakdong River residents were supplied with unpotable water for nearly three weeks.

After the incident, Kim Young Sam ordered his Cabinet to restructure the system of drinking water management functions so as to prevent further jurisdictional conflicts. Following his order, the Environmental Agency(EAG) at last inherited responsibility for water quality control functions from other agencies. The tasks of designating and managing drinking water protection zones and of sewage treatment facility operation, both of which had been entrusted to the EAG by the Ministry of Construction (MOC), were completely transferred to the EAG. Tap water quality inspection duties were also brought from the Ministry of Health and Social Affairs (MOHSA) to the EAG. With the existing functions, the EAG became the sole agency which was responsible for water quality control. Along with it, four divisions were ceded from other agencies—the Divisions of Water Policy, Drinking Water, and Sewage from the MOC, and of Drinking Water Management from the MOHSA—and the Division of Drinking Water Sources was newly added to the Bureau of Water Quality in the EAG. Along with it, the six Local Environmental Administrations were revamped to be instead four Environmental Management Administrations, each of which was responsible for one of Korea's four largest rivers—the Han, Nakdong, Keum, and Youngsan Rivers.

Hence, the division of labor at the central government level was established—“the Environmental Agency for water quality and the Ministry of Construction for water quantity” (National Statistical Office, 1996: 107~108). That is, the EAG would deal with the protection of drinking water sources and pollution of water, while the MOC would be responsible for, for example, building dams, and maintaining and improving rivers

In spite of the announcement of the new Kim Young Sam regime's pursuit of small government, the EAG was upgraded to be the Ministry of Environment in order to strengthen the implementation functions (National Assembly Committee of Public Administration, 1995: 112). Since the Environmental Agency had already taken up the functions and offices for water quality management, and since the local environmental administrative organizations had been regrouped to become the four

Local Environmental Management Administrations shortly after Nakdong River contamination incident in 1994, the upgrading was not surprising. At a public hearing held by the Committee of Public Administration of the National Assembly, no attendants opposed the organizational expansion (National Assembly Committee of Public Administration, 1995: 183~208).

4.4. Establishment of the Public Organization and the Act for the Sustainable Agriculture

Compared to the rapid development of the environmental policy domain, it has only been from the early 1990s since the agricultural policy domain began to pay serious attentions to the creation of public organization for the sustainable agriculture. The concern started with the survey of farm households which practiced the organic farming when the “Task Force for the Development of Organic Agriculture” was created as the first public organization for the environment-friendly agriculture (Ministry of Agriculture and Forestry, 1997).

The organic farming has more to do with the agricultural production techniques which depend on fewer chemical inputs (Suh, Kim, and Chun, 1992). In order to develop environment-friendly agricultural programs which were oriented toward sustainable agriculture, therefore, the Ministry of Agriculture, Forestry and Fishery created the Division of Sustainable Agriculture in December 1994. Since then, this agency initiated the long-term project of “Environmental Policy on Agriculture, Forestry, and Fishery Toward the 21st Century,” which operated as the basis for the future sustainable agricultural policy (Ministry of Agriculture and Forestry, 1997). This project includes the technological development for pollution abatement and the transformation of livestock wastes into resources, collection of agricultural wastes such as empty herbicide bottles, plastics, and machine tools. Also, for the households who operate within the drinking water source protection areas, it plans to subsidize them so that they adopt environment-friendly agricultural techniques which will not contaminate the water sources.

Besides the establishment of a new public organization, an effort to enact “Sustainable Agriculture Promotion Act” began in 1995. The effort was initially opposed by the Ministry of

Environment, since the latter agency argued that the task related with environment should be under the jurisdiction of itself. The Ministry of Agriculture, Forestry, and Fishery evaded the opposition by asking the lawmakers to initiate the bill. In the process of deliberation in the National Assembly, the attempt by the Ministry of Environment to narrow the range of the bill to the "organic farming" failed since the organic farming household consisted of only 0.5% of total farm households. The bill passed the National Assembly in December 1997, and will be enforced one year after the passage (Ministry of Agriculture and Forestry, 1997: 418~423).

VI. Conclusions

Based on a critical review of theoretical approaches and a careful consideration of the Korean case, this paper argued the following points; environmental policy has been strengthened, in spite of the continued top priority of economic growth in national policy. It is because of the state's need to maintain or reclaim its political legitimacy. The state legitimacy was undermined not only by broad-scale socio-economic changes, in general, but also by localized or small-scale environmental incidents, in particular. From the Korean experience and with regards to the research questions posed at the introduction of this paper, three key findings are summarized below.

First, Korean case shows that environmental issues have become salient among the policy actors because rapid industrialization and economic achievements have led to an environmental deterioration. Major environmental accidents dramatically and suddenly undercut the legitimacy of the dominant economic growth coalition, undermining confidence in its core beliefs, as well. The ultimate policy changes can be said, therefore, to be a joint product of macro-level contexts, meso-level political institutional interactions, and more specific mediating factors, including environmental accidents. These three dimensions are all important in studying policy changes.

Second, in spite of the speedy development of the environmental policy domain in terms of the public organization and the legal structure, the dominant economic growth coalition did attempt to respond to growing environmental issues with measures that were intended to be largely symbolic. However, it is also true that the

environmental policy domain has achieved some progress in improving the environment. Perhaps the key reasons were that the symbolic gestures were not enough to regain the political legitimacy of the dominant economic growth coalition, and that the emerging environmental coalition—in particular the environmental bureaucrats—actively exploited the opportunities to expand their institutional interests and ideologies. That is, when we look back upon the past process, both progressive and symbolic aspect could be found from the historical experience.

Last, the agricultural policy domain started to pay attention to the environmental issues only after the environmental policy domain fully developed in the early 1990s. Until that time, restrictions on the use of agricultural chemicals and other measures to contain water and soil contamination had been adopted sporadically. With the full development of environmental policy domain and the newly raised concerns for the organic farming, the public organization and legal measures for developing sustainable agriculture were created only recently. The interests in the sustainable agriculture are, therefore, just beginning, and it is still a task to the scholars and public officials to develop effective means that will facilitate a harmony between the environmental protection and the agricultural development (Se-ik Oh, 1996).

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