

A study of the state-nature relations in a developmental state

The case of South Korea's water resource policy, 1961-2015



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Summary

The East Asian ‘developmental state thesis’ (hereafter, DST) was suggested to explain the East Asian development states (i.e. Japan, South Korea, Taiwan and Singapore), where the role of the state has been very significant in producing ‘the East Asian economic miracle.’ However, the natural world has received little attention in DST scholarship. It is ironic that nature as a resource is intrinsically important to national economic development in East Asia, but research related to this issue is nonexistent. In particular, water, among the natural resources, is crucial because it is the backbone of economic growth in contexts that include hydroelectric power, industrial water for factories and residential water.

Since the 1960s, the Korean state has been active in pursuing various water resource development policies. For example, the Ten Year Water Resource Development Plan (1965) was designed to comprehensively develop water resources, including flood control and water utilization. The Specific Multipurpose Dam Act (1966) was a special law aiming at smoother and more efficient construction of multipurpose dams, replacing the River Act, which focused on flood control. The establishment of the Korea Water Resource Development Corporation (KWRC) (1967), which assumed the responsibility of water management from the extant river authorities, strongly advocated the construction of multipurpose dams. Based on the description thus far, the DST appears useful for explaining the role of the state in water resource development. However, understanding the context at this level is superficial. We must understand state-nature relations to properly explain how water resource development policies were established and pursued by the Korean developmental state. This thesis aims to explore how the Korean state played a key role in developing the discursive and material construction of nature.

This thesis is theoretically informed by recent development of the literature on the social construction of nature and the state-nature relation. Recently, there is increasing attention to the

debate on critical hydro-politics in studies of water resource development and policy. Conventionally, water is regarded as a pure and natural substance in the form of H₂O, detached from human society, but water should be seen as ‘social nature’ that is the assemblage of materiality and discursivity of human and non-human factors. The state plays a particularly prominent role in establishing the relationship between water and society. However, existing literature on hydro-politics does not sufficiently theorize the role of the state in hydro-politics. Recent studies of ‘state-nature’ relations emphasize the significance of the state role in the social construction of nature and argue that the state develops an intimate relationship with nature for its politico-economic ends using spatial strategies, such as framing, centralization and territorialisation.

The ‘state-nature’ literature can be effective in exploring the state-nature relations in the contexts of the East Asian development states. However, the DST is theoretically limited in explaining the state-nature relations. First, the DST tends to consider the state to be a gathering of a handful of bureaucrats who have plan-rationality and a pre-ordained separation from society. Second, the DST pays less attention to the dialectic link between society and nature in describing the process of capitalist production, and this may overgeneralize the episteme that all nature is equal to a pre-given ‘resource.’ Third, DST tends to be insensitive to interaction between the path-dependency of a developmental state and emergent changes (e.g., democratization and neoliberalization).

Based on the above problem orientation, by focusing on the water resource policy of the Korean developmental state (1961-2015), the analytic focus is to explore the ways in which the state-nature relationship as a ‘second nature’ is materially and discursively produced by social forces that pursue their own political and economic ends by acting in and through the state. More detailed research questions are as follows:

- A) *What were the state's intentions in advocating a certain water resource policy?*
- B) *How was the relationship between the state and nature constructed?*
- C) *How did the former regime's state-nature relationship impact the latter regime, and what changed this relationship under the latter regime?*
- D) *How does this perspective help us rethink the developmental state vis-à-vis nature?*

Based on these analyses, this thesis emphasizes the significance of the state role in hydro-politics, and suggests to see hydro-politics in terms of materially and discursively contested interactions among social forces acting in and through the state.

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List of Abbreviations

ADB	Asian Development Bank
ANSP	Agency for National Security Planning
CPE	Cultural Political Economy
DMZ	Demilitarized Zone
DST	Developmental State Thesis
EPA	Environmental Protection Agency
EPD	Economic Planning Board
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GNP	Gross National Product
GRDP	Gross Regional Domestic Product
IBRD	International Bank for Reconstruction and Development
ICDC	Industrial Complex Development Corporation
KCCI	Korea Chamber of Commerce and Industry
KCIA	Korean Central Intelligence Agency
KFEM	Korean Federation for Environmental Movement
KOSIS	Korean Statistical Information Service
KPGWSG	Korean Peninsula Grand Waterway Study Group
KRIHS	Korea Research Institute for Human Settlements
KWRC	Korea Water Resource Corporation
KWRDC	Korea Water Resource Development Corporation

MCI	Ministry of Commerce and Industry
MITI	Ministry of International Trade and Industry
MLTMA	Ministry of Land, Transportation, and Maritime Affairs
MOC	Ministry of Construction
MOCT	Ministry of Construction and Transportation
MOE	Ministry of Environment
NSO	National Statistical Office
PAI	Population Action International
SRA	Strategic Relational Approach
UNDP	United Nations Development Program
USAID	U.S. Agency for International Development
USOM/K	United States Operations Mission-Korea
WAMIS	Water Resources Management Information System

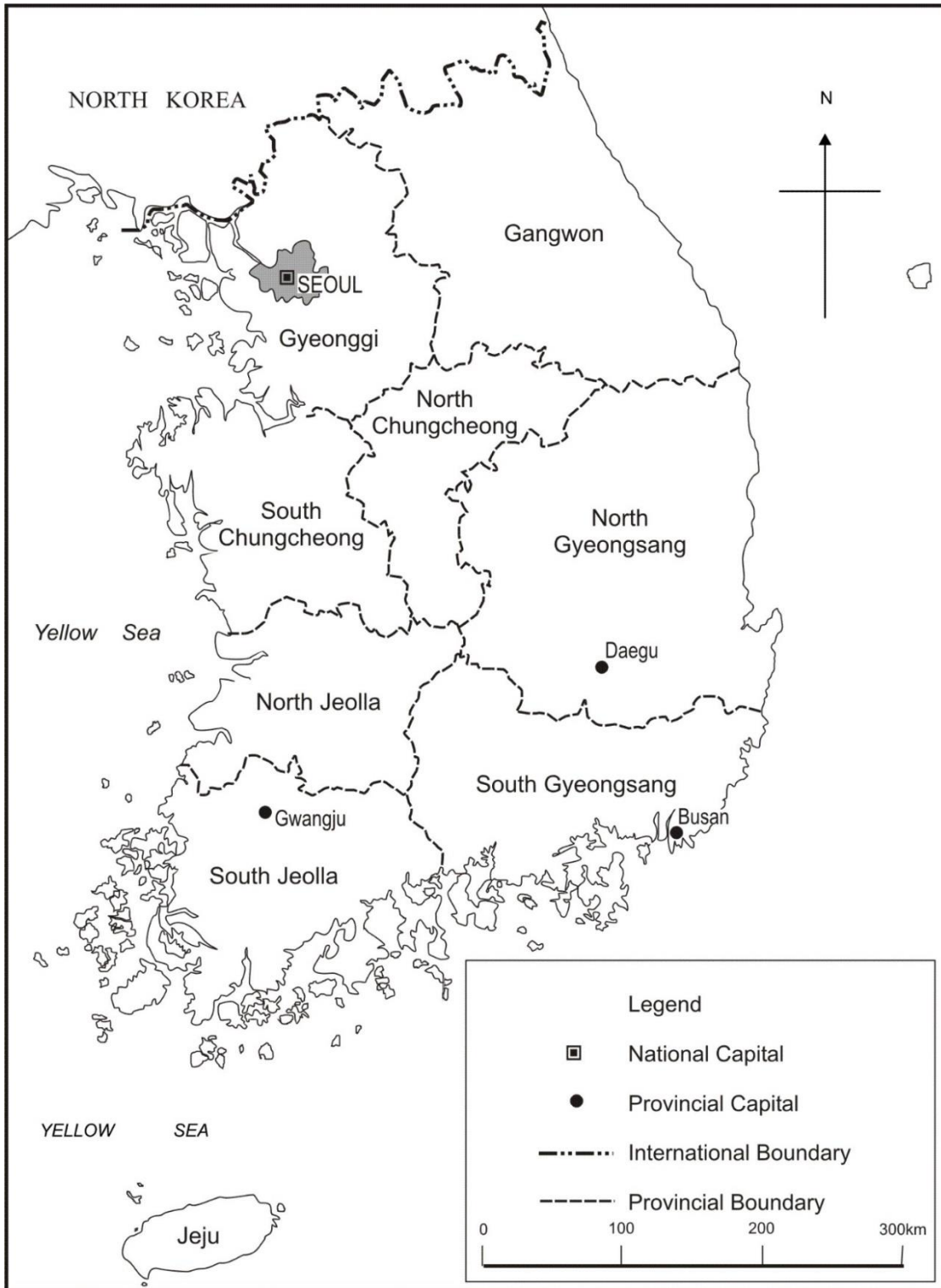


Figure 1: Provinces of South Korea.

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I. INTRODUCTION

Until recently, the Four Major Rivers Restoration Project (hereafter, 4 Rivers Project), a state-led Green Growth strategy for substantial re-engineering of the country's natural landscape and hydrological system, has been one of the most hotly debated environmental issues in South Korean society. In 2008, the Lee Myung-Bak government (2008-2013) began to implement the 4 Rivers Project. However, Korean civil society groups, including environmental activists, environmentally friendly religious groups and scientists, have strongly opposed the project, arguing that it would cause immense ecological destruction rather than environmental restoration. Because of the gravity of the issue, *The New York Times* and the journal *Science* (*The New York Times* 2009; Normile 2010) covered the project in depth. According to *Science*, the project, which includes “building 16 dams, dredging 570 million cubic meters of sand and gravel to deepen nearly 700 kilometers of riverbed, renovating two estuarine barrages, and constructing bike trails, athletic field, and parks along the waterways”, would cause significant environmental destruction and is “one of the costliest engineering projects in the country's history,” with expected spending of at least US\$19 billion (Normile 2010: 1568; see Figure 23).

Despite the strong criticism from civil society, the Lee Myung-Bak regime aggressively pursued the implementation of the project. Why was President Lee so aggressive in promoting this project? Some might answer this question by connecting this ambitious construction project to his personal experiences, including being involved in constructing critical national infrastructure projects such as the Gyeongbu (Seoul-Busan) Expressway as the former CEO of the Hyundai Engineering and Construction Corporation. However, rather than interpreting this project as a result of the Lee regime's policy direction or ideological preferences, I consider the project in relation to the historical legacies of the Korean developmental state and emergent neoliberal properties.

1. The state-nature relations in a developmental state: The South Korean water resource policy

The East Asian ‘developmental state thesis’ (hereafter, DST), which has been offered by the scholars, such as Johnson (1982), Deyo (1987a), Wade (1990) and Woo-Cumings (1999), was suggested to explain the East Asian development states (i.e. Japan, South Korea, Taiwan and Singapore), where the role of the state has been very significant in producing ‘the East Asian economic miracle’ (World Bank 1994). However, the natural world has received little attention in DST scholarship. It is ironic that nature as a resource is intrinsically important to national economic development in East Asia, but research related to this issue is nonexistent. In particular, water, among the natural resources, is crucial because it is the backbone of economic growth in contexts that include hydroelectric power, industrial water for factories and residential water.

Since the 1960s, the Korean state has been active in pursuing various water resource development policies. For example, the Ten Year Water Resource Development Plan (1965) was designed to comprehensively develop water resources, including flood control and water utilization. The Specific Multipurpose Dam Act (1966) was a special law aiming at smoother and more efficient construction of multipurpose dams, replacing the River Act, which focused on flood control. The establishment of the Korea Water Resource Development Corporation (KWRC) (1967), which assumed the responsibility of water management from the extant river authorities, strongly advocated the construction of multipurpose dams (KWRC 1994; Lee 2005). Based on the description thus far, the DST appears useful for explaining the role of the state in water resource development. However, understanding the context at this level is superficial. We must understand state-nature relations to properly explain how water resource development policies were established and pursued by the Korean developmental state. This thesis aims to explore how the Korean state played a key role in developing the discursive and material construction of nature.

This thesis is theoretically informed by recent development of the literature on the social construction of nature and the state-nature relation. Recently, there is increasing attention to the debate on critical hydro-politics in studies of water resource development and policy (Sneddon and Fox 2006, 2011; Biro 2007; Harris and Alatout 2010). Conventionally, water is regarded as a pure and natural substance in the form of H₂O, detached from human society, but, as Swyngedouw and others already noted (Swyngedouw 1999, 2007, 2013a, 2013b; Bakker 2003a; Gandy 2008), water should be seen as ‘social nature’ that is the assemblage of materiality and discursivity of human and non-human factors. The state plays a particularly prominent role in establishing the relationship between water and society, such as in Israel and India (Alatout 2008; Klingensmith 2007). However, existing literature on hydro-politics does not sufficiently theorize the role of the state in hydro-politics. Recent studies of ‘state-nature’ relations emphasize the significance of the state role in the social construction of nature and argue that the state develops an intimate relationship with nature for its politico-economic ends using spatial strategies, such as framing, centralization and territorialization (Whitehead et al. 2007; for details, see Chapter 2).

The ‘state-nature’ literature can be effective in exploring the state-nature relations in the contexts of the East Asian development states. However, the DST is theoretically limited in explaining the state-nature relations. First, the DST tends to consider the state to be a gathering of a handful of bureaucrats who have plan-rationality and a pre-ordained separation from society. Second, the DST pays less attention to the dialectic link between society and nature in describing the process of capitalist production, and this may overgeneralize the episteme that all nature is equal to a pre-given ‘resource.’ These limitations occlude consideration of the dynamics of making nature as a resource for rapid development, compared with advanced Western countries that took more time to achieve development. With this mindset, the DST cannot properly address the complex and dynamic conflict, contestation and compromise that occur at and across multiple geographical scales in the process of transforming nature into a resource. Third, DST tends to be insensitive to interaction between the path-dependency of a developmental state and emergent changes (e.g., democratization and neoliberalization). There have been two contrasting approaches to the

characterization of the Korean developmental state after political and economic liberalization. One approach is that of the neo-statists, who emphasize the point that the developmental state still alive under the influence of globalization and democratization, and that the role of the state in driving the national economy is as important as ever (Weiss and Hobson 1995; Weiss 1998, 2003). The other perspective is that the developmental state has waned, as unveiled actors such as civil society and the large Korean conglomerate (*chaebol*) have emerged (Chang 1998; Kim 1999; Minns 2001; Pirie 2005). In my view, both approaches share a common problem in that they both concentrate solely on the state either “before” political and economic liberalization, like the former approach, or “after” liberalization like the latter approach, in which a consideration of the close interactions between the past and the present of the Korean developmental state is neglected. Alternatively, influenced by a strategic-relational approach to the state that views the state as a site of political contestations among social forces as suggested by Jessop (1990), this study explores the way in which the South Korean water policy has been dynamically (re-)constructed by continuing political contestations among diverse social forces acting in and through the state and nature in the face of emergent changes. Lastly, and related to the third point, the relationship between DST and neoliberalism in respect of nature should be elaborated. Theoretically, neoliberal nature literature and the DST are effective for comprehending recent neoliberal nature projects in developmental states. In recent years, many geographers have examined the ways that neoliberal nature has been (re-)produced as the outcome of dialectic interactions between inherited regulatory frameworks and emergent neoliberal impetuses at multiple geographic scales, which contrast with a mainstream view that regards neoliberal mechanisms as homogeneous on a global scale (for seminal extensive reviews, Castree 2008a, 2008b). It is important that neoliberal nature research pay particular attention to capturing the linkages between local path-dependence and its relationship with extra-local path-breaking momentum *in situ* rather than prioritizing global over local momentum. Acknowledging the fruitfulness of the literature that has focused on the variegated landscape of neoliberal nature, I view that the role of the state in forming this nature should be theoretically and empirically more clarified and diversified in the existing research. When exploring East Asian neoliberal nature projects, dissecting the state’s role is very significant in that the developmental state form affects not only ‘the East Asian Miracle’ (World Bank 1994) in the 1970s and 1980s but also the

globalization and neoliberalism in the country today (Hill et al. 2012). This economic miracle and transplantation of neoliberalism are depends on political contestations among diverse social forces, such as national bureaucrats, politicians, civil societies and local communities, acting in and through the state (Park 2005a; Hill et al. 2012). Even though DST scholars emphasize the state's role in driving economic growth, there has been analytic silence around the relationship between the state and nature. Namely, both debates may help each make up the other's weak points, such as the state's role and the linkage between the state and nature, while strengthening my argument: the active role of the state is decisive in producing neoliberal nature in the context of East Asian developmental states (what I term the "neoliberalized developmental state-nature").

2. Main research questions

Based on the above problem orientation, by focusing on the water resource policy of the Korean developmental state (1961-2015), the analytic focus is to explore the ways in which the state-nature relationship as a 'second nature' (Smith 1984) is materially and discursively produced by social forces that pursue their own political and economic ends by acting in and through the state. More detailed research questions are as follows:

- A) *What were the state's intentions in advocating a certain water resource policy?*
- B) *How was the relationship between the state and nature constructed?*
- C) *How did the former regime's state-nature relationship impact the latter regime, and what changed this relationship under the latter regime?*
- D) *How does this perspective help us rethink the developmental state vis-à-vis nature?*

Based on these analyses, this thesis emphasizes the significance of the state role in hydro-politics, and suggests to see hydro-politics in terms of materially and discursively contested interactions among social forces acting in and through the state.

3. Structure of the thesis

The thesis is organized into eight chapters. Chapter 1 is this introduction. In Chapter 2, I first note the inadequacy of DST in explaining state-nature relations and the necessity of exploring the recent literature on the strategic relational approach to the state and its interactions with nature. The chapter ends with a research framework for discussing state-nature relations in the Korean developmental state.

Chapter 3 discusses the methodological concerns in the DST literature and presents the methods used for fieldwork, such as literature review, data collecting and interviews.

Chapter 4 focuses on the water resource policy of the Park Jung-Hee regime (1961-1979). During this period, the Park regime (mainly the Ministry of Construction (MOC) and the KWRC) established the modern Korean waterscape for the first time by centralizing and nationalizing local nature in the form of the “Four Major Rivers” hydro-scale.

Chapter 5 explores the water resource policy of the Chun Doo-Hwan regime (1980-1987). Despite the fact that the Park regime and the Chun regime had the same authoritarian natures, President Chun had less justification than did President Park because under the Park regime, South Korea accomplished significant economic growth, and civil society was impatient for democratization as the next stage of economic growth at that time. The Chun regime thus produced different state-natures, such as the “Ten Major Rivers” hydro-scale and the Peace Dam, to avoid a legitimacy crisis.

Chapter 6 focuses on the water resource policy in the 1990s and the early 2000s, and reveals that the path-dependency of the state-driven water resource policy under the former authoritarian regime did not disappear even after democratization. For instance, the MOC and the KWRC, which had grown under the past authoritarian regimes, created a ‘water scarcity state’ thesis to gain legitimacy for continuing dam construction.

Chapter 7 shows through a case study of the Lee Myung-Bak regime’s (2008-2013) 4 Rivers Project that the active role of the state is decisive in producing a neoliberal nature in the context

of East Asian developmental state (what I term the “neoliberalized developmental state-nature relationship”), contrary to the dominant neoliberal creed that the minimal state is a prerequisite for vitalizing neoliberalism.

Chapter 8 is the conclusion which summarizes the main results as well as revisiting the main research questions. I also propose some future research agendas.

II. STATE-NATURE RELATIONS IN A DEVELOPMENTAL STATE: THEORETICAL CONSIDERATION FOR THE ANALYSIS

This chapter is organized in eight sections. In the first and second sections, I note the inadequacy of the DST in explaining state-nature relations and suggest the necessity of exploring the recent development of literature on the strategic relational approach to the state and its state-nature. The third and fourth sections introduce key arguments of state-nature relation literature and its conceptual weakness that insufficiently considers a multi-scalar perspective. From the fifth to the seventh sections, I focus on the transformation of state-nature relations, in particular in the face of economic and political liberalization, including the neoliberal turn. Finally, in the last section, I establish a research framework of state-nature relations in East Asian developmental states to concretize this theoretical debate in an empirical case study.

1. The implications of a SRA for comprehending the Korean developmental state

The DST emphasizes that the state can play a significant role in national economic growth, particularly when it is composed of bureaucrats who are autonomous from social forces and act on the basis of plan-rationality in East Asia, such as what occurred between the 1960s and the 1970s (Johnson 1982; Deyo 1987a; Amsden 1989; Wade 1990; Woo-Cumings 1999). The DST scholars have used special terms, such as “plan-rationality” of national bureaucrats (Johnson 1982), “state infrastructural strength” (Weiss 1998) and “governing the market” (Wade 1990), to emphasize the “role of the state” in realizing the “East Asian Miracle” (World Bank 1994). These concepts are commonly based on the episteme that the state and its officials are independent from society, including private interests. In other words, along with a (neo-) Weberian reading of the state, DST scholars assume that state policy is designed in terms of the plan-rationality of national bureaucrats (Weber 1946). This perspective has provided useful alternative ways of thinking and policy-making on national development, raising meaningful challenges to the dominant, neoclassical economics-based development model, which assumes

that more freedom in the market and reductions in state intervention are beneficial to economic development.

However, the DST has been criticized for its (neo-)Weberian readings of the state that presuppose the separation of the state and society and see the state only as a gathering of a small number of bureaucrats who have plan rationality. In this sense, increasing numbers of critical geographers have highlighted the inability of the DST to detect the dynamic interactions between the state and society and the role of the varied social forces that could affect state actions from within and outside of the state (Park 1998, 2008; Glassman 1999; Hwang and Park 2014). For example, Park (1998) reveals that diverse social forces such as capital and labor had a deep impact on the state's housing development policies in South Korea and Singapore.

In other words, because of its state-centric perspective (i.e. territorial trap), the DST is limited in explaining the dynamic and contested interactions occurring at multiple scales that surround the East Asian development process (Glassman, 1999; Park, 2013b; Glassman and Choi, 2014).¹ According to Park (2013b: 184-186), the state-centric perspective of the DST underestimates other scales, such as global or local, as a unit of analysis. The state-centric perspective awards epistemological priority to national actors, such as national bureaucrats or national capital, over non-national actors such as local people. The SRA would be helpful in addressing these limitations.

¹ For example, Johnson (1982: 22-23) has heavily focused on bureaucrats, arguing that “in the plan-rational system, [policy] change will be marked by internal bureaucratic disputes, factional infighting, and conflict among ministries”.

Jessop (1990) criticizes both Miliband and Weber², pointing out that the economic (Miliband) and political (Weber) aspects of the state do not necessarily and firmly constitute the final form of the state, although both aspects are intertwined in the form of a “formal unity” (Jessop 1990: 198). Jessop suggests a SRA that considers that the state form should be supplemented by continuing accumulation strategy, which is defined as a particular economic growth model such as Atlantic Fordism, and a hegemony project, such as the “democratic welfare state” of the Chun regime (see Chapter 5), which unifies different types of capital, under a particular hegemonic faction for initiating certain accumulation strategies,³ driven by social forces to sustain the ‘substantive unity’ of the state form (Jessop 1990: 198).

In this sense, the state requires hegemony projects as well as physical violence means to achieve stable and long-term statecraft that includes supporting general accumulation in the capitalist system (Harvey 1982). Thus, we should see that even under a dictatorship, certain state actions are the outcome of interactions among diverse actors beyond the static boundary of state-society rather than considering these actions a pure result of a dictatorship’s interests or of state bureaucrats’ plan rationality.

In summary, from a SRA perspective, the DST has limitations, which may occlude the multi-dimensionality of the authoritarian regime. First, the DST views that the state is operated based on state bureaucrats’ independence from society, while downplaying the state’s hegemonic practices to gain legitimacy from the people. Second, and in relation to the first limitation, the

² In modern social science over the past fifty years, there have been two contrasting approaches to the state (Brenner et al. 2008). One is Max Weber’s reading that regards the state, which is detached from society, as a gathering of a small number of bureaucrats (Weber 1946). The other perspective is the neo-Marxist approach, such as that of Ralph Miliband (1968), who considers the capitalist state an ‘executive committee of the bourgeoisie’.

³ Accumulation strategy and hegemony projects may overlap, but accumulation strategy is mainly related to economic phenomena beyond the national scale, such as Atlantic Fordism, whereas hegemony projects are more focused on non-economic aims on a national scale (Jessop 1990: 198-201).

resultant state-civil society dichotomy tends to block the dynamics between the state and society in the formative process of state actions.

Even though the SRA emphasizes dialectic interactions between accumulation strategy and hegemony projects *in principle*, existing empirical studies tend to lean towards state-led capitalist accumulation *per se* or economic readings of the state (with the exceptions of Jessop and Oosterlynck (2008) and Oosterlynck (2010)). In this dissertation, among various state actions, the production of state-nature can be explained well in terms of the logics of hegemony projects as well as with accumulation strategy, which will supplement the lack of empirical research that supports the SRA.

2. Coupling the developmental ‘state’ with ‘nature’

Additionally, I illuminate another problem with the DST: the inability of the DST to understand state-nature relations. Similar to neoclassical economics and Weberian industrial locational theory, the DST tends to overlook the process of transforming nature into resources for capitalist production. Chalmers Johnson (1982), the founder of the DST, emblematically explained the relationship between nature and the Japanese developmental state as follows:

[B]oth types of systems [plan rationality and market rationality] are concerned with “*externalities*,” ... an example would be the *unpriced* social costs of production such as pollution. ... Accordingly, Japan persisted with high-speed industrial growth long after the evidence of very serious environmental damage had become common knowledge (Johnson, 1982: 22, italics added).

Although Johnson emphasizes the differences between economy systems by dividing the differences between the plan rationality of the DST and market rationality of neoclassical

economics, epistemologically, he notes that, with regard to nature, there is no difference between both systems in that the calculations for both systems do not include nature in the name of ‘externalities’, while partly considering environmental aspects, such as pollution, as necessary by-products of high-speed industrial growth. In addition, it is assumed that there is a practical reason for DST scholars’ downplay of the transformation of nature into resources. The majority of the economic growth of developmental states has been based on export-oriented industrialization due to a shortage of natural resources such as petroleum. Hence, DST scholars did not need to consider the transformation of nature into resources at length. However, as shown in this work on water, this does not mean that no relation exists between developmental states and nature. To reduce this gap in knowledge, more case studies are needed. Therefore, we find that there is no room for a discussion on the ways in which nature and the state are closely connected with each other by political contesting social forces in the process of national economic development. Although several environmental scholars have studied the impact of developmental states’ economic development on nature, they have primarily concentrated on the state’s destruction of nature without exploring the cause, process and ways that this outcome occurs (Cho, 2003; Koo, 2003). This situation calls our attention to the state-nature relationship in the developmental state.

3. The implications of state-nature relations literature

State-nature relations literature (for extensive reviews, see Whitehead et al. 2007) questions the separation between the state and nature.⁴ Basically, state-nature relation scholars do not view nature as the material world *per se* or a pristine realm. Instead, they understand nature, which is mixed with human art, science and technology, as social product (Whitehead et al. 2007: 13-14;

⁴ Although the relationship between the state and nature has been debated since the 16th century by authors such as Thomas Hobbes and Jean-Jacques Rousseau (Whitehead et al, 2007), I focused more on the relationship between the ‘modern’ state and nature. Whitehead et al. (2007) regard the recent definition of ‘state-nature’ as a relatively ‘modern’ phenomenon, different from relationships before the era of capitalism and modernism. The difference between the pre-modern and modern state-nature relationship should definitely be studied in the future.

see also Whatmore 2002). In fact, this perspective is not new in the debate on the ‘social construction of nature’ (Smith 1984; Eder 1996). At issue is the hyphen (-) between the state and nature (see Figure 2). According to Whitehead et al. (2007: 14), “states and natures are not pre-given, already completed entities, but continually emerging realities,” which means that we must focus upon how each nature and state influence each other and are closely interconnected, rather than seeing the state and natures as separate, established entities. In particular, they suggest three mechanisms to explain the specific relation between modern states and natures (Whitehead et al. 2007). First, framing is “a process that involves the ‘bracketing off’ of the things and objects interacting in a certain context” (Callon 1998: 249, quoted in Whitehead et al. 2007: 14). The state tries to frame nature in various forms from physical territorial barriers to property rights and engineering infrastructures. Therefore, nature becomes abstract, and its local ecological context is dissipated (Whitehead et al. 2007: 15). In the process of framing nature, centralization and territorialization are the modern state’s decisive actions to influence and control nature. Centralization involves building up standardized knowledge about nature, such as soil survey and environmental statistics, and the creation of a ‘field of power’ that natures are governed by the state (Whitehead et al. 2007: 16; see also Elden 2007).

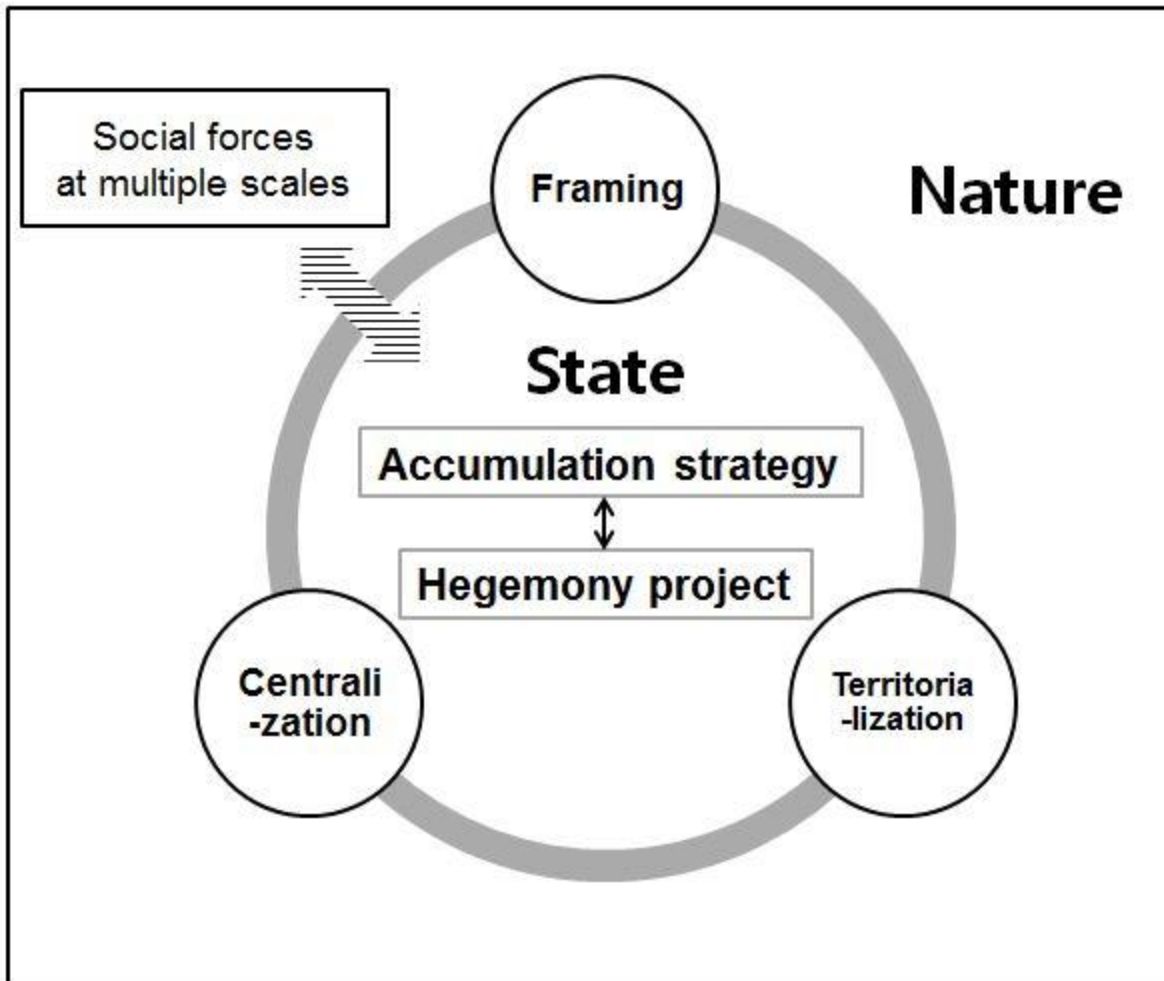


Figure 2: The formation of state-nature relations.

Here, the debate on the territorialization of nature must be explored in more detail for empirical study.⁵ In general, territorialization is a spatial strategy to control space and the resultant human activity (Sack 1986; Wainwright and Robertson 2003). More concretely, by constructing a geographical boundary, people are divided into ‘us here’ and ‘them there’. Within a certain boundary, diverse groups must converge into one group, ‘us’, while excluding others based on

⁵ Although divided into three parts (i.e. framing, centralization and territorialization) conceptually, the three mechanisms actually are intermingled.

factors such as gender and class (see also Cox 1999). Thus, territorialization of nature involves attempts to marshal not only nature, but also human-nature interactions such as nationalizing water at the *local* level in the name of *national* economic development. For example, Vandergeest (1996) explores the way in which a forest in Thailand is designated a national territory by a state entity, such as the Forestry Department, and how modern maps are created that erase locally-recognized properties and show forest falling under territorial sovereignty. In a similar vein, by focusing on Seattle's climate governance, Rice explores how the territorialization of carbon made it possible to govern people as 'good carbon citizens' within Seattle's jurisdictional 'carbon territory' (Rice 2010). I also reveals the ways in which the 'Four Major Rivers' hydro-scale as a national scale was constructed by the South Korean state during the 1970s to avoid local opposition and to promote export-oriented industrialization (see Chapter 4). As these studies have shown, among various actors, the state is a leading driver for the territorialization of nature because it has enough people and resources to territorialize certain areas, such as through map-making and establishing territorial administration.

Although I agree with the basic literature on territorialization of nature, I argue that there are some points that remain vague and beg more clarification. First, most studies tend to assume that territorialization of nature is a kind of transforming nature into a territory (e.g., forest or water as territory *per se*) (Vandergeest and Peluso 1995; Vandergeest 1996; Braun 2000; Wainwright and Robertson 2003). However, this could conceal the availability of different types of territorialization of nature. I would argue for another type of territorialization of nature. Nature could be involved in territorialization process as a *catalyst* in maintaining the already-established territorial tension. For example, as revealed below, water that cut across a military boundary could intensify the national-territorial tension between North and South Korea (see Section 6 of Chapter 5). Second, we also need to excavate veiled motives for territorialization of nature. Existing studies have mainly concentrated on either capitalist accumulation or nation-building in fostering state territorialization of nature (Vandergeest and Peluso 1995; Vandergeest 1996; Braun 2000; Wainwright and Robertson 2003; Rice 2010; Peluso and Vandergeest 2011). However, it is possible that the government can drive territorialization of nature, as reflected in

not only the impetus of capital accumulation and nation-building but also political motivation in the face of certain political crises. In a similar way, Swyngedouw recently showed that high-volume desalination plants were mobilized in Spain as ‘hydro-social fix’ to avoid political and ecological crises (Swyngedouw 2013a). As explained below, in the case of authoritarian regimes, the territorialization of water could be effective to curb potential resistance, such as the Gwangju Democratisation Movement (e.g., the Peace Dam, see Section 6 of Chapter 5), and to integrate one people. Finally, it primarily focuses on the ‘internal’ territorialization of the state (Vandergeest and Peluso 1995; Isager and Ivarsson 2002; Wainwright and Robertson 2003). In other words, with the exceptions of the Middle East and the Nile (Amery 2002; El-Fadel et al. 2003; Harris and Alatout 2010), it assumes that territorialization of nature mainly occurs within an established national boundary, which ignores the possibility that, given inter-state tensions, territorialization of nature beyond national boundaries can take place. In summary, these processes help us to understand how the hyphen in ‘state-nature’ relationships can sustain its linkage today.

To avoid any misunderstanding, it needs to be clarified that the term state-nature does not mean that the state can control or conquer all of nature and correctly estimate the state-nature’s effect and direction. Fundamentally, because of the unpredictability of nature, the state continually encounters various difficulties sustaining certain state-nature relations.⁶ Namely, it emphasizes that the specific state-nature relationship is constantly constructed and reconstructed by social forces that pursue their various political and economic ends acting in and through the state and nature, rather than a pre-given state-nature. However, the state-nature relation literature still insufficiently explores the point that concrete *spatial* strategy and process make it possible to control and connect with the nature and human-nature interactions. The scale concept is meaningful for narrowing this interval.

⁶ In a similar sense, by focusing on debates on the creation of markets for wetland services in the U.S., Robertson and Wainwright (2013) point out that the U.S. government faces an unexpected difficulty in calculating accurate value of wetland.

4. Observing state-nature relations from a multi-scalar perspective

The state-nature relation literature lacks the multi-scalar perspective⁷ in explaining the formative process of certain state-natures. The literature focuses on the production of the state-nature on the national scale as the sole unit of analysis. Meanwhile, the literature downplays the possibility that various scaled natures, such as regional nature, can exist in diverse scales and that these scaled natures impact the construction of certain state-natures (Hwang and Park 2013: 360). In my view, a key reason for this neglect is because the empirical studies narrowly focus on state-building or nationalism *per se* initiated by the state (see the chapters of Whitehead et al. 2007; Alatout 2008; Harris and Alatout 2010). State-nature relation scholars are more interested in *national* state form than *capitalist* state form where various social forces compete for their political and economic interests. In reality, both state forms cannot be separated from one another, as I will explain later.

In this sense, as many noted, the politics of scale is important for comprehending societal conflicts because when a social force located at a particular scale attempts to mobilize other forces at different scales for their own ends, they can take advantage of relevant scale language, such as local or global scale (Cox 1998; MacKinnon 2011). Similarly, certain dominant scaled natures are the product of contest, conflict and compromise among social forces at multiple scales (Sneddon et al. 2002; Biro 2007; Harris and Alatout 2010). The production of scaled nature is influenced not only by dominant social forces such as national bureaucrats and big capital but also by less powerful actors such as local communities and civil society (Biro 2007: 23-27). In other words, if there is a ‘scalar mismatch’ (Hwang 2014: 86) between local community and national government needs, the development of state-nature relations could be

⁷ In this section, I cannot present the context of the existing broad debate on hydro-scale in human geography (Swyngedouw 2007; Sneddon and Fox 2011). However, I need to mention briefly that hydro-scales are discursively and materially constructed and transformed by interactions between human activities and nature, instead of confining hydro-scales to the pristine first nature (Smith 1984).

affected. In sum, the existing state-nature literature is inclined to simplify spatially complicated relations of state-nature and one-sidedly emphasize the role of the state *per se* in capturing *untamed* nature.

Considering the necessity of observing state-nature relations from a multi-scalar perspective, I think that the developmental state can use the politics of scale to frame and control natures in accordance with the state's particular accumulation strategy and hegemony project.

5. Changing state-nature relations in a developmental state after political and economic liberalization: Accept or reject the term 'developmental State' to selective policy areas?

In this section, I concentrate more on literature covering the transformation of the Korean developmental state in the face of the political and economic liberalization that occurred between the 1990s and the early 2000s. In particular, it is important to note that existing studies have several limitations in capturing the dynamics of the Korean state in this period.

First, existing literature assumes that before the 1980s, the Korean state possessed “a high degree of autonomy” (Minns 2001: 1027) insulated from private interests (for similar views, Chang 1998; Kim 1999; Pirie 2005). Under this condition, according to the literature, the Korean state was able to realize the “East Asian Miracle.” However, this view cannot explain why social forces, such as state officials and national capitalists, that existed before the 1980s continued to compete with each other after the 1980s. In fact, the argument that a “high degree of autonomy” of the Korean state existed between the 1960s and the 1970s is taken to be nearly mythical, as revealed in recent empirical studies (B.-G. Park 2003; Gimm 2013; Glassman and Choi 2014; Hwang and Park 2014). For example, Hwang and Park (2014) show that, contrary to DST scholars' expectation that the Gumi Industrial Complex in South Korea was developed by the rational planning of the national bureaucrats in the late 1960s and the early 1970s, the place-

dependent local actors in Gumi, the Korean-Japanese businessmen and the national parliament members all had a key role in promoting the development of the industrial complex. The consideration of these unveiled facts is significant for avoiding the overgeneralized perspective that it was not until political and economic liberalization in the 1980s that various social actors became involved actively in conflict against the government. Put simply, even before the 1980s, political contestations had already appeared among diverse social forces surrounding certain state policies.

Second, this approach declares “the decline of the developmental state” (Chang 1998; Kim 1999; Minns 2001) *rapidly* after the 1980s under the influence of political and economic liberalization and the economic crisis, which omits the necessity of exploring the way in which the path-dependency (or legacy)⁸ of the developmental state affected what Pirie (2005) calls “the new Korean state”. I agree with the criticism of Linda Weiss (Weiss and Hobson 1995; Weiss 1998, 2003), who emphasizes “the role of the state” *per se*, as an example of a rigid perspective on the changing developmental state faced with globalization (see Kim 1999: 443-444; Minns 2001: 1026; Pirie 2005: 26). However, such critiques also share a flaw with Weiss. Namely, these authors pay excessive attention to the new bottles called “the new Korean state” (Pirie 2005) while overlooking the old wine (i.e. the legacy of developmental state).

I acknowledge that drastic changes (e.g., the rise of civil society and the prevalence of neoliberal ideology in policy making, etc.) took place in the mode of regulation of the Korean state. However, this does not mean that all of the past institutions, norms and people (such as state officials) were swept away to history at the democratic transition. The past and the present do not

⁸ The origin of the path-dependency of the Korean developmental state could be traced back to the time of Japanese rule or the Late Chosun Dynasty. In actuality, the sprouting of the Korean modernization is still debated (cf. Shin and Robinson 1999). This issue is beyond the realm of the present study. Here, I intend to focus on the former authoritarian regimes’ path-dependency between the 1960s and the 1980s, although I do not deny the possibility that even the authoritarian regimes could have been influenced by the former politico-economic systems (cf. Kim 2009).

follow a zero-sum relationship. It is insufficient to recognize what renowned Korean political scientist Jang-Jib Choi (2002) calls ‘democracy after democratization’ (J.-J. Choi 2002) in South Korea. Although J.-J. Choi (2002) does not deny the importance of abrupt changes from below in promoting the 1987 democratization, he argued that how the current Korean democracy became conservative democratization from above after the 1987 democratization should also be considered (see also Doucette 2010).⁹ In agreement with J.-J. Choi (2002), I argue that not only new factors, but also old factors, should be dynamically and periodically considered in analyzing democratized Korean society today. In this vein, several scholars have been recently focusing on the dialectic relationship between the legacies, such as state-led developmentalism, and new changes, such as globalization and democratization, of the developmental states because even during drastic changes, such as the IMF reform, the Korean state still plays an important role in planning, implementing and sustaining national economic development (Lee and Han 2006; Lim 2010; Park and Saito 2012). Building upon the work of Lim (2010) and Park and Saito (2012), I focus on the path-dependency of the developmental state’s impact on the current state’s water policy.

Finally, the realm of empirical studies is very limited in showing the changing characteristics of the Korean developmental state, although there has recently been an increase in the number of case studies on the subject (e.g., Lee and Han 2006; Lim 2010). Pirie notes that “certain state-institutionalists [including Linda Weiss] have been guilty of fetishizing and exaggerating the significance of *selected* areas of strategic activism by the state” (Pirie 2005: 27, italic added). Methodologically, I agree with Pirie’s indication. However, Pirie also tends to fetishize and exaggerate the current Korean state to support his argument that “a new, unambiguously

⁹ Several Korean social scientists used the term ‘87 regime’ to emphasize political and economic changes during this period, such as an amendment to the constitution calling for a direct presidential election system and national-level wage agreements between labor and capital to explain this great transformation (Park 2001; Sonn 2009; Cho and Seo 2009). While I do not deny the significance of these changes in 1987, this does not imply that the political and economic structure that existed before 1987 disappeared completely after 1987.

neoliberal state is developing within Korea” (Pirie 2005) by *selecting* central bank reform and the creation of an independent financial regulator as evidence for his argument. Thus, one may question whether there is any methodological difference between Weiss and Pirie.

Pirie then notes that “Neoliberalism essentially involves the creation of a ‘new’ state which seeks to support the functioning of *market disciplines* and the *commodification* of ever greater areas of social and economic life” (Pirie 2005: 27, italics added). However, during the period between the 1990s and the 2000s, the water sector, one of most significant areas of social and economic life, did not experience transplantation of market disciplines or commodification in Korea, in contrast to the experiences of the First and Third worlds (cf. Bakker 2003a, 2003b; Budds and McGranahan 2003). Perhaps, it can be said that Pirie’s analysis also suffered from a rushed generalization. I do not intend to criticize Pirie’s limited empirical selection. Instead, the point is that we should not accept or reject the concept of the developmental state based on personal taste and a rush to judgment. Despite the political and economic liberalization that seemingly created “the new Korean state” (Pirie 2005), why was the water policy not transformed to a more liberalized (or neo-liberal) system? To answer this question, broader case studies are needed in terms of specific spatial-temporal contexts. The water policy issue can supplement the lack of empirical research to reveal dynamics of the Korean developmental state.

6. Penciling the state’s role into the map of nature’s neoliberalism

Although I briefly address the economic liberalization and globalization that occurred between the 1990s and the early 2000s in the above section, we need to more specifically consider neoliberalism and its relationship with state-nature relations in the context of a developmental state during the period between the 2000s and the present because even after the 2007–2008 global financial crisis originated from the U.S., it was difficult to forecast that neoliberalism would soon become extinct (Peck et al. 2010). Even in cases of nature’s neoliberalism, varying neoliberal landscapes have been continually produced (Castree 2008a; Bakker 2010). Therefore,

based on the existing neoliberal nature literature, I attempt to theorize neoliberal nature in a developmental state in the sixth and seventh sections.

For ten long years, critical geographers have been challenging the dominant perspective that regards neoliberalism as a singular, abstract and homogeneous economic ideology and model for privatization, marketization, deregulation and the “hollowing out” of the state by arguing that “actually existing neoliberalism” (Brenner and Theodore 2002) appears as a dialectic amalgam between path-dependence stemming from extant institutions, norms and people and emergent neoliberal and market-oriented properties. Following this perspective, which emphasizes the necessity of contextualizing and reifying neoliberalism on the ground, there have been fruitful studies on the neoliberalism of nature in which the capital and the state attempt to conserve or degrade the biophysical world and even to create new natures for capital accumulation (Castree 2008a: 150; for reviews, Castree 2008a, 2008b; Bakker 2010). Although they do not deny that the so-called “unholy trinity” (the IMF, World Bank and WTO) has a significant impact on nature—particularly in the Third World (Peet 2003; Hartwick and Peet 2003)—researchers have strived to reveal that actually existing neoliberal nature involves complexities, contingencies and entanglements among varyingly scaled human and non-human actors and factors by its encountering biophysical entities in situ, that is, not reducible to homogeneous neoliberal projects driven mainly by the “unholy trinity” on a global level (Castree 2008a; Bakker 2010).

In essence, as Castree (2008a, 2008b) and Bakker (2009, 2010) noted, geographers in this field acknowledge that abstraction works that draw commonalities and differences among different case studies are needed to answer the question of how commonalities and differences in neoliberal nature are defined. For this work, based on the published articles on nature’s neoliberalism, Castree attempted to draw an “abstract map” (Castree 2008a: 149-150) showing the current variegated landscapes of neoliberal nature around the world while suggesting future research agendas. In particular, given a situation in which neoliberalism would not easily become extinct in the near future because of its adaptability to changes, such as that of “zombies” (Peck

2010; Peck et al. 2010), it is meaningful to pencil some missing points to Castree (2008a)'s map. In explaining the state's role in the mechanism of neoliberal nature, Castree observed two types: 1) off-loading the state's extant responsibilities to the private sector and/or civil society, mainly in Keynesian welfare states, and 2) minimizing state responsibilities by encouraging privatization in the public sector, as shown in underdeveloped and developing countries that have not yet established welfare policies (2008a: 149). Both types represent only a "roll-back" of the state, which may underscore the aspect of the "roll-out" mechanism that involves the state's active role in promoting nature's neoliberalism (Peck and Tickell 2002). Additionally, this categorization of the state may unintentionally strengthen the perspective of neoliberals who promulgate the state's demise, such as Ohmae (1995) and Friedman (2006).

Here, we need to problematize Castree (2008a)'s view on the state in two ways. First, Castree tends to see the state in the narrow sense as a "monolithic" government composed of national bureaucrats who are insulated from social forces, rather than seeing the state as a site of political contestations among social forces (Jessop 1990). In explanations of the mechanisms of off-loading or minimizing the state's responsibilities, it appears that social forces such as the private sector and civil society merely follow national bureaucrats' decisions without interactions, such as conflict or compromise, between them, although Castree did mention the terms "Marxist and neo-Marxist theory of the state" (2008a: 148). In actuality, on the surface, designating states' "roll back" or "roll out" actions as results is not particularly important because based on the changing situations, a "roll back" mechanism could dynamically transform into a "roll out" and vice versa. More fundamentally, the point is that we should recognize that the state's specific role, e.g., "rolling back" or "rolling out," is the outcome of contested interactions among various social forces acting within and through the state. Exceptionally, Bakker (2002) reveals political contestations among national bureaucrats, private corporations, civil societies and local communities surrounding the state's actions in introducing the logic of the market to water-resources management in Spain (see also Mansfield 2007; Roberson and Wainwright 2013).

Second, and related to the first point, in Castree's (re-)view, the driving force of nature's neoliberalism is inclined to economic impetus *per se* for maximizing profit given that he also accepted Bakker (2009: 1783)'s comment on his article (Castree 2009: 1791-1792). Although certain neoliberal nature projects are clear wastes of money as well as examples of environmental destruction, the projects could be started irrespective of maximizing profits from the perspective of capital in general. For instance, how and why was it possible to implement this project? To answer this question, we need to find more diverse motivations for neoliberal nature projects. As mentioned above, Castree tends to view the state as an economically determined entity in that the motivation for off-loading or minimizing the state's responsibilities is based on economic calculations in accordance with cost-benefit analyses. However, as Jessop (1990) notes, the state as a capitalist state tends to follow the logic of accumulation, whereas the state as a national state must guarantee the general, non-economic interests of the national population to sustain the current state form (see also Oosterlynck 2010). As examples of non-economic factors, a regime's legitimacy crises (e.g., military coups) or regional vs. local tensions that originated from uneven regional development may lead to neoliberal nature projects. In this sense, an economic deterministic view may impede capturing the various rationales behind enigmatic neoliberal nature projects. Thus, it is important to excavate the individual and social economic and non-economic factors that could affect the state's actions in relation to the nature's neoliberalism.

In summary, to better comprehend the state's role in promoting nature's neoliberalism, the state's role should be more diversified and elaborated on in order to locate the missing point on Castree (2008a)'s map. The need to see the state as a site of political contestation among social forces and to emphasize the relationship between economic and non-economic factors is also applied to conceptualizing what I called the "neoliberalized developmental state-nature" in the next section.

7. Neoliberalized developmental state-nature?: Bridging neoliberalism of nature into the East Asian developmental state

Before I conceptualize the term “neoliberalized developmental state-nature”, I briefly introduce what “developmental neoliberalism” means. As with neoliberalism, developmentalism is an economic ideology, and the two ideologies are mutually exclusive because developmentalism emphasizes the state’s role in accomplishing economic growth, whereas neoliberalism adheres to a view that guaranteeing an individual’s economic activity as *homo economicus* in a free market and curbing the state’s intervention in the market are prerequisites for economic growth. However, as Hill et al. (2012: 8) noted, “neoliberalism and developmentalism exist in pure form only in the imagination.” As introduced above, “actually existing neoliberalism” (Brenner and Theodore 2002) appears in the form of a hybrid in practice. Even in the context of East Asian developmental states, a hybrid between developmentalism and neoliberalism may exist. Although developmentalism is in stark contrast with neoliberalism in the sphere of ideology, they also share common orientations, i.e. prioritizing economic growth and capital accumulation over other values such as equity, distribution and environmentalism (Hill et al. 2012: 15), resulting in “developmental neoliberalism.”¹⁰ Next, the starting point for understanding nature’s neoliberalism in East Asia is understanding the “state-nature” relationship in the context of developmental neoliberalism.

To realize the so-called “East Asian Miracle” (World Bank 1994), the transformation of *local* nature into “*state-nature*” (Whitehead et al. 2007) was significant because developmental states needed nature as a resource for rapid industrialization at the early stages of economic

¹⁰ After the 1997 East Asian economic crisis, in Korea, there were political conflicts between national bureaucrats, who had protectionist and interventionist orientations, and the newly rising neoliberal reformers, who were based on the principle of *laissez-faire* in establishing special economic zones (SEZs) in which the government relaxed the existing domestic regulations to attract foreign investment. As a result, the government *selectively*, not throughout the entire territory, decided to establish the SEZs in the 2000s. This could be seen as a negotiated outcome between the inherited developmental state regulatory frameworks and the emergent neoliberal properties for new growth (Park 2005a) that shows the mechanism of developmental neoliberalism.

development (cf. Chapter 4). Spatially, nature as a potential resource exists at the local level. Because of this spatial characteristic, local communities may oppose the government's safeguarding of local nature as the sources for their livelihood. In other words, local nature is not a pre-given resource for national economic growth. Additionally, most developmental states were authoritarian regimes with less political legitimacy, although each country's specific situation was different (Deyo 1987b; Cheng 1990). Thus, the regimes strove to overcome these lacks of legitimacy by accomplishing *fast* economic growth. In this situation, by centralizing (e.g., environmental statistics) and/or territorializing (e.g., treating local forests as national territories) local nature, producing a state-nature could be an effective means of erasing local opposition and interest and gaining legitimacy from the national population at the same time, as was shown in the case of the producing the "Four Major Rivers" hydro-scale at national scale in South Korea in the 1960s and 1970s.

However, certain state-nature relationships do not have the durability to maintain their statuses in perpetuity. For example, political and economic liberalization may significantly affect existing hegemonic state-nature relationships. The "East Asian Miracle" did not always benefit countries uniformly. Instead, this miracle was based on uneven development in which some regions were more developed than others, which facilitated local and regional development-based territorial politics and spatial tensions among regions (Fukui and Fukai 1996; Hsu 2011; Park 2011). In many cases, underdeveloped regions and state-nature spaces overlapped with each other (cf. Chapter 4). Thus, it is estimated that the activation of civil society and "local-dependent actors" (Cox and Mair 1988) could have problematized the extant hierarchical state-nature relationships that infringed on local interests by demanding the decentralization of undemocratically centralized governance.

Surely, it is not the case that all legacies of the developmental state will soon weaken because certain social forces—national bureaucracies (e.g., the Ministry of Construction (MOC)), national capital and politicians—that benefited and grew under the authoritarian regimes are

stronger than other actors such as the Ministry of Environment (MOE) and nongovernmental organizations (NGOs) and can sustain their interests by camouflaging their democratic and environmental gestures in its policies without fundamentally changing the inherited regulatory framework (see also Park 2011). If the developmental states face more severe challenges (e.g., the 1997 East Asian Crisis) that demand neoliberal-styled major surgery, it would appear to be necessary for those states to accept the precepts of neoliberalism, such as privatization, marketization, deregulation and minimalism in public sectors. In this situation, dominant social forces may *selectively* accept marketization and/or deregulation while avoiding sweeping privatization of the public sector by acting in and through the state and nature. In other words, it is possible that the state's "roll out" becomes very decisive in implanting the logics of marketization and commodification into local nature in the name of national economic growth, which may be referred to as the "neoliberalized developmental state-nature."

8. Establishing a research framework of state-nature relations in the Korean developmental state

On the above theoretical basis, I suggest the following research framework. This framework is organized in three stages corresponding to each period i.e. stage 1 (Chapter 4), stage 2 (Chapter 5) and stage 3 (Chapters 6 and 7).

8.1. Stage 1: The birth of state-nature relations in the Korean state

In general, East Asian developmental states made accumulation strategy, which is defined as a particular economic growth model, such as export-oriented industrialization, and hegemony projects such as 'Modernization of the Fatherland' of the Park Jung-Hee regime, which unifies different types of capital (i.e. financial and industrial), under a particular hegemonic faction for initiating certain accumulation strategies (Jessop: 1990: 198). Corresponding to the accumulation strategies, the developmental state can drive spatial fixes on nature from building infrastructure such as dams to supporting the genetically modified organism industry (Harvey 1982; Castree 2008a). At an early stage of industrialization, the state needs nature as a resource, such as water

for hydroelectric power or coal for thermal power to produce electricity. The state’s particular policy on hydroelectric power or thermal power is selective and depends on different strategies, such as an integrated system of water or electric resource development, and political contestations among different social forces beyond the realm of the idealized plan-rationality.

However, it is not easy to change nature into a ‘resource’ for the state because nature is not a pre-given state-nature. Epistemologically, in many cases local people had considered natural elements such as water to be local assets for their living communities, local nature as free or public goods, not economic goods. Materially, local people, with the institutional support of the state, owned property rights for the nearby riverside and their living space. Under these conditions, it is highly possible that the state may face conflicts at the local level when the state introduces spatial fixes such as building multipurpose dams. In particular, given the urgent need for a developing state to achieve *fast* economic growth, opposition against the regime can be more intense than for developed countries and at the same time negatively impact economic development.¹¹ East Asian economic growth has been labeled a ‘miracle’ (World Bank 1994) in part because East Asian countries achieved the miraculous growth in only approximately three decades instead of the two centuries that developed countries required. For instance, Table 1 indicates the high velocity industrialization of the Park regime compared to growth in other developing countries.

Table 1: Average real annual growth rate of the manufacturing sector, 1960s-1980s.

Korea (A)	Developing countries (B)	A/B
20.3%	6.6%	307%

Source: World Bank (1983) quoted in Sonn (2006: 223)

¹¹ In contrast to this argument, I do not deny the fact that there were fierce, though sporadic, political debates held under conditions of *slow*-paced economic development in developed countries.

This ‘compressed industrialization’ process (Chang 2010) involved strong restrictions on labor and civil rights that likely caused East Asian states to face local and national popular resistance. In this situation, potential conflict would have complicated the developmental state’s efforts to bring about rapid ‘miracle’ growth.

The establishment of a state-nature relationship could be an alternative to reduce possible conflict at the local and national levels. Therefore, through actions for the centralization and nationalization of nature (e.g., making a special act or establishing a special national agency) and discursive actions (e.g., newspaper articles or schools book), the state must reframe nature as a nationalized economic good. In addition, the state needs more abundant and stable water for industry to support the change in accumulation strategy from light industry-based import substitution industrialization to export-oriented industrialization with heavy and chemical industries. In this situation, the possibility of social conflict and criticism of a state’s water resource policy still may exist on the local level. As a *capitalist* state, the state tends to follow the logic of accumulation. However, this does not mean that the state necessarily reflects the interest of a particular dominant capitalist class. As a *national* state, the state also must secure the non-economic, general interest of the people to sustain the existing state form (Jessop 1990). Therefore, the state can use politics of scale to drive water policy smoothly and to establish political legitimacy. Through a variety of material (e.g., building dams) and discursive actions (e.g., creating maps or making speeches), *local* nature may become *state-nature*, such as in the case of the ‘Four Major Rivers’ hydro-scale for national economic development, which may erase local interests and resistance.

8.2. Stage 2: The transformation of state-nature relations in the Korean state before political and economic liberalization

The reason a capitalist state attempts to form intimate relationships with water is to sustain the stable accumulation of a national economy. For example, the Park Jung-Hee regime framed water as “nationalized economic goods” and constructed the “Four Major Rivers” hydro-scale to guarantee the provision of abundant water and electricity to industrial complexes in accordance

with the change of the accumulation strategy from import substitution to export-oriented industrialization, as described in Chapter 4. At that time, these state actions were very effective in curbing possible social conflicts at the local and national levels that may have prevented state-led accumulation. However, particular state-nature relationships are not permanent but are transformed continually by both unpredictable human and nonhuman factors. In particular, given the situation in which the latter regime followed the previous authoritarian political system without democratization, the latter regime could have less justification than the former, which could have continually undermined the regime's political legitimacy and encouraged people's pent-up desire for democracy during the regime's tenure. Acknowledging this contingent condition, I focus more on the changing state-nature relationships in the latter authoritarian regime at a specific level. The regime had two options to escape from its legitimacy crisis: 1) the politics of distribution or 2) territorializing nature.

Although water is constructed as state-nature, according to the logic of accumulation, it is still part of the everyday lives of people. When people's safety cannot be guaranteed due to water-related natural disasters, such as floods or droughts, everyday life can be overcome with social conflicts even under the authoritarian regimes.¹² In particular, during the rapid industrialization (known as the 'East Asian Miracle'), the developmental state with limited financial capacity could invest their resources in several major rivers, such as building a large scale multi-purpose dam, while neglecting most small and mid-sized basins. In this scenario, it is highly likely that small and mid-sized basins would be vulnerable to natural disasters because disaster preparations

¹² To avoid any misunderstanding, it needs to be clarified that this thesis's main purpose is not to introduce the exceptionality of a particular authoritarian regime's water politics in comparison with other general capitalist state forms. Historically, it has been assumed that if a despotic monarch can manage hydraulic civilization well, she/he can sustain her/his despotism stably. The genesis of this idea can be found in Karl Wittfogel (1957). However, by suggesting a number of counter-examples to Wittfogel's thesis, we find that there is not necessarily a relationship between grand hydraulic infrastructures and despotic rule (Zimmerer 1991: 444-445; Swyngedouw 2007). Therefore, I view the particular relationship between water and politics as the product of political contestation among social forces acting in and through the state and nature, rather than seeing a pre-given, inevitable relationship.

in these areas would not be carried out¹³, which can bring about social reactions at the local and national levels and eventually may prevent capital accumulation. Therefore, the state can exercise alternative actions, such as changing the focus of policies from large-scale multipurpose dams to mid-sized single-purpose dams, to decrease the risk of natural disaster. More specifically, the production of state-nature could be related to the politics of distribution in the context of the developmental state. According to Park (2013a: 1120), the spatial patterns of East Asian countries' development were uneven from region to region because of the state's spatial selectivity in favoring certain regions for half a century. Therefore, the politics of distribution was important to sustain the existing political economic systems in these countries (Park 2008: 52-53). In this sense, a state with less political legitimacy, such as the Chun Doo-Hwan regime, may construct state-nature that aims at "balanced development" or "welfare" to relieve discontent in the region, as we will see in the example of the "Ten Major Rivers" hydro-scale project.

However, if the regime had faced the situation that the politics of distribution had an obvious limit in gaining legitimacy, it could have considered new measures to improve the entire situation. For instance, water that cut across a military boundary could have served as a catalyst in intensifying the existing national-territorial tensions between both coterminous countries in the form of a flood attack scenario, which could have been referred to as the territorialization of water. In an atmosphere of increased territorial tension, people would show more concern about an external enemy than they would criticize their regime's legitimacy, as we will see in the case of the Peace Dam.

¹³ Besides, the construction of multipurpose dams in big rivers could worsen the situation of small and mid-sized basins.

8.3. Stage 3: The transformation of state-nature relations in the Korean state after political and economic liberalization

Even though water policy is constructed by the government, water is used by the people in everyday life for their lives at the same time. When people could not drink clean water, the realm of everyday life could become space of social conflicts. In this sense, it is highly possible that rapid export-oriented industrialization, including heavy and chemical industries, lead to water pollution at the cost of nature that can bring about social reactions at the local and national levels. Therefore, the state should exercise alternative actions, such as establishing more environmentally friendly water governance, to decrease water pollution, which could change existing water policy orientation. Under this condition, democratization could accelerate the transformation of the state from an authoritarian one to a democratic and environmental one. However, this does not mean that the prior influential actors, who benefited from the extant developmental state system, gave up their interests or were totally replaced. These actors could guarantee their interests by using spatial strategies. Here are several examples. First, the use of a localization strategy is one example. Localization literally means that the national government materially hands over authority to the local governance structures while discursively emphasizing the local scale rather than national scale. Seemingly, localization would be the outcome of democratization. However, localization could be used as a Trojan horse of dominant social forces utilized to safeguard their interests. Second, and related to the first mechanism, new state-natures could be produced. Some might argue that after economic and political liberalization, certain state-natures would be decomposed into more localized and democratized natures for local residents because state-nature *per se* is regarded as an outdated legacy of past authoritarian regimes. However, extant influential actors such as the Ministry of Construction could utilize climate change and its related natural phenomena in rationalizing a new state-nature, as will be shown in the cases of “the water scarcity state” (Chapter 6) and the Four Major Rivers Restoration Project (Chapter 7). In particular, given a situation in which uneven regional development is intense, it is possible that by using “localization,” local actors legitimize the production of a new state-nature for each local economy.

As Whitehead et al. (2007: 17) indicated, a case study including geographical complexity and temporal diversity of state-nature relations at a less abstract level is needed. Therefore, I will examine the water resource policy of the Korean developmental state as a concrete case study.

III. METHODOLOGY AND FIELDWORK

This chapter is organized in three sections. In the first section, I suggest that DST scholars consider not only the epistemological perspective but also the methodological dimension to effectively exploit the less territorially trapped DST research. For this purpose, I first ascertain the reality of territorially trapped DST by focusing on the data used by DST scholars. Second, I classify newly discovered geographic data that have been used according to spatial scale and evaluate its implications and limits. Third, I debate the potential synergy between the DST and the cultural political economy to deepen the methodological progress. Finally, I propose a future research agenda. In the second and third sections, I introduce research methods used for fieldwork, such as literature review, data collecting, interviews, etc.

1. Territorially trapped East Asian developmental state thesis and its methodological escape

1.1. Introduction

Although acknowledging the fruitfulness of the DST, from the late 1990s to the present, there has been an increasing amount of geographic literature that is critical of the DST because it argues that the DST is caught in a ‘territorial trap’ (Agnew 1994) (also known as ‘embedded statism’ (Taylor 1996) or ‘methodological nationalism’ (Brenner 2004)) in which the state is regarded as a pre-given entity that is isolated from society, and the national scale is prioritized over other geographic scales to make national actors and factors stand out in the process of economic development. Using a multi-scalar approach that focuses on diverse actors located on

multiple geographic scales and their contingent interactions, geographers have demonstrated that certain state actions were the outcome of political contests among social forces of various scales acting in and throughout the state (Park 1998, 2013; Glassman 1999; Glassman and Choi 2014; Hwang and Park 2014; Hwang forthcoming).

I certainly acknowledge that ontological realities are inevitably more complex than what any specific epistemological framing can capture. Thus, even a multi-scalar approach necessarily involves ‘complexity reduction’ to the social world (Jessop and Oosterlynck 2008; Sum and Jessop 2013). However, despite the potential danger of ‘complexity reduction’ that may miss some actors, the multi-scalar approach is still meaningful because it continually attempts to reveal veiled actors and factors that describe the realities of the multi-scalar processes of East Asian economic development and that exceed the territorially trapped economic imagery of the existing DST research. In this vein, Hwang and Park (2014) refute DST scholars’ belief that national bureaucrats’ plan rationality decisively affected Korean economic development by suggesting the counter-example of the establishment process of the Gumi Industrial Complex in the late 1960s and the early 1970s, which was one of the largest in Korea. According to Hwang and Park (2014), the development of the Gumi Industrial Complex was rendered possible not by national bureaucrats alone but also by diverse actors on various scales from the local to the global, such as Korean-Japanese businessmen, local growth coalitions, and others.

In agreeing with the above critical premise, in this section, I suggest another avenue to deepen the debate. The target of geographers’ criticism of the DST tends toward the realm of epistemology, while there is much less concern about research methodology, even though epistemology and methodology are, in fact, intermingled (cf. Hay 2005). In this section, I emphasize that scholars should consider not only epistemological aspects but also methodological dimensions to exploit the less territorially trapped DST research. In terms of methodology, it has been determined that DST scholars heavily depended on national data, such as statistics and maps produced by government institutions, central government documents and

national newspapers and downplayed other materials. Therefore, it is necessary to understand how these researchers became caught in this territorial trap and what types of data contributed to it.

The territorial trap should be viewed not only as a data problem but also as a socially constructed outcome created by certain social actors such as national bureaucrats and social scientists. According to Häkli (2001), with the cooperation of social scientists, governments – primarily in Europe – utilized maps and statistics to effectively territorialize local subjective worlds while simultaneously taking the objective modern state for granted. In other words, the state intentionally created a territorial trap for the building of the modern state. In a similar sense, the existing DST literature paid less attention to the context behind the territorial trap and actually blocked explanations about the state's practices (e.g., advertising phrases such as 'attaining GDP per capita of \$ 20,000!'), masked actual conditions of uneven development on sub-national scales and blocked the debate on alternative, denationalized development models when constructing a certain hegemonic mechanism, i.e., 'GDPism' (Sum 2013).

This methodology-based problem orientation could also be applied to the multi-scalar approach. Unearthing various scaled data from the global to the local scale is necessary to prove the effectiveness of the multi-scalar approach because, without reasonable data, the multi-scalar approach is less persuasive. Thus, it is meaningful to trace how and with what types of data geographers escape the territorial trap.

More specifically, in this section, I first show that the existing DST literature is caught in a territorial trap in terms of methodology by examining the data used by DST scholars. Second, after reading about recent multi-scalar approaches based on geographic critiques of the DST, I classify newly discovered geographic data according to spatial scale and evaluate the data's implications and limits. Third, I briefly debate the potential synergy between the DST and the

cultural political economy (CPE), as suggested by Ngai-Ling Sum and Bob Jessop, to deepen the methodological progress. The CPE could be effective in deconstructing a taken-for-granted territorial trap and revealing the various rationales of social actors behind the territorial trap by increasing the understanding that GDP, and more accurately ‘GDPism’ (Sum 2013), functions as a hegemony project, which is the production of co-evolution between semiotic and extra-semiotic aspects, not simple figures. In conclusion, I propose a future research agenda to exploit the less territorially trapped DST research. Based on these analyses, this section emphasizes that interdisciplinary research using a multi-scalar methodology and epistemology is required to better explain economic development in East Asia.

It is further noted that most of the material presented herein is focused on South Korea because of my position as a Korean scholar and the access this position grants me to Korean data and scholarship.

1.2. Territorially trapped East Asian developmental state literature

As shown in the criticisms of the DST (for a review, see Park 2013), epistemologically, the existing DST literature is focused on national actors acting on a national scale, which is a focus that blocks considering supra- and sub-national actors and factors. When reading the DST literature, one can find national actors, such as Japan’s MITI (Ministry of International Trade and Industry) (Johnson 1982), South Korea’s EPB (Economic Planning Board) (Amsden 1989) and Taiwan’s CEPD (Council on Economic Planning and Development) (Wade 1990), which commonly insulate the economic bureaucracy from private interests in the context of East Asia. To prove the economic miracle led by the MITI, EPB and CEPD, DST scholars used time-sequential changes of key economic indicators, such as GDP, GNP (gross national product) and the share of manufacturing in GDP provided by international and national organizations (e.g., UN Statistical Yearbook, World Development Report and Bank of Korea National Income Accounts). Several DST scholars who had learned the Korean language and/or received assistance from Korean scholars could access the Korean (mostly national) written data (cf.

Amsden 1989; Evans 1995). Even in terms of methodology, it is obvious that such scholars function within a territorial trap by having to depend on national data.¹⁴

Then, why are DST scholars caught in a territorial trap and for what purpose? This question is important because it is closely related to the methodological issue. To answer this question, I concentrate on Peter Evans, one of the DST scholars. Evans (1995) discusses the methodological concerns of DST research in the second chapter of his book *Embedded Autonomy*. According to Evans, DST scholars problematize methodological individualism because methodological individualism that emphasizes the logic of atomistic and asocial individual motivation, which is supported by neo-utilitarianism and neoclassical economics, views the state as ‘an aggregation of individual maximizers’ (Evans 1995, 36), which is a perception that cannot explain ‘institutional effects’ beyond individual interests (Evans 1995, 28). While their problem orientation is shared with some geographers, DST scholars only recognize national actors while downplaying the spatial differences among the various scaled actors and factors that change the institutional effects. Their criticism of methodological individualism is extended to the necessity of a ‘comparative institutional approach’ (Evans 1995) as follows.

‘Lack of a comparative perspective was also a natural consequence of fascination with the asocial logic of individual decisions. As long as individual choices could be predicted from a simple set of universalistic motivational assumptions, and as long as the aggregation of individual choices was sufficient to predict organizational outcomes, a generic theory of how state managers behaved would suffice. If historically derived institutional patterns define individual interests and constrain the way they are pursued, then ‘one size fits all’ diagnoses will not work’ (Evans 1995, 29).

¹⁴ International data published by international organizations should be considered national data in that these materials are inclusive of each government’s data.

This paragraph shows that the main aim of DST research is to extract commonalities and differences to historically conceptualize the East Asian developmental states (i.e., what Cumings (1984, 38) calls ‘a regional phenomenon,’ not an individual country phenomenon) and prevent falling into the ‘one size fits all’ category, as occurred with the general capitalist state (for similar opinions, see Cumings, 1984; Amsden 1989, Chapter 3; Wade 1990, Chapter 10). I posit that DST scholars and geographers are not oil and water in that the multi-scalar-approach-based critique of the DST also ultimately requires a comparative analysis of developmental states. Additionally, most of the key DST literature was published as single-authored monographs rather than in the form of journal articles. These monographs devoted a great number of pages to the introduction of national data and the authors’ interpretation of that data. As such, it could be said that the existing DST research represents the first stage in finding the arteries and veins of developmental states, although the existing research has an apparent clogged artery – the territorial trap. As for the second stage, recent works are attempting to detect capillaries located at various geographic scales in an effort to reduce the state-centered clogged artery.

1.3. Escaping from the territorial trap through a multi-scalar approach

Two decades ago, John Agnew noted ‘the possibility of seeing the territorial state and its power as dependent on the interaction between global and local (including state-territorial) processes of political-economic structuration’ (1994, 66, italics added) to avoid the territorial trap. Following Agnew’s argument, this section reviews how hidden data can help DST research escape the territorial trap. Three scaled data sources – local, global and national data – are involved.

First, let us consider local data. The existing DST literature assumes that local politics and practices in South Korea did not exist before the democratization of the late 1980s due to the ruthless oppression of the people by authoritarian regimes. The fact that the Park Jung-Hee’s Military Revolutionary Committee dissolved the nation’s local assemblies shortly after the military coup of May 1961 supports this assumption (Gimm 2013, 1154). However, contrary to the state-centered assumption, several geographers recently discovered active local politics and movements, including regionalism (Park 2003; Gimm 2013), competition for state-led industrial

complexes (Park and Choi 2014; Choi 2014; Hwang and Park 2014) and local communities' opposition to government policies, such as the displacement of residents due to the construction of industrial complexes (Chang 2014) and large-scale multipurpose dams (Hwang forthcoming). Such opposition significantly affected the state's decision making.

The authors used local newspapers as the primary sources for their data, as these papers contained information that was specific to the local areas and included the main local actors and organizations as well as their motivations and activities, as opposed to the national newspaper, which focused on national bureaucrats, politicians and issues specific to the capital. In addition to the local newspapers, researchers accessed and used local materials published by local interest groups such as local chambers of commerce (e.g., Gimm 2013; Park and Choi 2014).

The key reason that local data from the 1960s and 1970s have been hidden in the DST research is that most of the local data are confined to specific areas, such as local university libraries, chambers of commerce and newspaper offices, although some of the local newspapers are stored at the National Assembly Library in Seoul, the capital of South Korea. Compounding the problem of accessing the data is the fact that the local data are not digitized. Therefore, a substantial amount of time is required to locate evidence and data, as all searches must be conducted manually. Accordingly, without financial support, it would be difficult to remain at a single research site and excavate local data that is coated with dust within a limited amount of time. According to the acknowledgements cited in many of the research articles, most of the researchers/authors were supported by a government-financed research foundation, such as the National Research Foundation of Korea (Gimm 2013; Chang 2014; Park and Choi 2014; Gimm and Kim 2014; Hwang and Park 2014) or the German Research Foundation (Hwang forthcoming). Moreover, they hired research assistants who could quickly and efficiently locate the requisite data. Given that most DST scholars are Anglophone, it is an undeniable fact that their limited language skills impeded their access to not only government materials but also local materials, as they were written in either Korean or Chinese, especially in the 1960s.

Second, global data have recently highlighted the fact that the East Asian developmental states developed under conditions of Cold War geopolitics (Cumings 1984; Amsden 1989, 35-48; Woo 1991; Glassman 2011; Glassman and Choi 2014). As Glassman and Choi (2014, 1162) rightly note, in the existing DST literature, there is ‘a deep and sometimes systemic neglect of specific geopolitical and transnational class influences on East Asian development’ due to methodological nationalism. To supplement this tenuous link, Glassman and Choi (2014) reveal the role of U.S. military offshore procurement and its strategic coupling with the large Korean conglomerate, the chaebol, in South Korean industrialization by exploring released national security files that are mostly located at the Lyndon Baines Johnson Presidential Library in Austin, Texas. In actuality, using U.S. government documents is not a new method in American social science (e.g., see Ekbladh 2002; Biggs 2006; Sneddon and Fox 2011). However, even though several East Asian scholars (Park 2007; Tadashi 2008) visited the U.S. to access documents about the link between the U.S. and South Korean industrialization, much of the data presumably remain buried in U.S. archives.

Another way to obtain information is by accessing the Korean government’s documents. Gimm and Kim (2014) use documents from the Presidential Archives, such as correspondence between the former Eighth U.S. Army commander James A. Van Fleet and the Korean government; these documents revealed the global agent’s influence on the construction of a petroleum refinery plant. Similarly, Hwang and Park (2014) reveal a direct link between Korean-Japanese businessmen and President Park Jung-Hee regarding an industrial complex when they discovered documents signed by President Park.

Finally, we must reconsider the value of national data. To avoid any misunderstanding, emphasizing a multi-scalar approach and problematizing a territorial trap do not mean that national data should be excluded from research. National data are significant in revealing multi-scalar dynamics among various geographic scales. Again, it must be noted that epistemology is

closely connected with methodology. When territorially trapped DST scholars used national data, they immersed themselves in disclosing the state's capacity while downplaying other interactions on different scales. Conversely, the multi-scalar approach-minded geographers viewed the same national data in relation to interactions among differently scaled actors and factors.

In fact, national data serve as a rich repository for researchers. For instance, national statistics provided by the National Statistical Office (NSO) are used to show that the economic miracle of East Asia is a reality by referring in particular to the GDP index. However, when using the GRDP (gross regional domestic product) index, we ascertain that there was an uneven regional development pattern beneath the economic miracle that in fact brings into question the reality of this miracle that supposedly benefited the entire country (Park 2003; Gimm 2013).¹⁵ Not only should statistics be used to support or negate a premise, but one should also examine national scaled data published by the government apparatus or the chaebol. For example, although the history books celebrating the foundation of the public and private corporation (e.g., KWRC 1994; Hyundai 1982) present a state-centered view, a multi-scalar approach using these books led researchers to locate information regarding interactions among various actors (Glassman and Choi 2014; Park and Choi 2014; Hwang forthcoming).

Second, in general, the national newspaper is regarded as the voice of the nation. Contrary to this perception, however, many authors have used national newspaper articles to expose local and global actors and their influences on the government (Gimm 2013; Chang 2014; Choi 2014; Hwang and Park 2014). In particular, the Naver News Library (<http://newslibrary.naver.com>)¹⁶,

¹⁵ Although the NSO established the GRDP index in 1985, the index has only been publicized since 1993 because the government was concerned about public sentiment in underdeveloped regions (*The Kyunghyang Shinmun* 3 June 1994).

¹⁶ The Naver News Library carries four major national newspapers, i.e., *Dong-A Ilbo* (1920-1999), *The Kyunghyang Shinmun* (1946-1999), *The Maeil Kyungjae Shinmun* (1966-1999) and

which is a full-text Korean newspaper article database started in April 2011, marked a new epoch in Korean social sciences by drastically decreasing search time. In fact, when finding local agents who are hiding in local newspapers, without any previous knowledge, it would take a great deal of time to locate these individuals. In this sense, the Naver News Library can be defined as a compass for locating local agents. Based on the results of searches, such as the dates of key events, researchers can now more efficiently search local data by using the Library.

1.4. Seeing the developmental states from the perspective of cultural political economy

Because I am interested in identifying any possible synergy that might exist between the DST and CPE, I examine the relationship from the perspective of the CPE. I further contend that the CPE could be a useful approach to fundamentally rethink the DST, as the CPE perceives socio-spatial phenomena as ‘the co-evolution of the semiotic and extra-semiotic aspects of the political economy’ (Jessop 2004, 159; Sum and Jessop 2013)¹⁷ without minimizing the hard orthodox economy or the soft cultural economy (Jessop and Oosterlynck 2008). More specifically, according to Jessop:

‘CPE is not only concerned with how texts produce meaning and thereby help to generate social structure but also how such production is constrained by emergent, non-semiotic features of social structure as well as by inherently semiotic factors. Although every social practice is semiotic (insofar as practices entail meaning), no social practice is reducible to semiosis.

The Hankyoreh (1988-1999) that were published between 1920 and 1999. By inserting the date and a keyword or by using an advanced search function, one can view the original version of each newspaper online.

¹⁷ According to Jessop (2004, 161), semiosis includes ‘argumentation, narrativity, rhetoric, hermeneutics, identity, reflexivity, historicity, and discourse.’ However, the point is that semiosis needs to be seen in terms of ‘the *intersubjective* production of meaning’ (italics added) beyond each concept.

Semiosis is never a purely intra-semiotic matter without external reference and involves more than the play of differences among networks of signs' (Jessop 2004, 163).

Building on the CPE, I suggest that GDP, which is DST scholars' and the World Bank's shared fundamental criterion for substantiating the East Asian economic miracle, should be regarded as part of the co-evolution between semiotic and extra-semiotic aspects. The GDP growth rate is a numerical reflection of national economic growth. Thus, the figure appears to be obvious, objective proof of a nation's economic development. However, GDP is not a purely objective outcome but rather a political ploy to legitimize a certain economic strategy selected by social force, which is referred to as 'GDPism' (Sum 2013). For example, the Park Jung-Hee regime exploited various figures, such as the GDP index and the amount of exports, when mobilizing the national population behind 'the Modernization of the Fatherland' movement (Gimm 2013; Hwang and Park 2014). As previously mentioned, GRDP and other figures that reflect uneven regional development patterns were not selected by the dominant social forces. Thus, as in the mainstream social sciences – economics, sociology and political science (Taylor 1996) – territorially trapped DST scholars who depend on the GDP index are naive to the fact that it is produced by dominant social forces such as national bureaucrats in the form of 'the territory of knowledge' (Häkli 2001). Additionally, GDPism assimilates not only economic issues but also broad social agendas by prioritizing economic value over other values such as environmental sustainability, basic human rights and democratic interests in decision-making processes in society (Brohman 1996, 123-127). In other words, there is a singular, territorially trapped economic image that marginalizes other scaled actors, tensions and appearances. In connection with the multi-scalar approach, the CPE may rescue these hidden actors and factors located at diverse scales from the shadow of the territorial trap.

In conclusion, we fundamentally reconsider a taken-for-granted concept of the East Asian economic miracle. In other words, is East Asian economic growth really a miracle, or is it only a mirage? In breaking the spell created by the miracle, the CPE could be an important interlocutor

for gathering scholars of different backgrounds, including economics, geography, linguistics and cultural studies.

1.5. Conclusion

In this section, I aimed to extend the thinking about the territorial trap solely from the epistemological perspective to the methodological perspective by critically reviewing the extant DST literature, the multi-scalar informed critiques of the DST and the data used in the critiques and the literature.

Although this section focuses on the issue of methodology, it would be difficult to suggest a new perspective without an epistemological turn. For example, during my five years as a master's and doctoral student in Korea (2008-2012), I observed that Bae-Gyoon Park, a professor at Seoul National University and the person who introduced the concepts of local dependence (Cox and Mair 1988), the spatial interpretation of a strategic-relational approach to a state (Jessop 1990; Brenner 2004) and the multi-scalar approach (Park 2005) to Korean academia, taught his students the multi-scalar approach. With the multi-scalar approach in mind, his students began to apply this epistemology to the territorially trapped empirical world in their journal articles and in their master's and doctoral theses. Conversely, without methodological progress, the multi-scalar approach-based research would have been substantially delayed, thus suggesting the complementarity of epistemology and methodology.

Based on what has been discussed herein, this discussion will be concluded by proposing a future research agenda that might serve as a general starting point for exploiting the less territorially trapped DST research.

First, there is a demand to accelerate the digitalization of governments' paper documents. Currently, the National Archives of Korea (<http://www.archives.go.kr>) and the Presidential

Archives (<http://www.pa.go.kr>) provide online search engines. However, in many cases, it is difficult to view the full text and pictures of content online, with the exception of the title. To view non-digitized data, one must personally visit the institutions. Perhaps it is of some relief that governments have, to a great extent, effectively digitized national government data. However, most local data have been left idle, stored in warehouses. This situation urgently demands governmental support before the paper documents deteriorate.

Second, it is necessary to gather interview data from the appropriate people and to build a requisite database. It is possible that a multi-scalar approach may nullify the recognition of differences in power among individual actors by referencing all actors that appear in the data (Hwang and Park 2014, 21). In other words, a certain fact should be cross-checked using sources that are as diverse as possible. To avoid excessive relativism, interviews can be considered an alternative method, and accordingly, several scholars have interviewed a variety of people, such as executives of a chaebol (Glassman and Choi 2014), members of a local growth coalition (Park and Choi 2014) and local residents whose houses were submerged by the construction of a multi-purpose dam in the 1960s (Hwang forthcoming). Conducting interviews is perhaps a more urgent concern than the digitalization of paper documents because possible interviewees are advanced in age, which may distort their memories or may make interviews impossible due to death.

Third, students in this field need to take a profound interest in strengthening the global interdisciplinary cooperation network beyond the writing of individual articles that suit each discipline's taste. I believe that economist and political scientist-led DST research has both merit – the rediscovery of the role of the state against neoclassical economics – and demerits – the territorial trap. One way to remove this shortcoming of the territorial trap is to break the chronic 'disciplinary division of labor' (Taylor 1996; Brenner 1999; Wimmer and Schiller 2002) by communicating not only with economists and political scientists but also with geographers, anthropologists, linguists, etc. For example, Jim Glassman and Jamie Peck organized the Geopolitical Economies of Development and Democratization in East Asia roundtable at the

University of British Columbia, Canada, in May 2015 (cf. <http://geopolecon.pwias.ubc.ca>). This event was unprecedented in that not only critical geographers but also a key DST scholar (Bruce Cumings) and CPE theorists (Bob Jessop and Ngai-Ling Sum) participated in the discussions. Based on the establishment of the ‘internationalism of scholars’ (Glassman 2009), we should examine the developmental states through both a microscope – empirical research on the ground – and a telescope – abstractions from individual findings.

2. Research carried out before coming to Germany

In general, it would be difficult for a Ph. D. student in the field of geography to complete his/her thesis in three years. During the last three years, from September 2012 to August 2015, as a Ph. D. student of the International Research Training Group TERRECO funded by the Deutsche Forschungsgemeinschaft (DFG), I was able to finish my thesis without financial difficulty. Surely, my project was one of factors that made my work successful. Additionally, it should be mentioned that research carried out before I arrived in Germany significantly contributed to the completion of my work within a short time.

2.1. Preceding theoretical literature review

While I was a master and doctoral student in the Department of Geography Education, Seoul National University (2008-2012), I read the DST literature in earnest, although I had already read *Kicking Away the Ladder* (Chang 2002), which introduced the term “the role of the state” to me for the first time, during my military service (2004-2006). My master’s supervisor, Bae-Gyoon Park, was interested in a geographical interpretation of DST. During the master’s course (2008-2010), he did not hold a seminar on DST. Instead, I got to understand his perspective on DST by reading his articles (Park 1998, 2006, 2008) and discussing DST with him and his students outside the seminar room, including in the pub. In addition, when writing my master’s thesis on global city formation in a Korean developmental state (Hwang 2010a), I had an opportunity to read the classic DST literature meticulously, such as Johnson (1982), Deyo (1987a), Amsden (1989), Wade (1990) and Woo-Cumings (1999). As mentioned in Section 2 of Chapter 3, Bae-

Gyoon Park taught state theory, politics of local economic development and the multi-scalar approach in his graduate seminars. Using these theoretical resources, he tended to criticize DST while suggesting an alternative perspective in his research (e.g., Park 2008). After I became a Ph. D. student under the guidance of Bae-Gyoon Park based on his key research interests, I wrote journal articles on the right to the city (Hwang 2010b, 2011a), labor struggles (Hwang 2011b, 2012), social movements (Hwang 2011c), the Singaporean global city strategy (Hwang and Park 2012)¹⁸ and urban megaprojects (Hwang 2014). As my publication list shows, at that time I was not interested in DST as a key research theme for my Ph. D. thesis. Although I did not foresee that the above-mentioned theories would become key theoretical resources for my Ph. D. thesis, an increasing understanding of these theories eventually helped my conceptualization of the developmental state and its relationship with nature later.

On the other hand, Bae-Gyoon Park paid little attention to political ecology. I had a thirst for such studies because I was interested in the 4 Rivers Project of the Lee Myung-Bak regime and global climate change at that time. Therefore, I started to study political ecology, including organizing a seminar group. In particular, the neoliberal nature debate, as in Castree (2008a, 2008b) and Bakker (2010), was attractive to me. For a while, I tried to find commonalities and differences between the existing neoliberal nature literature and the East Asian experience by focusing on the role of the state, which contributed to the development of Chapter 7.

2.2. Preceding data collection

After completing Ph. D. course at the SNU, I became a research associate in my master supervisor's research project titled "A Study on the State-Locality Relations in the Era of Developmentalism" funded by the National Research Foundation of Korea for one year (September 2011-August 2012). In this project, my mission was to collect basic data, such as news articles, government reports and related research articles, in order to reveal the dynamics of

¹⁸ Exceptionally, this paper was conceived within the context of DST.

the relationship between the local and the state in national policies (i.e. industrial complexes, road and water policies, etc.). Regarding water resource policies, I read government documents (e.g., KWRC 1994) and news articles from the 1960s to the 1990s, using the Naver News Library. During that time, I got to understand the general history of Korean water resource policies. Most importantly, I made an Excel spreadsheet file of news articles on water resource policies between the 1960s and the 1990s.¹⁹ This broad database was very useful for explaining empirical questions in my Ph. D. thesis.²⁰

1	A	B	C	D	E	F	G	H	I	J
	신문	년도	월	일	면	주제	섹션	제목	내용	
2	196711230	매일경제	1967	11	23	3면	경제	수자원개발공사(수자원개발공사) 23일염료(발족)		
3	196712010	매일경제	1967	12	1	2면	경제	昭陽(소양)댐개발本格化(본격화)	소양강댐 건설에 필요한	
4	196712130	매일경제	1967	12	13	1면	경제	여의島開發(도개발)지시	영등포 지역 매립과 관련	
5	196802240	매일경제	1968	2	24	1면	경제	請求權資金(청구권자금)3차年度(연도) 使用計劃案(사용계획안)통과	소양강댐 건설에 필요한	
6	196804050	매일경제	1968	4	5	2면	경제	소양강댐건설비10억 追徴(추예)반영토 特협의	건설부는 댐건설비를 국·	
7	196804240	매일경제	1968	4	24	2면	경제	사업특허법폐지 特定多目的(특정다목적)댐	국회건설위는 특정다목적	
8	196805180	매일경제	1968	5	18	2면	경제	設計(설계) 변경 제의	현대건설에서 소양강건설	
9	196806260	매일경제	1968	6	26	3면	사회	排水(배수)「터널」안공		
10	196808260	매일경제	1968	8	26	3면	경제	소외된 地方兼善(지방업자)	대국토건설사업에서 지방	
11	196811200	매일경제	1968	11	20	1면	경제	그림그릴지안착(안도)의 한숨	도산서원에 수물지구예 3	
12	196812060	매일경제	1968	12	6	1면	경제	ADB借款(차관) 교섭		
13	196901080	매일경제	1969	1	8	2면	경제	올해13억원투자(투입)	남강댐 6월 완공한다는 5	
14	196901230	매일경제	1969	1	23	2면	경제	1억8천만원투자(투입) 漢江(한강)동流域(유역)조사에		
15	196901310	매일경제	1969	1	31	2면	경제	建設(건설) 17억원투자(투입)	소양강댐 3차년 공사 본격	
16	196902190	매일경제	1969	2	19	2면	경제	올해4억원투자(투입)	한국전력에서 남강댐 수	
17	196904050	매일경제	1969	4	5	1면	경제	黃財務(황재무)항발 亞洲銀(아주은)총회참석		
18	196909160	매일경제	1969	9	16	3면	경제	國土(국토)기틀지게할 水資源(수자원)개발	수자원종합개발 장기계획	
19	197002030	매일경제	1970	2	3	3면	경제	펼쳐진「民族(민족)의꿈」	국토건설종합계획 1차 시	
20	197002030	매일경제	1970	2	3	7면	경제	공유수면을매립	수자원개발공사사장이 5	
21	197002050	매일경제	1970	2	5	1면	경제	昭陽江(소양강)댐건설위해 7백만佛借款(불차관)합의	소양강댐 건설에 대일청-	
22	197003030	매일경제	1970	3	3	3면	경제	국토보전과 수자원	국토종합개발계획안에 다	
23	197004100	매일경제	1970	4	10	1면	경제	對韓經濟協方案(대한경협방안)모색	ADB 총회에서 차관 확보	

Figure 3: The structure of an Excel spreadsheet file containing news articles.

¹⁹ Each worksheet has the date of issue, title and a brief summary of the news article. The file is composed of seven worksheets by subject (i.e. “KWRC (수자원공사)”, “Four Major Rivers (4 대강)”, “Han River (한강)”, “Geum River (금강)”, “Yeongsan River (영산강)”, “Nakdong River (낙동강)” and “multi-purpose dam” (다목적댐)) (cf. Figure 3). If I want to read a full-text news article, I can directly access the original article in the Naver News Library by clicking on the title.

²⁰ My master’s supervisor allowed the use of this Excel file.

2.3. Preceding fieldwork

While I was a graduate student in Korea, the Lee Myung-Bak regime conflicted with civil society. In particular, many citizens came out on the streets to demonstrate against the government's decisions, such as a Korea-USA Free Trade Agreement and the Four Major Rivers Project in the summer of 2008. As a citizen, I am also interested in the situation that surrounds government policy. I personally conducted several field investigations, including observations and informal chats at conferences, demonstrations and dam construction sites between January 2008 and March 2011 (for details, see Chapter 7). This fieldwork supports the arguments presented in Chapter 7. Based on my preceding Ph. D. research work, I was quickly able to design a Ph. D. research plan in Germany as set out below.

3. Ph. D. research after coming to Germany

3.1. Theoretical literature review

After arriving in Germany, the most urgent matter was to establish my theoretical perspective. Although I had studied DST in Korea, I had not thought much about the theoretical linkage between developmental states and nature, and there was no precedent study in academia. In this situation, I thought that I first needed to review the existing Korean environmental studies literature, such as on ecologism, the metabolic rift theory, the social construction of nature and the green state thesis, from the perspective of political ecology, and then to briefly suggest the conceptual usefulness of the concept of "state-nature" relationships. As a result, I published a review article with Bae-Gyoon Park in a Korean geography journal (Hwang and Park 2013). However, this review article was still insufficient for gaining a vivid perspective on state-nature relationships in developmental states; I needed to receive detailed comments on my hypothesis from experts in this field. My master's supervisor, Bae-Gyoon Park, offered only limited opinions about my hypothesis, particularly in relation to political ecology. My Ph. D. supervisor, Detlef Müller-Mahn, specializes in development geography in East Africa. Although I acknowledge that my supervisors had achieved important goals in the field of geography, I

decided to prepare a journal article as a solution because I surmised that anonymous reviewers would judge whether my perspective was suitable or not. I therefore began to read critical hydro-politics literature, such as Swyngedouw (1999, 2007) and Sneddon and Fox (2006, 2011), and I also reread DST literature to find any unveiled links between the DST and nature. In addition, when I was in Korea for my first fieldwork, between April and July 2013, I organized a seminar group to read *The Nature of the State: Excavating the Political Ecologies of the Modern State* (Whitehead et al. 2007), which suggested the concept of “state-nature” relationships, in order to obtain my colleagues’ feedback on my early version of the article before submission. As a result, the article was accepted for publication (Hwang forthcoming).

3.2. Data collecting

As a case study methodology, this thesis considers that discursive materials such as newspaper articles, speeches and maps, etc. are significant in detecting how certain hydro-scales are hegemonized by discursive factors (Swyngedouw 1999; Zimmerer 2000: 152-153; Harris and Alatout 2010: 149-150). When scrutinizing governmental actors, such as the MOC and MOE, official government texts (e.g., KWRA and KWRC (1997), MOCT (2001a, 2001b, 2006, 2007)) alone are clearly limited in revealing the interactions among social forces. Because of this limit, I more or less heavily use newspaper articles. At the least, I have attempted to cross-check different newspapers to guarantee the creditability of quotation used. Some might argue that using newspaper articles to analyze a period (Park Jung-Hee and Chun Doo-Hwan regimes) is problematic because these authoritarian regimes pursued strict forms of censorship. However, this historical fact does not mean that these authoritarian regimes successfully controlled all local voices, as revealed in the empirical parts below.

Using the Naver News Library, I read online news articles from the 1960s to the 1990s, but it was difficult to access local newspapers. I focused on *The Gangwon Ilbo*, a local newspaper in Gangwon Province. The reason I selected *The Gangwon Ilbo* as a key local newspaper is that the

Soyang Dam, which was Asia's largest multipurpose and rock-fill dam in 1973, is located in Gangwon Province (cf. Chapter 4). *The Gangwon Ilbo* is stored at the National Assembly Library in Seoul and the Kangwon National University Library in Chuncheon. At the National Assembly Library, news articles from the 1960s and 1970s are stored on microfilm. Because my parents' home is in Seoul, I worked in the National Assembly Library from 9:00 a.m. to 5:00 p.m. for approximately two months; in general, it took one day to read a year's worth of articles. Then, I visited the Kangwon National University Library to read articles from the 1980s and 1990s. This library provides original newspaper articles. I also found government documents from the National Archives of Korea and the Presidential Archives, and I collected statistics from KOSIS (the Korean Statistical Information Service)²¹ and WAMIS (the Water Resources Management Information System), etc.²²

3.3. Fieldwork

Because of data collecting, as explained above, I did not have much time to visit research sites. However, because my preceding fieldwork already covered several research sites such as the Four Major Rivers Project, I was able to focus on Gangwon Province, which is closely related to Chapter 4, as follows.

It is undeniable that discursive materials alone are limited to the *lived* voices of local people not referenced in the text. Because of this limit, I conducted in-depth interviews that took approximately one to two hours in July 2013. To reveal local perceptions concerning dam construction, I met two people (a seventy-two-year-old man and a seventy-seven-year-old man) whose homes were submerged in the 1960s by the construction of the Soyang Dam in Gangwon Province, despite the fact that it is difficult today to find interviewees who have memories of submerged residences at that time. Although I conducted some interviews, I acknowledge that

²¹ <http://kostat.go.kr>

²² <http://www.wamis.go.kr>

there are many persons, such as experts, stakeholders, etc., who could have been interviewed for my thesis. Therefore, in future research after this Ph. D. thesis, I intend to make up for this methodology weakness by conducting further interviews. Finally, in order to comprehend and feel the local situation *on the ground*, I visited the Soyang Dam (Figure 4), and a village where people live whose homes were submerged (Figure 5).



Figure 4: A monument commemorating the completion of the Soyang Dam. The term “Soyang Lake (소양호)” is written by President Park Jung-Hee (11 January 2014).

Source: Author’s own photograph



Figure 5: A view from a village where people live whose homes were submerged (10 July 2013).

Source: Author's own photograph

All these experiences became part of the research itself. They directed me firmly towards an understanding of “state-nature” relations in a developmental state as outlined in Chapter 2. The result of this process that concerns my understanding of the Korean water resource policy will be presented in the following four chapters.

IV. THE WATER RESOURCE POLICY OF THE PARK JUNG-HEE REGIME, 1961-1979

1. Introduction

Along with the literature on “social construction of nature”, some scholars have recently emphasized the role of the state in the construction of nature by arguing that among various social forces and actors, the state plays a key role in making the discursive and material construction of nature. Based on this argument, and by focusing on the water resource policy of the Park Jung-Hee regime (1961-1979), this chapter aims to explore the ways in which the state-nature relationship is materially and discursively produced by social forces that pursue their political and economic ends by acting in and through the state. Based on these analyses, this chapter emphasizes the significance of the state role in hydro-politics, and suggests to see hydro-politics in terms of materially and discursively contested interactions among social forces acting in and through the state and nature. From the next section, I examine how local nature could be transformed into state-nature. Three stages are involved as follows.

2. Stage 1: The centralization and nationalization of water as the outcome of contestation among social forces

“Because a country’s physical and spatial characters cannot be changed or revised easily, such plans should not be influenced by the change of *political* perspective.”

(Ministry of Construction 1969: 1, italic added)

Water resource policies are not only a technical issue; they are socially and politically constituted through contestations, negotiations and alliances among various social forces acting in and through the state. In analyzing these processes, existing studies on critical hydro-politics tend to view global actors as more influential than national and local actors. For example, most scholars

in critical hydro-politics studies have believed that, after the Second World War, the U.S.-led Tennessee Valley Authority (TVA) program, which emphasized the construction of multipurpose dams under the guidance of the U.S. Bureau of Reclamation, was a global project with significant influences on the modernization processes in many countries including South Korea (Cullather 2002; Ekbladh 2002; Klingensmith 2007; Sneddon and Fox 2011; KWRC 1994).²³

However, I emphasize that the outcome of global projects is not homogeneous in all countries and regions. In particular, the global factor alone cannot explain how the Korean water resource policy was implemented.²⁴ Shortly after the Korean War, various water resource development policies were pursued by national bureaucrats and politicians for the reconstruction of the ruined national territory because industrial and urban development rely heavily on water for industry and living (National Land Planning Study Group 1970; KWRC 1994; cf. footnote 31 in this thesis). In this vein, after Park Jung-Hee had seized control of the country in a military coup in 1961, he pushed forward various water resource development plans under the name of ‘Modernization of the Fatherland’.

²³ This does not mean that recent studies of hydro-politics epistemologically presupposed the power that global actors had on national or local actors in a top-down way. They are also sensitive to each geographical particularity and its interaction with global actors (cf. Sneddon and Fox 2011; Barry 2006). However, additional empirically and theoretically studies are needed about the dynamics of the state in relation to hydro-politics.

²⁴ In this sense, a multi-scalar approach plays a meaningful role in breaking the global-local dichotomies in which epistemologically global actors, such as the World Bank and the U.S., which employ advanced technologies and skillful engineers for developing modern waterscapes, are depicted as strong actors at the global scale, whereas local actors are passive and tied to vernacular (or uncertain, irrational and unscientific) knowledge (for similar discussions, see Mitchell 2002; Barry 2006 248-250). Surely, I do not deny the fact that the modern Korean waterscape was influenced by the technological and financial support of global actors in the 1960s and 1970s (KWRC 1994: 113).

In 1965, the Korean state pursued the Ten-Year Water Resource Development Plan, as mentioned in the introduction. But, this plan was neither an outcome of global influences nor an invention of national bureaucrats with plan-rationality. Instead, it was strongly conditioned by socio-political contestations among different actors within and without the state. For instance, before establishing the Ten-Year Plan, there were fierce conflicts between the Ministry of Construction (MOC), which insisted on the expansion of multipurpose dams to produce electricity, and the Ministry of Commerce and Industry (MCI), which prioritized thermal power generation plants over multipurpose dams. Both ministries' positions and interests related to a long-term national plan for electrical resource development. First, the MOC aimed for an integrated system of water resource development. In principle, this system included both electricity production and water management, claiming that "the construction of hydroelectric power stations, led by MOC, is a *national benefit* in terms of effective water resource development" (Kim 1995a: 85, *italic added*). On the other hand, the MCI established an integrated system of electric resource development. The MCI's logic emphasized production of effective electricity, managing both thermal power generation plants and hydroelectric power stations in terms of "national benefit" (Kim 1995a: 85). The ministries' conflict lasted from 1962 to 1963 at the Meeting of Cabinet Ministers in charge of Economic Affairs. In the end, the Cabinet sided with the MOC because they preferred its comprehensive approach to water resource management. The political interests behind their official positions are also important. Prior to the conflict between the ministries, the MOC assumed management authority of Chuncheon Dam and Seomjin River Dam from the MCI in 1961 at the behest of the Park regime, although the MCI stubbornly tried to protect its authority. In the process of this transfer, the MCI had to yield its manpower and some assets to the MOC (KWRC 1994; KEPC 2001). In other words, conflict went beyond plan-rationality for national economic development and related in part to the political interests of each ministry and organizational survival of the ministry.

After the Cabinet's decision favoring the MOC, antagonism between the MOC and the MCI persisted. Both sides attempted to engage with pressures from other actors both within and without the state. First, the MCI took advantage of global actors. In March 1965, a research

group comprised of electrical engineers from the U.S. under the guidance of the U.S. Agency for International Development (USAID) published the Thomas Report for United States Operations Mission-Korea (USOM/K). This report describes the long-term plan for electric resource development in South Korea, 1965-1984. The plan is divided into two stages: the early part (1965-1974) and the later part (1975-1984). Early part planned construction of a half dozen thermal power generation plants (total 766,000 KW) and one hydroelectric power station (80,000 KW). The later part proposed nine thermal power generation plants (total 2,400,000 KW) and three hydroelectric power stations (total 326,000 KW) (Kim 1995b: 79). This plan raised strong opposition from the MOC because the report was oriented toward a thermal power generation plant-centered system and downsized the share of hydroelectric power stations. The MCI greeted this report positively and started to curb the dam policy of the MOC. However, the MOC finished this episode by taking actions such as publishing *the Review of Thomas Report* (Economic Planning Board 1965: 892-929). Second, the MOC also tried to engage other domestic political actors. As mentioned above, although the MCI strove to extend its realm in the national electric resource policy, it failed several times. The MCI attempted to prevent the establishment of the Specific Multipurpose Dam Act, a fundamental law of the Ten-Year Water Resource Development Plan initiated by the MOC. Faced with dissent from the MCI, the MOC strategically selected legislation by assembly members, instead of the government's legislation. Based on the actions of National Assembly members, the Specific Multipurpose Dam Act eventually was passed in April 1966 (An 2004).

This example demonstrate that the South Korean water resource policy is not a product of pure plan-rationality, as developmental state theorists have argued, but instead is the product of political conflict, contestation and negotiation between different ministries, with global (e.g., Thomas Report) and national actors (e.g., National Assembly members), within and without the state, although each ministry claimed to act in support of the 'national benefit,' corresponding with the Park regime's 'Modernization of the Fatherland'. In sum, these contestations could have altered the outcome of water resource policy in the national economic plan. In other words, the

‘political perspective’ had a significant influence on the policy-making, contrary to the suggestion of the MOC quotation at the beginning of this section.

However, several of the state’s actions toward centralization and nationalization did not automatically advance water resource policy due to the possibility of social conflict from below. For example, initially, the government did not seriously direct the creation of state-nature. After their homes were submerged by the construction of the Uiam Dam, approximately 1,000 local people in Gangwon Province in 1965 demonstrated several times in the capital of South Korea, Seoul, saying “we will crush the dam” (*The Gangwon Ilbo* 28 July, 16 December 1965). The local newspaper, *The Gangwon Ilbo*, also supported the demonstrations and suggested that from the perspective of “democracy”, the dam violated the people’s rights. The newspaper also criticized “the Miracle of the Han River”²⁵, which was based on dam-centered water resource policy (*The Gangwon Ilbo* 29 July, 31 July, 5 December 1965).²⁶ Eventually, the government promised compensation for submersed homes (*The Gangwon Ilbo* 18 December 1965). This episode shows ‘scalar mismatch’ (Hwang 2014: 86) between local and national needs, which could threaten a new regime’s legitimacy. Therefore, various discursive and material actions on nature are required to impress on the people the need for water resource policy.

3. Stage 2: Framing water as nationalized economic goods

Before the 1960s, Korean water policy was mainly focused on flood control. Thus, at that time, epistemologically, water was not considered economic goods but public property and free goods. The concept of water as economic goods has been produced by social forces with a mediating

²⁵ The term ‘Miracle of the Han River’ was used to describe the Korean rapid industrialization during the Park regime. Originally, this phrase comes from the ‘Miracle of the Rhine River’ (http://en.wikipedia.org/wiki/Miracle_on_the_Han_River).

²⁶ Interestingly, major national daily newspapers did not report the demonstrations at the time, which proves that these newspapers indirectly supported the state’s water policy.

role by the state. The term ‘water resource (수자원: 水資源)’ did not exist in Korean society before 1960.²⁷ Officially, the establishment of the Bureau of Water Resources under the MOC in September 1961 marked the first appearance of the term ‘water resource’.²⁸ Through this fact, we know that the concept of water as economic goods was produced by national bureaucrats of the MOC. However, this idea did not only originate with Korean bureaucrats. In 1965, there was increased attention to the episteme that regards water as economic goods on the global scale, which also had an influence on the mentality of the bureaucrats. Among them, Kim Yeo-Taek, who participated in the creation of the Ten-Year Water Resource Development Plan, described the influence of global factors in the formative process of the plan as follows:

When the Ministry of Construction was actively engaged in preparing the Ten-Year Water Resource Development Plan, there was increased awareness of water as a resource in *the global village*. It is true that this awakening about water resource development was a tailwind that pushed the establishment of our country’s water resource development (Kim 1995b: 82, italic added).

Kim noted three sources for his ‘awakening’ about water resources. The first and second sources were cover pages of *Newsweek* magazine (23 August 1965) and *Time* magazine (1 October 1965) indicating the importance of both water management and water development (Figure 6). The last item was a speech by U.S. President Lyndon Johnson emphasizing the development of water and the rationalization of water management at the International Conference on Water for Peace in May 1967.

²⁷ According to Kim Yeo-Taek (1995a: 83), one of the key figures making the Korean water policy during the 1960s, the Korean people lacked awareness of water as a resource before the establishment of the Bureau of Water Resources in 1961.

²⁸ An Kyoung-Mo, an official of the MOC, is the man who came up with the idea for this title (Kim 1995a: 83). He became the president of the Korea Water Resource Development Corporation in 1967.



Figure 6: Water-related cover pages of *Newsweek* and *Time*.

Source: *Newsweek* 23 August 1965 and *Time* 1 October 1965

However, this global-scaled semiotic process, including discourse, pictures and statement, did not affect the bureaucrats' thinking one-sidedly. Rather, national bureaucrats intentionally utilized unintentional global factors to gain legitimacy with the people for establishing the water resource development plan (see also *The Maeil Kyungje Shinmun* 15 July 1971²⁹). After 1968, the state started to collect statistics in *the Water Resource Development Annual Report* indicating that water began to be viewed as a 'national resource'. This statistics report was a territorial

²⁹ Domestic newspaper also used Johnson's speech to legitimize the Korean state's water resource policy.

strategy to control nature at the national scale.³⁰ In other words, contrary to the hypothesis of neoclassical economics, the term ‘water resource’ is not a purely economic concept in Korean society. Instead, it was developed as a nationalized economic good under the strong influence of the state. In this vein, there were moves to conceptualize water as nationalized economic goods in Korean society beyond the realm of the MOC’s jurisdiction.



Figure 7: Making the water as nationalized economic goods.

Source: *The Maeil Kyungje Shinmun* on 16 September 1969

First, mainstream newspapers developed certain discursive frameworks in which the water was viewed as nationalized economic goods (e.g., publishing a series of features on titled “the economics of water” in *The Maeil Kyungje Shinmun* in July 1971). For instance, an article in *The Maeil Kyungje Shinmun* on 16 September, 1969, introduced the MOC’s plan for water resource policy, including multipurpose dams. As revealed in Figure 7, headline was “Water resource (水

³⁰ In fact, the term ‘statistics’ means “the science of the state” (Elden 2007: 567).

資源) development (개발) that will enrich the national territory (國土)”. The article also includes a bird’s eye view of a multipurpose dam and a national map of potential dam arrangement. The composition of the article reflects the justification for and necessity of the water resource plan, including multipurpose dams, as a representation of national development. The map in the news article depicts the emergence of a national waterscape, erasing each locality for the episteme on water as nationalized economic goods. Second, schools textbook published by the Ministry of Education also disseminated a public perception of water as nationalized economic goods. For example, one elementary textbook includes a virtual travel essay about Soyang Dam. The characters, who are elementary school students, go to Soyang Dam and learn the importance of water as nationalized economic goods and the necessity of building multipurpose dams (Ministry of Education 1974: 73-79). According to previous studies, this indirect experience can effectively shape students’ consciousness (Oh 2003b; Hwang 2005).

Thus, a type of state-nature relationship was produced through these persistent efforts to frame water as nationalized economic goods. The socially produced second nature was actively utilized in efforts to justify the nationalization of personal properties in the dam construction areas until the advent of the ‘Four Major Rivers’ hydro-scale in earnest. However, it was still far from suitable to initiate a stable water resource policy. The controversy over revision of the River Act in 1968 is a typical example. The MOC attempted to revise the River Act to accept money from water user in accordance with the benefit principle, which caused controversies from other ministries and the major news media (*Dong-A Ilbo* 28 May 1968). The Ministry of Home Affairs and other ministries strongly opposed the revision because local governments could no longer collect water use-related taxes from water user at the local scale, making local finance vulnerable (*The Maeil Kyungje Shinmun* 28 May 1968). However, despite opposition, the amendment passed on 13 December, 1968 (*The Maeil Kyungje Shinmun* 13 December 1968). This episode indicates that the state’s attempt to frame water as nationalized economic goods was still incomplete and required continuing framing practices. Interestingly, there were different opinions at that time about water among the media. Despite acknowledging water as economic goods, some media expressed annoyance about the perception of water as nationalized goods

because they considered water an ownerless commodity such as oxygen (*Dong-A Ilbo* 28 May, 1 June 1968). That is, the perception of water as a nationalized economic good had a crack in it. Therefore, the ‘Four Major Rivers’ hydro-scale was invented to complete the framing of water as a nationalized economic good and drive the changed national economic development plan.

4. Stage 3: Constructing the ‘Four Major Rivers’ hydro-scale as a national scale

“I will raise the curtain of the age of heavy and chemical industry and reproduce the miracle of the Han River at the Four Major Rivers.”

(President Park Jung-Hee’s inaugural address, 1 July 1971)

By the early 1970s, to overcome the economic crisis stemming from the limits of import substitution industrialization in the 1960s, the Park regime had changed its accumulation strategy from import substitution industrialization, which focused on developing light industries, to export-oriented industrialization, emphasizing heavy and chemical industrialization (Tadashi 2008). To push for heavy and chemical industrialization without conflict, it was necessary to guarantee the provision of abundant industrial water and electricity to industrial complexes (Figure 8).³¹ Although there had been several attempts to frame water as nationalized economic goods before 1970s, the change of the state’s accumulation strategy in the 1970s required more assertive measures to support the accumulation strategy. The production of the ‘Four Major Rivers’ hydro-scale is the representative example.

³¹ The *first draft of the First National Physical Development Plan* includes the bureaucrats’ forecast that “in the future ... due to the rapid expansion of heavy and chemical industrialization ... industrial water may be used in large quantities. ... The shortage of industrial water may give a negative influence on our country’s industrial development” (National Land Planning Study Group 1970: 82).

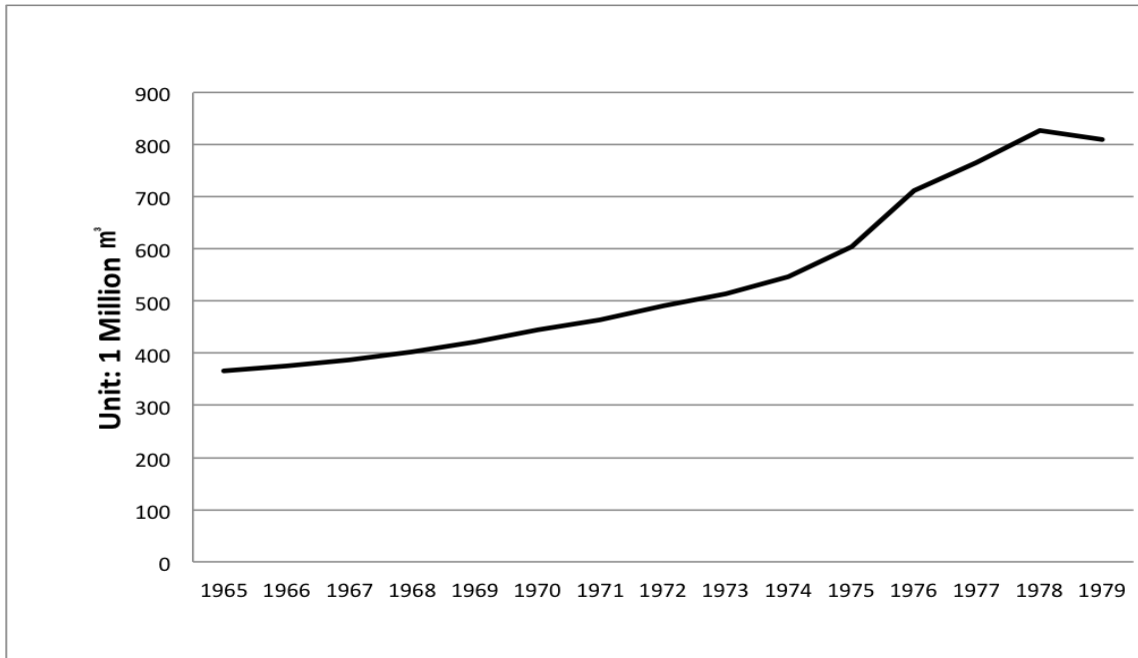


Figure 8 Amount of industrial water use in South Korea, 1965-1979.

Source: WAMIS, <http://www.wamis.go.kr>

The term ‘Four Major Rivers’ did not exist in Korean society until the late 1960s. President Park Jung-Hee mentioned the ‘Four Major Rivers’ for the first time in a news conference about the Second Five-Year Economic Development Plan (1967-71) in 1967 (*Dong-A Ilbo* 18 April 1967). Two weeks later, President Park announced the Comprehensive Plan for Construction of National Territory, a prototype of the National Physical Development Plan, and regarded the Plan as a “basic design for the Modernization of the Fatherland” (*The Kyunghyang Shinmun* 2 May 1967). Through the map (Figure 9) depicting the plan for the four major river basins (Han River, Nakdong River, Geum River and Yeongsan River) and the memorial stamp (Figure 10)³²,

³² This stamp, made by the Korean Postal Service, indicates the relationship between the ‘Four Major Rivers Basin Development (4 대강유역개발)’ and ‘the Second Five-Year Economic Development Plan (제 2 차 경제개발 5 개년계획)’.

we ascertain that the national economic development plan was intimately related to the ‘Four Major Rivers’ hydro-scale.

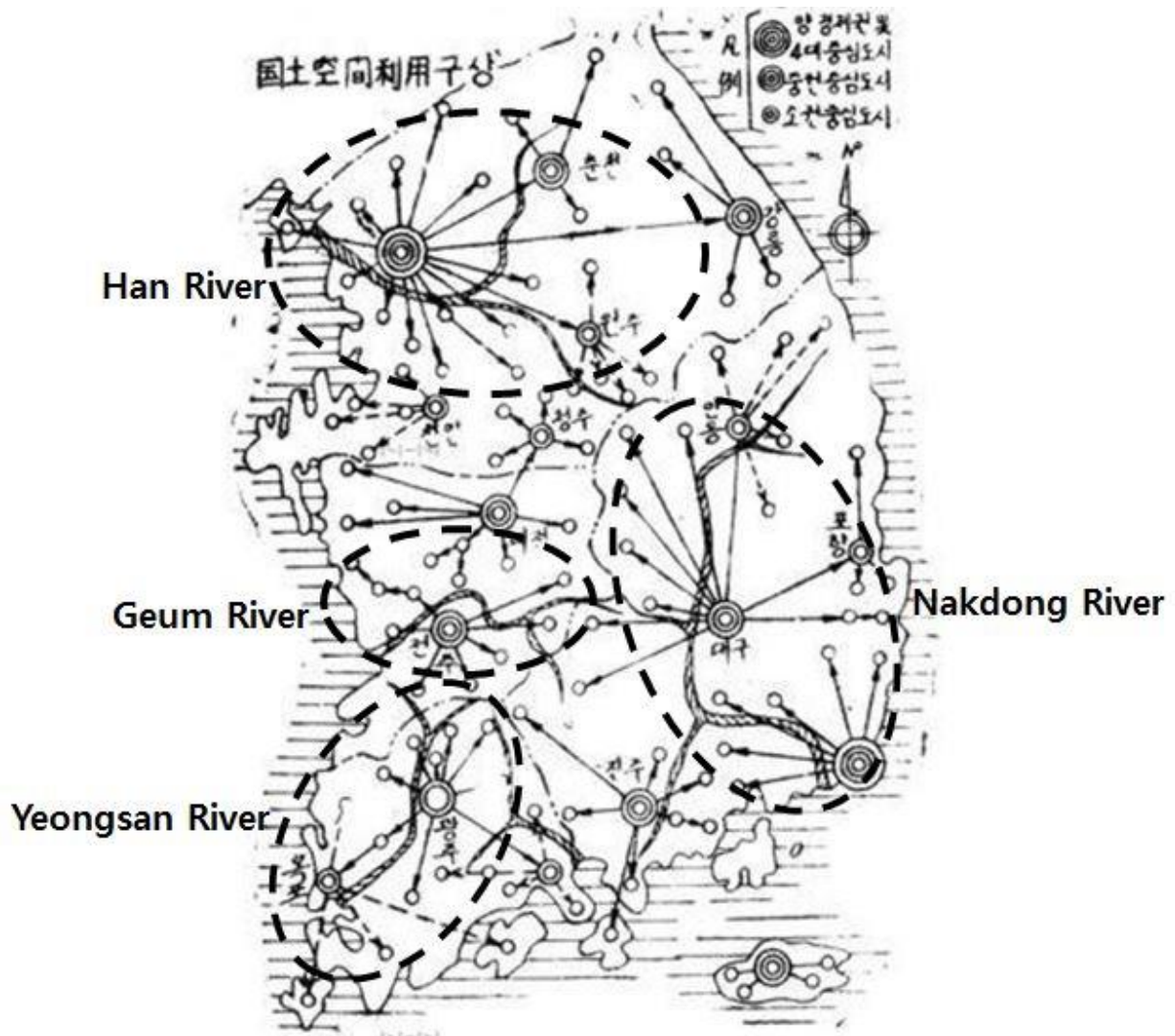


Figure 9: Map of the Comprehensive Plan for Construction of National Territory.

Source: *The Maeil Kyungje Shinmun* 20 July 1968, English words and dotted ovals added



Figure 10: The Second Five-Year Economic Development Plan memorial stamp.

Source: Korean Postal Service³³

However, based on only several statements of President, cited at the beginning of this section, the plans for the project and geographical depictions (such as the map and stamp), the ‘Four Major Rivers’ hydro-scale could not have the durability to sustain its scale. The state needed persistent effort or performance of both materiality and discursivity of scale to maintain the scalar formation of the ‘Four Major Rivers’.

From the late 1960s, the Korean state began to conduct pre-investment surveys of the four major rivers funded by the Food and Agriculture Organization (FAO), the United Nations Development Program (UNDP), the U.S. Bureau of Reclamation and Japan (KWRDC 1970). Although it is difficult to deny the role of global actors, who transplanted their technology, scientific knowledge and money into the four major rivers, in modernizing the Korean waterscape (KWRC 1994), it was not a top-down process. In fact, in addition to receiving financial and technical support, the Korean state used global actors as the geographical ideal to justify the pre-investment surveys. For example, the Minister of the Economic Planning Board Kim Hak-Yeol

³³ <http://stamp.epost.go.kr>

said “the pre-investment surveys have been conducted by cooperating with *authoritative international organization* such as UNDP, International Bank for Reconstruction and Development (IBRD), Asian Development Bank (ADB) and USAID for the development of the four major rivers” (*The Maeil Kyungje Shinmun* 21 October 1970, italics added). The front page headline of the same article that introduced Kim Hak-Yeol’s statement also included the terms ‘世銀 (IBRD)’, ‘USAID’ and ‘ADB’, which reveals the episteme that made the relationship between the legitimacy of four major rivers development and global actors. In other words, the Korean state actively utilized foreign assistance to produce the ‘Four Major Rivers’ materially and discursively. Furthermore, the Korean state’s scalar politics entailed the dialectic relationship between materiality and discursivity of scale to sustain the ‘Four Major Rivers’ as a strategic hydro-scale for the national economic development.

Based on pre-investment surveys of the four major rivers, the Committee for the Four Major Rivers Development was founded under the guidance of President Park Jung-Hee, and then the Four Major Rivers Development Plan (1971-81) was initiated (*The Maeil Kyungje Shinmun* 7 August 1970). In accordance with the state’s heavy chemical industrialization plan, the Korea Water Resource Development Corporation (KWRDC) was renamed the Industrial Complex Development Corporation (ICDC) in 1974, and the renamed corporation was asked to supervise both water management and industrial estate development. It became the major institution that advanced the Four Major Rivers Development Plan.

The production of the ‘Four Major Rivers’ hydro-scale, such as the creation of reservoirs by building multipurpose dams, entails vast natural, economic and social changes, which marginalized local interests near the sites of dam construction, such as the occurrence of submerged residences and the nationalization of private properties. Faced with potential social conflict from the local level, such as the Uiam Dam episode in 1965, the state needed more specific territorial strategies for transforming local nature into state-nature, such as the ‘Four Major Rivers’ hydro-scale, to secure justification of the plan from the national population and

exclude local people.³⁴ For example, An Kyung-Mo, former president of KWRDC, had directly spread the episteme coupling ‘Four Major Rivers’ with ‘national economic development’ to the public through the media in interviews and opinion columns (*The Maeil Kyungje Shinmun* 18 December 1970, 1 April 1975; An 1971). KWRDC also opened an industrial complex exhibition in Seoul and other major cities to “remind the people of the present condition of main industrial complexes and multipurpose dams” (*The Maeil Kyungje Shinmun* 28 March 1975) through the participation of the people during the years 1974-1975. One video clip, which was made in 1974 and was provided by the National Archive of Korea, reveals that the people who participated in the exhibition could learn the generation of hydroelectric power works and see miniature dams and industrial complexes (National Archive of Korea 2012). The people’s participatory practice of exhibition was significant to connect the ‘Four Major Rivers’ hydro-scale with national economic development and sustain this scalar formation.

In sum, the ‘Four Major Rivers’ was produced by the state’s scalar politics under the condition of ‘Modernization of the Fatherland’ and export-oriented industrialization. This illustrates that DST scholars, who do not mediate extensively on complex interactions between the state and nature, should focus on the natural world to better grasp mechanisms of economic growth in East Asia.

5. Conclusion

Empirically, this chapter has demonstrated that the Park Jung-Hee regime drove a water resource policy designed to build multipurpose dams and hierarchical water governance for fast and stable national economic development in the name of the ‘Modernization of the Fatherland’, which was conditioned by political contestations between the MOC and the MCI. For this policy, state

³⁴ According to two interviewees, even people whose houses were submerged sympathized with building multipurpose dam because “this construction is for my country”, which indicates the success of the state’s nationalization strategy with the local people.

apparatuses (e.g., the KWRDC) and institutions, such as the Specific Multipurpose Dam Act, were established by the MOC. The MOC, along with the media, portrayed water as a nationalized economic good and constructed the 'Four Major Rivers' hydro-scale as a national scale. In the transformation of local nature into state-nature, it is significant that the production of state-nature blocked potential local and national conflicts while also strengthening the political legitimacy of the state's water policy that connects constructed state-nature with national economic development.

Influenced by the state-nature literature, I theoretically ascertained that DST scholars should consider the state-nature relationship in explaining the process of national economic development. DST scholars could consider this relationship by showing that the transformation of nature into a resource is more complex than the DST's simplistic view suggests. In addition, from the multi-scalar perspective, I emphasized that certain state-nature relationships must be viewed as the product of political contestations among various social forces at multiple scales acting in and through the state to avoid territorial traps (i.e. regarding the role of the state or the national scale *per se* as only one imperative for producing a state-nature).

In closing, I want to remind readers that this chapter helps us rethink the present developmental state vis-à-vis nature. President Park Jung-Hee was assassinated on 26 October 1979. However, the historical legacy of water resource policy of the Park regime still survives in the form of the Four Major Rivers Project established by the Lee Myung-Bak government (2008-2012) (cf. Chapter 7). Specters of the Park regime (e.g., the 'Four Major Rivers' hydro-scale, the existence of KWRDC, multipurpose dams and hierarchical water governance) have haunted Korea through the Four Rivers Project. The word 'specters' does not refer to a literal illusion. Rather, this specter is composed of the materiality and discursivity of the state-nature relationship of the Korean state, which reinforces the latter regime's waterscape.

V. THE WATER RESOURCE POLICY OF THE CHUN DOO-HWAN REGIME, 1980-1987

1. Introduction

In explaining the water resource policy in South Korea in the 1980s, the Chun Doo-Hwan regime's vulnerable legitimacy, which stemmed from not only Chun's military coup and the massacre of civilians³⁵ but also structural constraints, such as uneven development across the region and repressive regulation of labor that resulted from the economic growth of the Korean developmental state in the 1960s and the 1970s, is key because the Chun regime actively used water resource policy as a solution, such as the "Ten Major Rivers" hydro-scale and the Peace Dam, to gain legitimacy from the people.³⁶

After President Park Jung-Hee was assassinated on 26 October 1979, South Korean civil society expected that a "Seoul Spring"³⁷ would be soon coming (Sonn 2006: 350-351). After his death, there were active democratic movements that strongly demanded abolishing the *Yushin*

³⁵ As Poulantzas noted, the state is distinct because of its 'monopoly of legitimate physical violence' (Poulantzas 1978: 80; see also Weber 1946). In other words, without legitimacy using military power to the people directly mutilates the legitimacy of the state.

³⁶ There are no attempts at linking water resource policy to the Chun regime's hegemonic practices, which is at the heart of the argument of this section. Interestingly but exceptionally, when the Lee Myung-Bak regime (2008-2013) drove the Four Major Rivers Restoration Project to substantially re-engineer the country's natural landscape and hydrological system, a government-run blog for promoting the project explained that 'after the unexpected resignation of President Park Jung-Hee, the Chun Doo-Hwan regime, which had seized control of the country by a military coup led by a new military power, suffered from unconstitutionality and legitimacy disputes from its inception. The Chun regime had to find stronger ways to sustain the regime than did the Park regime to address this situation. Then, the regime promoted strong policy for the purpose of growth and social stability. The Chun regime's flood control project according to the Basic Plan for the Long-Term Comprehensive Water Resources Development was one of them' (Naver Blog 2010). Here, I aim to specifically explore the link between the water policy and the 'stronger ways to sustaining the regime'.

³⁷ The term 'Seoul Spring' is derived from the 'Prague Spring' of 1968.

Constitution, which had neutralized the existing constitution by military power and allowed the president to freely use emergency measures between 1972 and 1979; these movements were led by students and civic groups during the period between October 1979 and May 1980. Unexpectedly, however, Chun Doo-Hwan, who was a commander of the Defense Security Command, seized control of the country in a military coup on 12 December 1979. Immediately following the coup, in Gwangju city, which is located in the southwest corner of Korea, Gwangju citizens who were labeled *Bbalgengi* (a red person who supports communism) by the regime, and who resisted the political intervention of Chun's military, were the victims of extreme bloodshed under the guidance of General Chun on 18 May 1980 (Lee et al. 2014). The Korean Special Forces engaged in unprecedented state violence that left many Gwangju citizens dead or missing. As a result, at least 2,000 people perished in Gwangju (Suh 1982; Shin and Hwang 2003; Katsiaficas and Na 2013). Eventually, despite the fact that the Chun regime was built on citizens' blood, the possibility of a "Seoul Spring" ended after General Chun became the president of the fifth republic on August 1980.

Meanwhile, the existing research on the Korean water resource policy in the 1980s may downplay the necessity of seeing the 1980s in a specific spatial-temporal context. These studies regard the 1980s simply as a "transition period" between the 1960s and 70s, which represents the foundation of state-led water resource policy, and the 1990s, when not only the central government but also diverse actors including civil society and local governments had significant impacts on the water policy in the context of democratization and globalization, in vivid contrast to the 1960s-70s (S.-H. Lee 2005; M.-H. Lee 2005). In particular, it is a serious problem that no existing literature has explored how the path-dependency of the previous regime was connected with the later one. In relation to this problem, existing perspectives on the Chun regime in Korean social science tend to view the Chun regime as "an imitator of the *Yushin* regime" (Jung 2007: 92), which may establish an episteme that there is no difference between the regimes in terms of their same 'authoritarian' natures. At a glance, the 1980s remained a missing link between the 1970s and the 1990s. This chapter aims to supplement this missing link.

2. Research context: The Chun Doo-Hwan regime's vulnerable legitimacy

Before analyzing the water policy in earnest, I briefly discuss the character of the Chun regime to understand why the Chun regime actively attempted the production of new state-natures. Although there is a controversy regarding the legitimacy of Park Jung-Hee's coup in Korean social science from the right wing to the left (for a review, see Cho 2005), recently, there is an increasingly shared perspective that the Park regime reconstructed the ruined territory after the Korean War and achieved significant economic development (e.g., Cho 2007). In the case of Chun's coup, however, Chun had less justification than did President Park because under the Park regime, South Korea accomplished significant economic growth, and civil society was impatient for democratization as the next stage of economic growth at that time (Suh 1981; Sonn 2006).

However, I do not intend to imply that the Chun regime's weak legitimacy stems completely from the Chun regime. Rather, structural constraints that existed during the former regime should be considered to fully grasp the causes of this weak legitimacy. Although the Park regime rebuilt the destroyed territory, this success was made possible by strong restrictions on labor and civil rights and uneven regional development between the southwestern, including Gwangju (광주), North Jeolla and South Jeolla, and southeastern, including Pusan (부산), Daegu (대구), North Kyongsang (birthplace of President Park), regions, as well as South Kyongsang, in accordance with the spatial selectivity of the state (cf. Figure 1). In other words, the Park regime selected the southeastern region as a location for state-led industrialization to receive political support from this region (Cho 2000; Park 2008). In the beginning, the Chun regime did not attempt to resolve these structural constraints. Rather, as illustrated by the Gwangju Massacre (also known as the Gwangju Uprising), another southeasterner-led military regime run by General Chun, a "son of Daegu", worsened the political tension between both regions regarding the presidency. In this sense, the Chun regime's accession to power, accompanied by the numerous casualties and structural constraints, was fatally vulnerable, which suggests the necessity of supplementing legitimacy during Chun's tenure.

To acquire this legitimacy, welfare is an important hegemonic term and technique. President Chun mentioned the ‘democratic welfare state’ for the first time in a news conference to announce this ruling principle on 12 August 1980 (*Maeil Kyungje Shinmun* 12 August 1980). Subsequently, the Chun regime promoted this ruling principle (the “democratic welfare state”) and its national economic plan (“the Five-Year Economic and Social³⁸ Development Plan”) to receive political legitimacy from the people. To acquire this legitimacy, the regime criticized the previous government’s development strategy, which had resulted in uneven regional development, and it suggested more balanced regional development actions such as the Growth Control and Management Law for the Capital Region (1982) and the establishment of rural industrial parks (1983) (Park 2008: 52-53). For instance, in the meeting with the MOC, President Chun said ‘economic feasibility is important in the comprehensive plan for land development such as road development and water resource development. However, the necessity of balanced development between regions should be considered in establishing the plan from now on (*Kyunghyang Daily* 22 September 1980). It can be explained in the aspect of the “politics of distribution” (Park 2013a). As shown below, the Chun regime’s logic of the politics of distribution was reflected well in its water resource policy.

3. Contested water policy among social forces acting in and through the state

In this section, I ascertain how the path-dependency of the Park regime was reflected in the water resource policy of the Chun regime. However, this path-dependency did not induce the same responses by social forces. Under the contingent politico-economic and ecological changes, there were contestations around the water policy among social forces that led to unexpected, path-breaking momentum.

³⁸ The Chun regime added the term ‘social’ to the plan to emphasize welfare and distribution compared with the former regime’s Five-Year Economic Development Plan, which resulted in uneven regional development.

According to the Chapter 4, the large-scale multipurpose dam orientation of the ICDC³⁹, a national water resource policy agency, and the MOC-led hierarchical water governance were the key bases of the Park regime's water policy. Emblematically, An Kyung-Mo, who was the President of ICDC under the Park regime, was reappointed under the new regime. In the Daechung Dam completion ceremony on 2 December 1980, President Chun highlighted the importance of multipurpose dams as below:

In light of our economic development process toward becoming a highly industrialized state, it is expected that there is increasing importance in building multipurpose dams and developing natural resources in the future...By developing and effectively using water resources...we should realize the building of the democratic welfare state we hope for in the 1980s...I believe that because our country has the plentiful resource of 140 billion tons of water, if we develop this actively, we will promote our sustainable economic development without a hitch (*Donga Ilbo* 2 December 1980, italics added).

According to Chun's speech, there is a close relationship between multipurpose dams and the 'democratic welfare state' for a state's sustainable economic growth. To support its policy orientation, the Chun regime followed a strategy similar to that of the Park regime, which discursively frame water as a vital resource and emphasizes the importance of building multipurpose dams. This is shown by a newspaper advertisement announcing the completion of Daechung Dam, a key part of the Four Major Rivers Development Plan under the Park regime (Figure 11). In this advertisement, the main title is "The completion of Daechung Dam that will

³⁹ The Korea Water Resource Development Corporation (KWRDC) was renamed the ICDC in 1974, and the renamed corporation was asked to supervise both water management and industrial estate development in accordance with the change in the accumulation strategy from import-substitution to export-oriented industrialization (cf. Chapter 4).

be the cradle of building the Welfare State (福祉國家 건설의 요람이 될 大清多目的댐 竣工)”, and it shows a panorama of the dam and the names of the actors who built the dam (ICDC (産業基地開發公社), Hyundai Engineering and Construction Corporation (現代建設株式會社) and the MOC (建設部)). The ad shows that multipurpose dams are significant in driving the national economic plan under the name of “Welfare State”.

近景·중의·지층의 생김새

〔報〕 大清多目的댐 竣工

福祉國家 건설의 요람이 될 大清多目的댐 竣工

治水는 福祉國家의 根幹입니다. 錦江을 가로막아 中部生活圈에 새 活力을 줄 大清多目的댐이 現代建設의 技術陣에 의해 完工되었습니다.

국내 최초의 大田, 清州 및 中部地域의 導水路를 通한 年間 13억톤의 生活 및 工業用水와 3억5천만톤의 農業用水, 그리고 2억5천만KWh의 電氣를 供給하게 된 多目的댐으로 國土開發을 通한 國家發展에 크게 기여하게 될 것으로 確信합니다.

直徑 3m, 延長 3천 8백52m, 一日通水量 1백5만톤 규모의 國內最長 導水터널.

建設部
 産業基地開發公社
 現代建設株式會社

Figure 11: A newspaper advertisement announcing the completion of the Daechung Dam.

Source: *Donga Ilbo* 2 December 1980



Figure 12: Memorial stamp celebrating 10 years of the Soyang Dam.

Source: Korean Postal Service

The memorial stamp plays a similar role (Figure 12). According to the Korean Postal Service, it published three million copies of “the special stamp for all people to recognize the importance of water resource development in celebration of 10 years of Soyang Dam, the nation’s largest multipurpose dam” (Korean Postal Service webpage). Taking a look at the stamp, we find that there are water drops and industries that need water within water drops, which iconographically shows the intimate relationship between water and national industry. Also, the name of the stamp is “Water Resource Special Stamp”, without mentioning “Soyang”. In other words, the Soyang Dam in itself represents the whole Korean water policy, and the Chun regime accepted the former policy by celebrating the former regime’s representative built environment.

Thus, the MOC presented three multipurpose dams to be included in the Fifth Five-Year Economic and Social Development Plan (1982-1986) in March 1981. Subsequently, the Second

Comprehensive National Land Development Plan (1982-1991) contained plans for building ten multipurpose dams in the same year (*Maeil Kyungje Shinmun* 4 March 1981). Based on this fact, it could be explained that the path-dependency of the previous regime had a significant influence on the Chun regime's water policy. However, the path-dependency of Park's regime did not completely define the characteristics of water policy under Chun's.

The economic conditions in Korea from 1979 to 1981 were poor owing to political instability after the death of Park Jung-Hee, overinvestment in heavy and chemical industry and the Second Oil Shock (Suh 1982; Sonn 2006: 356-358). Under these conditions, the Economic Planning Board (EPB) selected to pursue a fiscal austerity program. The EPB, which was established in 1967, had played the role of a control tower in driving Korean economic development by establishing, for example, the Five-Year Economic Development Plan (Haggard and Moon 1990). In this vein, the EPB attempted an economic feasibility analysis of ongoing government-led projects in 1980. As a result, multipurpose dams such as Imgye Dam were suspended (*Maeil Kyungje Shinmun* 17 July 1980). In the process of developing the water resource policy, the MOC as an initiator of water policy for nation building gained political power among government ministries under the Park regime (Chapter 4). Thus, the MOC preferred to sustain the path-dependency of the previous regime. In a newspaper article, the MOC expressed financial dissatisfaction in a roundabout way (*Donga Ilbo* 2 October 1982). Decisively, the EPB announced that it would be difficult to include in the budget the three planned dams, Imgye, Imha and Myungchun Dams, and only ongoing construction projects could be included (*Maeil Kyungje Shinmun* 24 April 1983). This inevitably pitted the EPB and the MOC against each other. Immediately following this announcement by the EPB, the MOC responded that the construction business was going to grow 15% every year, and seven multipurpose dams would be built earlier than scheduled (*Maeil Kyungje Shinmun* 28 April 1983). The tension between the EPB and the MOC shows that there were different perspectives on and interests regarding the water policy.

However, dam construction is not confined to state actions for the organizational survival of a ministry and that ministry's interests because materially, dam construction per se requires a large amount of money and the people in the capital were also deeply involved in these projects.⁴⁰ In other words, cancelling dam construction would harm the capital's interests. In particular, as the Middle East Boom in the late 1970s was winding down, the large Korean conglomerate *chaebol* that owned overseas construction company became interested in the domestic market (*Maeil Kyungje Shinmun* 27 July 1983). Dam construction was important for *chaebol's* interest. Therefore, after the MOC's announcement on the dam plan, there was fierce competition for five of the dams, including Imgye, Imha and Myungchun Dams, among ten domestic construction companies, including Hyundai, Daewoo and Daerim (*Maeil Kyungje Shinmun* 2 June 1983). In addition, the government allowed the construction companies to bring their unused overseas heavy equipment to Korea and gave them tax benefits on the condition that the permitted equipment should be used only for building dams. This condition was imposed because the construction companies strongly demanded tax exemptions from the government (*Maeil Kyungje Shinmun* 19 July 1983). President Chun recognized that the growth of the construction sector was closely related to the national economy, especially after the Second Oil Shock, and he even held a reception for *chaebol* who owned an overseas construction company (Presidential Archives 1980). In this situation, it would have been difficult for the EPB to vehemently react against the MOC's actions. It is possible that the EPB had already determined that they should defer to the MOC. For example, before the conflict between the EPB and the MOC in April, the EPB had declared their plan for fiscal austerity in March, but although the EPB had strongly emphasized "ultra-austerity" and "sound finance", it later said that a highly motivated investment plan would be implemented in pursuit of "balanced development of national economy" and "social welfare". Project examples included multipurpose dams as well as paving roads and building new housing (*Maeil Kyungje Shinmun* 30 March 1983). It could be explained that the EPB compromised with Chun's policy orientation toward the politics of distribution. Eventually,

⁴⁰ According to one news article, the government financed half of the dam building with long-term low interest and management rights to the dams for the construction company following their construction. Furthermore, companies believed that dam construction was a profitable business because they would be able to secure a great deal of work in the long term (*Maeil Kyungje Shinmun* 2 June 1983).

in 1984, it was decided to construct five dams at the Ministerial Economic Meeting (*Maeil Kyungje Shinmun* 14 July 1983).

From a SRA perspective, this case shows that water policy of the Chun regime was the outcome of political contestations among diverse social forces such as different state bureaucrats (EPD, MOC) and the capital (*chaebol*), which acted in and through the state. In addition, the SRA can be applied not only to state-society relationship but also to the state-society-nature relationships as follows.

4. Contested water policy among social forces acting in and through the state and nature

The Chun regime established the Basic Plan for Long-Term Comprehensive Water Resources Development (1981-2001) in 1980 as an extension of the Park regime's Ten-Year Water Resources Development Plan (1966-1975). At a glance, based on the fact that both regimes established a long-term water resource plan, one may judge that the later plan had simply followed the previous one. However, we should look at the plans in detail. First, we observe the Ten-Year Plan (1966-1975). According to the plan, "water resource development is a prerequisite for the expansion of food production and industry enhancement" (MOC 1966: 1). Although the plan briefly addressed the need for flood control (MOC 1966: 12), the water policy leaned toward water utilization for economic aims. In contrast, the Basic Plan (1981-2001) emphasized both economic and non-economic purposes. On the first page of the plan, Minister of Construction Kim Ju-Nam devoted a major part of his preface to flood damage as a 'social problem' after he briefly mentioned the role of water resource development in economic growth. Then, he concludes that overcoming flood damage is closely connected with "building a democratic welfare society" (MOC 1980: iii). The plan specifically explains the causes of flood damage, such as geomorphological features (e.g., approximately 70% of the area of South Korea consists of mountainous regions without extensive plains) (MOC 1980: 11). In addition, the plan describes that the "urbanization" in the 1960s and 70s "necessarily" downgraded the function of

flood control for urban rivers (MOC 1980: 13), which indicates that the state (and society) and nature influenced each other in the form of intensified flood damage in the urban regions (for a similar perspective, see Gandy 2008).

As a result, the Basic Plan's (1981-2001) main aims were 1) to build eight multipurpose dams, two water supply dams and two river estuary barrages to increase the water supply from 3,314 million cubic meters to 12,753 million cubic meters by 2001, 2) to increase the river improvement rate⁴¹ from 30 % to 70 % by 2001, and 3) to increase hydro energy output from 1,202 billion kw to 4,102 billion kw (MOC 1980: 13). The first and third aims were related to the multipurpose-dam-based national economic growth orientation, i.e., the path-dependency of the previous regime. However, the second aim shows the importance of flood control as a path-breaking aspect in the face of contingent flood damage and people's potential complaints about it.

As shown in the Basic Plan's (1981-2001) three aims, large-scale multipurpose dams (the first and third aims) and flood control policy (the second aim) coexisted each other. In other words, the Chun regime did not recognize that building large-scale dams *per se* could be a negative influence on flood control at that time. However, there was a sudden change in the regime's episteme beginning in the mid-1980s. Namely, plans for the eight multipurpose dams in the Basic Plan (1981-2001) were canceled in 1985 (*Donga Ilbo* 24 September 1985). According to the Korea Research Institute for Human Settlements, a government-affiliated organization for national land planning:

⁴¹ For instance, building an embankment along a river and dredging are included in river improvement projects.

While acknowledging that extant water resource development work, which was almost entirely large-scale projects to build multipurpose dams in the main streams of main rivers, significantly contributed to flood control and water utilization, several problems with building large-scale dams, including vast submerged districts, migration measures for people whose houses were submerged and great investment costs, arose, and the dams did not directly address water shortages and flood regulation capacity in the upper and middle stream areas and tributaries of the rivers. To solve these problems, water resource development moved toward building *medium-scale multipurpose dams in small and mid-sized basins* (KRIHS 1996: 891, italics added).

The quotation summarizes two factors that changed the multipurpose-dam-based water policy. First, there was the political and economic burden of building large-scale dams. The second factor was the focus on primary river flow management and the resulting improper maintenance of small and mid-sized basins. First, I focus on the first factor.

Table 2: Expenditures for multipurpose dams.

	Unit: One hundred million won				
	Total cost	Cost of construction	Compensation expenditure	Ratio of compensation expenditure in total cost (%)	Maintenance cost
Soyang Dam (1973)	321	211	78	24.0	32
Andong Dam (1977)	404	190	138	34.0	75
Daechung Dam (1981)	1557	657	781	50.0	120
Chungju Dam (1986)	5551	2727	2744	49.0	81

Source: KWRA and KWRC (1997: 134), revised by the author

As shown in Table 2, the ratio of compensation expenditures to the total cost of dam construction increased exponentially. However, this was not solely an economic problem but also a political issue. Although the occurrence of submerged homes and districts did not lead to any mass

demonstrations or resistance that could have threatened the regime, dissenting voices, i.e. damages claims against building multipurpose dams, begin to appear at the local level.⁴² In addition, *Donga Ilbo*, an influential daily newspaper, published a special article between 11 and 19 November 1981, titled ‘Dam, mixed light and shade: Task of modernization and nature protection’, that discussed the local damage caused by multipurpose dams. Additionally, a novel titled “Song of Water”, about the lives of people whose houses were submerged, was published in a literary magazine (Lee 1981). However, other related actions were not reduced to people whose houses were submerged or to submerging nature. There were also voices of place-dependent actors such as local politicians and governments. These actors emphasized the negative connection between building multipurpose dams and local economies. For instance, the governor of North Chungcheong Province asked the Prime Minister, who was visiting Chungju Dam, to designate the area around the dam a national park in 1980 (*Donga Ilbo* 11 January 1980). In the Andong area, local actors recognized that the decrease in the workforce after the construction of the Andong Dam had caused the crisis in the local economy and argued the need for the “industrialization of Andong” (*Maeil Kyungje Shinmun* 19 April 1985).

The second factor is that the existing water policy could not properly address floods and droughts. President Chun ordered that multipurpose dams be built in the main rivers to prevent water damage after the flood in the summer of 1981 (*Maeil Kyungje Shinmun* 13 July 1981). Following the 1981 flood, five multipurpose dams had to stop generating electricity and releasing water because of a drought in the spring and summer of 1982 (*Maeil Kyungje Shinmun* 21 April, 7 August 1982). In addition to the 1981 and 1982 events, there were frequent floods and droughts in the small and mid-sized basins during the 1980s, which increased the need for mid-sized single-purpose dams (*Kyunghyang Daily* 29 July 1987). As a result, the twenty-sixth Council of Comprehensive Plans for Construction in the National Territory, which was presided over by the Prime Minister, decided to change the policy direction from large-scale multipurpose

⁴² For example, 39 farmers, who lived in the upper stream of Uiam Dam in Gwangwon Province sued the Korean Electric Power Corporation for flood damage after the construction of the dam (*Kyunghyang Daily* 23 September 1982).

dams to mid-sized single-purpose dams on 8 December 1986 (*Maeil Kyungje Shinmun* 8 December 1986). President Chun and the Prime Minister took the lead in the situation, which should fall under the authority of the MOC, was unprecedented and shows that the regime was very sensitive to possible social reactions, i.e. national expansion of Uiam Dam cases (cf. footnote 45).

In summary, we find empirically that, in the third and fourth sections, 1) the path-dependency (e.g., the large multipurpose dam orientation) of the previous regime had an impact on the subsequent one; 2) however, at the same time, there was path-breaking momentum in the water policy owing to a number of factors such as the changed economic situation (EPB's fiscal austerity orientation) as well as natural disasters and the resulting local society and state responses. Theoretically, I emphasize that perspectives on the Korean state in the 1980s (such as the DST) tend to downplay the dynamics between the state, society and nature under authoritarian regimes. Additionally, I identified that state-nature relationships are constructed by not only humans but also by nature in the form of natural disasters that are partly caused by human, which reflects that the relationship between the state and nature is dialectic, not one-sided. However, this section could not fully explain the Chun regime's water policy and its politics. As emphasized above, we should focus more attention on the ontological deficiency of the Chun regime, i.e., its insufficient political legitimacy. Because of this, the Chun regime attempted to actively construct a new state-nature to sustain Chun's rule.

5. Making a new state-nature 1: Construction of the 'Ten Major Rivers' hydro-scale

As previously confirmed, although the path-dependency of the previous regime in water policy was maintained, especially at the beginning of the Chun regime, there were also differences stemming from the vulnerability of its legitimacy following the Gwangju Massacre and structural constraints for which the previous regime was responsible. In this vein, in February 1986 after the Chun regime lost the 1985 general election, the opposition New Democratic Party promoted

the ‘Ten Million People’s Signature Campaign for a Constitutional Amendment’, which threatened the Chun regime (Jung 2007; C.-U. Lee 2013).⁴³ This situation drove the state’s spatial strategy in earnest.

In the context of the “democratic welfare state”, the Chun regime attempted to connect spatial policy with the logic of balanced regional development. President Chun often visited Jeolla Province, where the Gwangju Massacre occurred, and mentioned “balanced development” at the sites of regional development projects such as the expansion of the Honam railway line and expressway (*Kyunghyang Daily* 16 November 1985; *Maeil Kyungje Shinmun* 11 September 1986), in order to obtain legitimacy from the region’s residents. This logic of the politics of distribution can also be applied to the water resource policy.

The Chun regime constructed new hydro-scale projects that were similar to “Four Major Rivers” of the Park regime. However, both regimes’ main aim is different. The “Four Major Rivers” hydro-scale as a state-nature was constructed by the Park regime to promote the stable supply of water (Chapter 4). The Chun regime, on the other hand, has emphasized the aspect of distribution more. The Second Comprehensive National Land Development Revision Plan (1987-1991), which was announced on December 1986, presented the “Ten Major Rivers” hydro-scale project, which added another six rivers (Seomjin River (섬진강), Mankyung River (만경강), Hyungsan River (형산강), Dongjin River (동진강), Ansong Cheon (안성천) and Sapgyo Cheon (삽교천) as well as four major extant rivers (Han River (한강), Nakdong River (낙동강), Geum River (금강) and Yeongsan River (영산강)) (see Figure 13). Corresponding with the “democratic

⁴³ The reason a constitutional amendment was an essential agenda item for civil society was that in a single seven-year presidency, the Chun regime sought the long-term seizure of power (Jung 2007: 93).

welfare state”, the “Ten Major Rivers” hydro-scale was on a more balanced national scale that extended from the less balanced “Four Major Rivers” led by the Park regime (KRIHS 1986: 41).

The episteme of the “Ten Major Rivers” hydro-scale was disseminated discursively through the mass media. For example, one news article that was established in *Maeil Kyungje Shinmun* on 8 December 1986 and that introduced modifications of the Second Comprehensive National Land Development Revision Plan was titled ‘Water Resource Development Is Expanded to Ten Rivers’ to emphasize the water resource aspect of the plan; its subtitle was ‘Priority over inter-Regional Balanced Development’. In an explanation of the announcement of the project, the article indicated that the basin zones were being expanded in order ‘to relieve the unequal distribution of water resources’ (*italics added*).

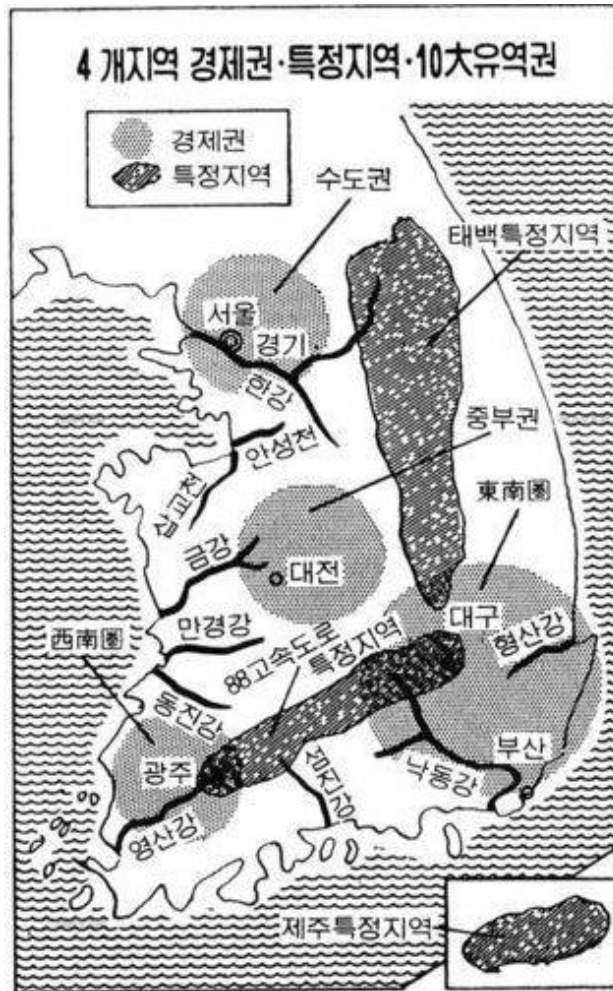


Figure 13: Map of the Second Comprehensive National Land Development Revision Plan.
 Source: *Maeil Kyungje Shinmun* 8 December 1986

Additionally, the map that was published in the same article iconographically shows how the “Ten Major Rivers” project was closely related to the economic development plan. Readers of the news article expected that the surrounding areas around the six new rivers would be developed in the same way as the other four major rivers by visualizing the six rivers on a national scale. That is, the construction of the “Ten Major Rivers” hydro-scale as a new state-nature was based on the politics of distribution.

6. Making a new state-nature 2: Construction of the Peace Dam

This section explores the territorialization of nature aimed at preserving the Chun Doo-Hwan authoritarian regime using the case of the Peace Dam. As explained above, the legitimacy of the Chun regime was vulnerable because of factors such as his rise to power through military coup and the massacre of civilians. Even the Chun regime faced the situation that the politics of distribution had an obvious limit in providing legitimacy. In this situation, territorialization of nature could be effective in curbing potential resistance and integrating a people facing political crisis. The motive for building the Peace Dam was to defend the national territory from North Korea's potential flooding threat because the Chun regime knew that North Korea was planning to construct the Geumgangsang Dam (金剛댐) at the headwaters of the Han River in the north (Figure 14). In the end, it was revealed that North Korea's potential flooding threat and the necessity of the Peace Dam were part of a scheme by Chun to maintain political power through the territorialization of water, specifically, by setting North Korea as an external enemy and consolidating the South Korean people. In this sense, state territorialization of nature would be effective in addressing the case of the Peace Dam.

6.1. The illegitimacy of the Chun regime and the necessity of anticommunism as a means of exclusion/inclusion

Before analysing the Peace Dam, I briefly explain the relation between the Chun regime and anticommunism. Anticommunism was an important dominant ideology for the Korean government to control its people after liberation in 1945 under the geopolitical conditions of the Cold War (Cho 2000; Shin 2006).⁴⁴ Since the Korean War armistice of 1953, the national-territorial division between North and South Korea provided the government to routinely mobilize people as 'us' in South opposed to 'them' in North. Under this spatial demarcation, the Park Jung-Hee regime regarded all pro-democratic oppositions to the regime as pro-North Korean communism and a threat to national security. The regime did this through establishing an

⁴⁴ Along with anticommunism, developmentalism was also an important ruling ideology under the Park regime (Park 2001: 64). However, regarding the Peace Dam, this section focuses primarily on the effect of anticommunism as a ruling ideology.

Emergency Martial Law and the National Security Law⁴⁵ (Lee et al. 2014: 565-660). Even the new Chun regime with less political legitimacy followed in the footsteps of the previous one. For example, one newspaper's editorial shows the connection between the Gwangju Massacre and communism as follows:⁴⁶

When we think about the meaning of excessive collective actions and acts of destruction such as the *Gwangju Incident* that caused a state of anarchy, we feel our hair stand on end. ... We have no doubt that the reason the armed forces for the defense of national territory participated in a martial law affair to preserve *people's right to live* from not only *external enemies* but also *internal auto-destructive factors*. (*Kyunghyang Daily* 1981 italics added)

This editorial justified the military actions in Gwangju by identifying 'external enemies' (North Korea) and 'internal auto-destructive factors' (Gwangju citizens), which reflects the territorializing logic that divides 'us' from 'them' and constructs a boundary between 'inside' and 'outside'. As we can see later, this logic was applied to the territorialization of water by the Chun regime.

6.2. The construction of the Peace Dam as a 'barrier around the country'

On 30 October 1986, Minister of Construction Lee Gyu-hyo issued a statement to announce the construction of the Geumgangsán Dam, which is approximately 11 miles from the Korean Demilitarized Zone (DMZ), in North Korea. According to the statement, if the Geumgangsán

⁴⁵ As explained below, the Korean Central Intelligence Agency (KCIA), which crafted the Peace Dam plan, was the key organization for the National Security Law's enforcement. In other words, the KCIA was the authoritarian regimes' guard dog.

⁴⁶ During the Chun regime, the media called 'a sycophant to the government' was strongly controlled by the state (Kang 2003). Thus, it is reasonable that newspaper articles represented the government's opinion.

Dam (金剛댐) (according to the Chun regime, the dam's height was 200 m, and its maximum pondage was 20 billion tons of water) were to collapse, the Seoul (서울) Metropolitan Region would be damaged (Figure 14). After one week, Minister of Defense Lee Ki-back argued in a press conference that 20 billion tons of water would flood Seoul with the power of a nuclear weapon within twenty-four hours and allow the North Korean army to penetrate South Korea. Maps had an important role in people's recognition of the possible risk.

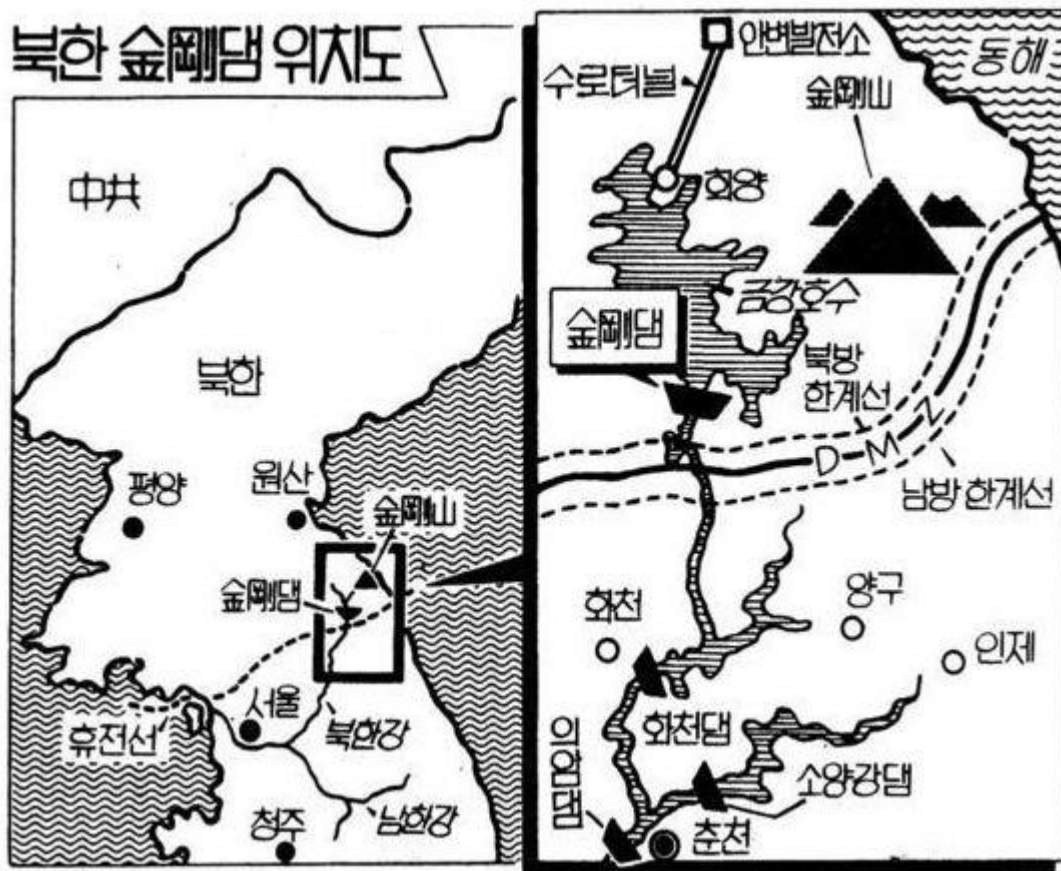


Figure 14: Map of the location of the Geumgangsan Dam in North Korea (북한 金剛댐 위치도).

Source: *Kyunghyang Daily* 30 October 1986

In the department's first statement, the Minister of Construction emphasized that '20 billion tons of water is seven times the capacity of Soyang Dam (29 hundred million tons)' to make people afraid. Additionally, visualization of the risk was more effective than text. The map that was presented in the first statement depicted the Geumgangsan Dam's reservoir as being much larger than that of the Soyang Dam (소양강댐, see Figure 14) and showed a river flowing across the border; this visualization caused people to intuitively fear that 'the survival of the nation was being threatened' and this was 'the biggest crisis since the Korean War' (Lee 2000: 51, 64), which highlights the transformation of water that is 'aterritorial in essence' (Whitehead *et al.* 2007: 8) into a territorial substance.

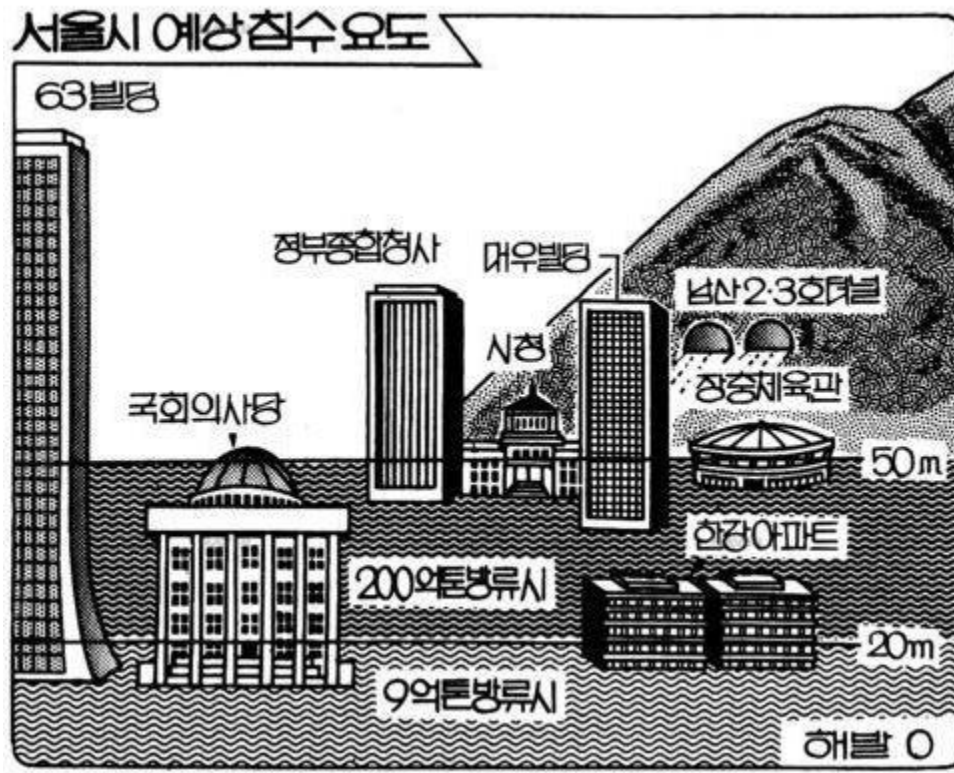


Figure 15: Seoul flood inundation map.

Source: *Kyunghyang Daily* 6 November 1986

The second map, which was presented in the Minister of Defense's statement, was a flood inundation map of Seoul (서울시 예상침수요도) that showed the effects of 20 m (i.e. the discharge of 9 hundred million tons (9 억톤방류시)) and 50 m (i.e. the discharge of 200 hundred million tons (200 억톤방류시)) increases in the water level (Figure 15). This map showed the main buildings of Seoul, including the National Assembly Building (국회의사당), the Integrated Government Complex (정부종합청사) and City Hall (시청), under water, which would lead to suspending the management of the state.⁴⁷

Based on this anxiety, large crowds amassed for anticommunist rallies against North Korea all around the country that began in Chuncheon, which is near the Soyang Dam (MBC 2001). People could also participate in building the Peace Dam by making a national donation. We can find the implication of a fund-raising campaign for the dam in an editorial entitled 'A barrier around the country will be built with national donation' as follows:

Now we are joining in the national donation to keep peace. This is a fund-raising campaign for building the Peace Dam. ... This is the people's tacit resolution and agreement to safeguard the nation's security and our right to live free from the threat of the North Korean puppet regime under any terms. At the same time, this campaign can be our stubborn anticommunist rally against North Korean communism (*Kyunghyang Daily* 3 December 1986).

⁴⁷ In this sense, we can also find the territorializing logic of water in a poem by Minister of Culture and Information Chung Han Mo: 'Hark, you outlaws who are going to abuse *the peaceful river as a weapon of destruction and mass murder*. Those who violate the *law of nature* shall meet nothing but ruination' (*The Washington Post* 1988, italics added).

As reflected in the editorial, the fund-raising campaign was an action for ‘the nation’s security and our right to live’ and an ‘anticommunist rally’. In this territorialized atmosphere, it was difficult to raise opposing opinions such as the possibility that the threat and the potential water damage were being exaggerated. People who expressed different views on the national donation were regarded as being against ‘the nation’s security and our right to live’. In other words, those with different views became communist.⁴⁸ As a result, the campaign raised sixty-five billion Korean won, one-tenth of the total construction cost, in a very short time.

As previously mentioned, the threat of the Geumgangsán Dam was mere propaganda. Firstly, the amount ‘20 billion tons of water’ was calculated by a staff person at the Korean Electronic Power Corporation, who had limited information on the dam, in only eight hours (MBC 2001).⁴⁹ Even though, using computer simulation, scientists from the Ministry of Science and Technology noted in a report that if the dam were to rise to a height of over 184 meters or its maximum pondage exceeded 16.8 billion tons of water, the water would flow northward (i.e. toward North Korea, not South Korea), the Chun regime refused to accept the report (MBC 2001). Meanwhile, the North Korean government criticized that the ‘South Korean puppet government had exaggerated the pondage of the dam and propagated an arbitrarily reduced economic effect’; large crowds held rallies around North Korea against South Korea’s distortion (MBC 2001). According to a scientist who escaped from North Korea and specialized in building dams, North Korea advertised that the Geumgangsán Dam was a ‘peaceful construction’, and although it would require a great deal of money, the construction began because of extreme electricity shortages (MBC 2001; *Rodong Sinmun* 1986).⁵⁰ More crucially, North Korea presented a

⁴⁸ Kim Geun-tae, who was one of the most important democracy activists under the Chun regime and an influential politician after democratization, lamented that ‘no one dared to question the Peace Dam’ (MBC 2001).

⁴⁹ According to one professor who does not believe government statements, at least three months are needed to input basic data for calculation into the computer (*Kyunghyang Daily* 18 June 1993).

⁵⁰ The North Korean state’s newspaper (*Rodong Sinmun* 1986) introduced Kim Il-sung’s statement, i.e. “Let’s start promoting increased electricity production” and “A faster increase in electricity production

Geumgangsán power plant white paper on 25 December 1986. According to the white paper, Geumgangsán Dam was to be composed of four dams, not just one, and the total pondage of the four dams was to be 4.7 billion tons. In addition, Innam Dam, which is called Geumgangsán Dam by the South Korean government, can store 2.6 billion tons of water, not 20 billion tons (MBC 2001). In other words, without knowing even basic information about the Geumgangsán Dam, such as the number of dams and the maximum pondage, the South Korean government simply announced the figure 20 billion tons of water. Thus, it is important to understand why the South Korean government attempted to pull off this scheme. For this understanding, we look to the director behind the scene: The director was the Agency for National Security Planning (ANSP), which was the new name for the KCIA.

The ANSP began Geumgangsán Dam operations in July 1986. The statements by the two ministers were also premeditated by the ANSP. The ANSP established a team that opposed the Geumgangsán Dam: 1) a consulting group comprising water resource experts, among them Kim Yeo-Taek, who had participated in the creation of the water resource policy in the 1960s (cf. Chapter 4); 2) working-level meetings between bureau directors⁵¹; and 3) a coordinating committee to collect the donations, which shows that the government directly intervened in the fund-raising campaign.

The reason the ANSP was so deeply involved in this scheme was the vulnerable legitimacy of the Chun regime. During Chun's tenure, the democratization movement steadily problematized his regime's legitimacy. In 1986, the opposition party, New Democratic Party, became nationally known, and there was strong demand for a constitutional amendment. Eight thousand police

improves production in all sectors and guarantees the seamless supply of power in response to the high future power demands", which indicate the reality of the power shortage in North Korea.

⁵¹ A state bureaucrat, who gave a briefing on the Geumgangsán Dam, said 'I am just an actor', reflecting that the water policy was governed by the ANSP (MBC 2001).

officers were stationed at Konkuk University on the day the Minister of Construction made his statement about Geumgangsan Dam on 30 October 1986, and approximately a thousand university students were arrested on the same day (*The New York Times* 1986; Lee 2000: 49-50; C.-U. Lee 2013: 77-81).⁵² After construction of the Geumgangsan Dam had been halted because of its cost, the Chun regime still argued that the construction of the Peace Dam should be completed before the opening of the 1988 Olympic Games to maintain the regime's power.⁵³

In summary, I have shown how existing inter-states territorial tension between North and South Korea was maintained and strengthened through territorialization of water closely coupled with anticommunism led by the Chun regime. Additionally, it is ascertained that territorialization of water took place in accordance with a political motivation to avoid legitimacy crisis, not the logics of nation-building or capitalist accumulation alone.

6.3. After democratization, authoritarian regime's territorialization of nature reloaded?

In 1997, May 18 was declared an official memorial day and a law privileging bereaved families took effect in 2002. In 2011, 1980 Archives for the May 18th Democratic Uprising against the Chun regime located in Gwangju city hall were inscribed on the UNESCO Memory of the World Register. Regarding the Peace Dam, an inspection by the Kim Young Sam administration, the first truly democratic regime, revealed that Chun Doo-Hwan was a superb manager of the Peace Dam construction and the ANSP practically supported this plan. In addition, the inspection team

⁵² It is revealed that the ANSP and other state apparatuses were involved in causing the 1986 student uprising at Konkuk University. The Chun regime with less political legitimacy described students in this uprising as 'pro-Communist' by mobilizing the mass media despite the fact that there was no relation between students and North Korea (*The New York Times* 1986).

⁵³ At a National Assembly hearing on 31 December 1989, former President Chun said "exaggerating the risk of Geumgangsan Dam was absolutely not to stay in power". Paradoxically, his statement reveals a close relationship between the territorialization of water and his regime's political aim by juxtaposing 'dam' and 'stay in power', which would seem to be unrelated, in one sentence.

disclosed that there was no evidence that constructing the Geumgangsan Dam in North Korea would disturb the 1988 Olympic Games (*Hankyoreh* 1 September 1993). Ultimately, Chun was arrested for rebellion in 1995, although he was pardoned in 1997.

Based on the aforementioned explanation, international readers may assume that, when South Korea became a democratized nation, the legacy of the authoritarian regimes was wiped out. However, material and discursive structures of the Peace Dam have still affected Korean society even after democratization. In 2002, South Korean conservative media created an air of anxiety about the Geumgangsan Dam failure, as did the Chun regime in 1986. Because of this, North Korea openly refutes conservative media reports and the North Korean government cancelled a prearranged inter-Korean economic cooperation meeting (*Media Today* 2002). In 2009, Chun and his subordinates, including the former Minister of Defense and the ANSP director, visited the Peace Dam. Dead power can still move living authority. An incumbent three-star general, the president of the KWRC, which is the managing body of the Peace Dam, and a provincial governor came out to greet Chun's party. At the site of the dam, Chun said that "building the Peace Dam was positively necessary" (*Sesame Tube* 2009a). A staff member of the KWRC remarked in front of Chun that "the Peace Dam is the sole fulcrum that ensures the safety of the North Han River watershed and the Seoul Metropolitan Area against the North Korean flooding threat today" (*Sesame Tube* 2009b). In the same vein, more recently, an influential far-right wing commentator, Gab-Je Cho (2011), noted on the way back from the Peace Dam that "the argument that the Chun regime built an unnecessary Peace Dam, exaggerating the flooding threat of North Korea, is simply crap".

In other words, a legacy of state territorialization of nature (i.e. the Peace Dam) still affects the democratic regime and the geopolitical side of inter-Korean relations. It reminds us of the importance of exploring not only the rationale behind globalization and/or neoliberalization, but also the path-dependency of an authoritarian regime to better understand 'democracy after democratization' (J.-J. Choi 2002) in Korean society.

Interestingly, absurd history repeats itself. After the failure of the South Korean liberal-progressive block in the 2007 presidential elections, the conservative candidate Lee Myung-Bak won the election (Doucette 2010). During an election, the Lee camp propagated the ‘747 plan’, a plan to achieve 7% annual economic growth, increase in the GDP per capita income to US\$40,000 and to make the nation the 7th largest economy in the world. However, the Lee regime had to abandon the ‘747 plan’ in the face of societal conflicts such as the negotiation of a Korea-USA Free Trade Agreement in 2008 (Lee et al. 2010). Instead, the Lee regime promoted the Four Major Rivers Restoration Project, which costs approximately US\$17.3 billion and aimed at dredging of river beds and constructing new sixteen dams to control floods and droughts, as a response to political crisis (cf. Chapter 7). Hence, the Peace Dam of the Chun regime and the Four Rivers Project of the Lee regime resemble each other in that both regimes attempted an infrastructural political fix to avoid political crisis (see also Swyngedouw 2013a). Although I do not deny the fact that conjectural factors, such as the failure of the ‘747 plan’ and President Lee’s career as an ex-Hyundai construction CEO, affected the promotion of the Four Rivers Project, it is important to see old factors, such as involvement of the KWRC and the Ministry of Construction as leading actors in promoting the Peace Dam, and uneven development that leads to the politics of distribution, also played significant role.

7. Conclusion

This chapter focuses on the water resource policy of the Chun regime to reveal that because of a fatal shortage of political legitimacy stemming not only from his military coup and the massacre of civilians but also structural constraints that are the outcome of economic growth during the Park regime in the 1960s and the 1970s, such as uneven regional development, the Chun regime produced state-nature as a solution, such as the “Ten Major Rivers” hydro-scale and the Peace Dam, to gain legitimacy. The Chun regime’s new state-natures were a failure because President Chun could not extend his rule.

After the 1987 Democratization Movement, ‘Seoul Spring’ finally arrived in Korean society. Therefore, it would be easy to expect that Korean water policy would also be changed to be more democratized. However, we should observe the same phenomenon from another angle. As explained above, the path-dependency of Park Jung-Hee’s water policy had influenced the Chun regime. That is, without considering the path-dependency of the former, we could not fully understand the characteristic of the latter’s state actions. This view could be applied to the age of democratization in the 1990s. We should not easily downplay the possibility that the path-dependency of the Chun regime could also have impacted the democratic regime. Democratization opened a window of opportunity (or a Pandora’s Box) that allowed not only the state bureaucrats but also diverse actors such as global and national NGOs and local stakeholders to become involved in the process of the state’s actions. Who will be President Chun and who will be the democratization movement groups in the age of democratization and globalization? It will be all more complicated. Thus next chapter should explore the years after the 1980s.

VI. CHANGING WATER RESOURCE POLICY AFTER POLITICAL AND ECONOMIC LIBERALIZATION BETWEEN THE 1990S AND THE EARLY 2000S

1. Introduction

Since the political liberalization of 1987, the Korean civil society movement has become active in the democratic nation. The wave of liberalization has also had a significant impact on the environmental movement. National environmental movement organizations such as the Korean Federation for Environmental Movement established in 1993 and the general public has broadly learned the importance of environmental issues (Koo 1996: 155-159).⁵⁴ In addition, with the progress made towards local autonomy as an outcome of political liberalization, local community-based criticisms and environmental resistances have arisen against existing state-led projects such as large-scale multipurpose dams. In summary, it became imperative for the Korean state to change from its prior authoritarian and state-led model to a more democratic one (Lim and Tang 2002; Lee 2002). Based on the description thus far, the perspective of some scholars that declares “the decline of the developmental state” (Chang 1998; Kim 1999; Minns 2001; Pirie 2005) appears useful for explaining this situation. In other words, in explaining the rise of the environmental movement and related NGOs activities, existing environmental studies also follow the perspective that democratization triggered the activation of civil society and the erosion of the developmental state (e.g., Lee 1993; Lim and Tang 2002). In my view, however, these studies are insufficient to explain the way in which the path-dependency of the authoritarian regime affected the democratic regime’s policy orientation.

⁵⁴ For example, a newspaper article titled “the popularity of accusatory books on environmental pollution” reported that because people recognized “the severity of environmental destruction resulting from the high rate of growth after the late 1980s” many accusatory books on environmental pollution were being published (The Kyunghyang Shinmun, 21 April 1990). Also, *Green Review*, the most influential bimonthly environment magazine at present, was first issued in October 1991.

As explained below, the path-dependency of the state-driven water resource policy under the former authoritarian regime did not disappear even after the democratization. It was difficult to transform the old authoritarian and hierarchical water governance to the newly democratic and environmentally-friendly one because the MOC, as a main actor in driving water policy under the authoritarian regimes (Chapter 4), did not give up its interest in a dam-based policy orientation, although it did partially accept institutional tools for democratic policy making, such as public hearings and the participation of civil society in the process of establishing the water policy plan. It also showed democratic and environment-friendly gestures using the rhetoric of “environmentalism” and “localization”. However, existing water policy-related studies of the 1990s heavily concentrate on individual conflicts between a “monolithic” government and civil and local societies and do not grasp the inner dynamics of the state as a main unit of analysis.⁵⁵ Therefore, we should broaden our research scope to the political contestations surrounding water policy among diverse social forces acting in and through the state.

In this chapter, I explore political contestations among social forces surrounding water policies. According to previous chapters, the water policy was driven largely by the MOC. Large scale multipurpose dam construction was an essential part of the MOC’s interest, and the KWRC was established successfully in 1974 under the MOC for the purpose of multipurpose dam construction (KWRC 1994). As shown in Figure 16, the KWRC’s main income source was water resource-related development, which mostly comprised the construction and management of multipurpose dams.⁵⁶ After the 1987 democratization, veiled actors such as civil society and

⁵⁵ Based on the ubiquity of individual case studies on topics such as movements against dam construction (S.-H. Lee 2005; Oh 2003a), water pollution (Lee 2002, 2005) and water rights (Y.-H. Choi 2002; Lee 2003; J.-C. Park 2007), it is apparent that the existing literature focuses mainly on the activities of environmental NGOs, local people and local governments against a “monolithic” national government, which masks the complexity and polymorphism of the state and its interactions with social forces.

⁵⁶ Although other studies have criticized the Korean state’s dam construction-oriented tendency, such criticisms were not proven empirically (Hong 2005; Park 2011). For my research, I acquired financial statements from 1969 to 1987 by asking the KWRC. Figure 1 shows the historical process of the Korean dam construction orientation.

local populations more actively took part in problematizing existing MOC and KWRC-led water policies.

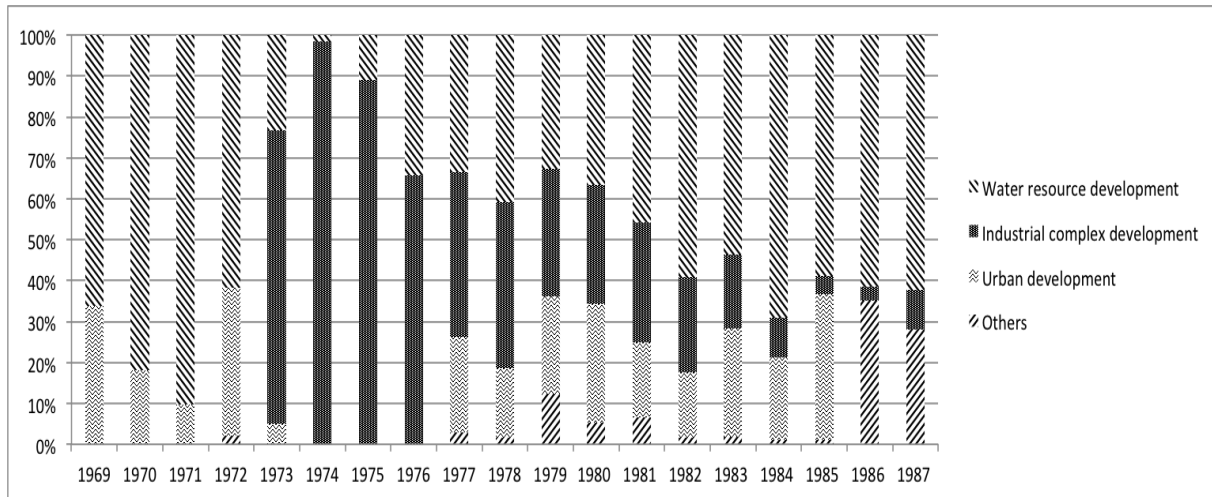


Figure 16: Profit structure of the KWRC, 1969-1987.

Source: KWRC

The chapter is composed of four parts. First, I ascertain political contestations between the MOC that has long dominated existing water policy, and the Ministry of Environment (MOE) that attempted to draw down the MOC’s water-related works. Second, I trace conflicts between the MOC and civil society over the revision of the Specific Multipurpose Dam Act, which supported extant multipurpose dam-based water policy during the past authoritarian regimes and the formation of a new act. Third, I trace how the long-term water resource plan, established by the MOC, became the point of contestation for various actors acting in their own interest. Finally, I explore the South Korean ‘water scarcity state’ thesis was materially and discursively created by influential social forces such as the MOC and KWRC to gain legitimacy for continuing dam construction.

2. Case 1: An integrated system for water management

As mentioned above, there had been increasing attention paid to environment issues in Korean civil society during the 1990s. This reflected the extent to which accumulated environmental pollution, a by-product of “compressed modernization” (Chang 2010), had significantly affected society and the regime. The democratic state subsequently had to solve this problem as soon as possible. In particular, after the 1987 democratization, the seriousness of water pollution (representatively, the phenol spills in the Nakdong River in 1991⁵⁷) made the policy’s primary focus change from quantity of water to quality of water, which raised the necessity of an integrated system for water management. However, the policy was still insufficient to actually establish such an integrated system.

Although the Environment Administration (EA) was established in 1980 under the Chun Doo-Hwan authoritarian regime, water quality improved insignificantly during the 1980s. One of the leading causes of this situation was the relative power of the EA. The EA’s opinion did not substantially impact development-oriented ministries, which had a high possibility for contributing to pollution, because the EA’s administrative status was lower than that of other ministries such as the MOC.⁵⁸ Second, following from the first point, the EA alone could not drive an integrated system for water management because water resource-related works were dispersed into different ministries (especially, MOC). Third, the quantity of water pollution emission was excessive in comparison to the existing capacity to handle polluted water, which

⁵⁷ Due to a pipe rupture in the Doosan electronic factory located at Gumi, North Kyungsang Province, 30 tons of phenol spilled into the Nakdong River on 14 March 1991. Subsequently, in the same factory, 1.5 tons of phenol again flowed into the same streams. After the incident, the Environmental Protection Agency’s minister and vice-minister and the President of Doosan group stepped down. The incident caused the public to pay increased attention to the importance of water and government to establish an act on special measures for environmental crimes (S.-H. Lee 2005; Wikipedia 2014).

⁵⁸ For example, the Minister of the Environmental Protection Agency, Cho Kyung-Sik, stated “I heard from staff in the ministry that it was difficult to converse with other ministries on an even ground before the Environment Administration was elevated to the Environmental Protection Agency” (The Kyunghyang Shinmun, 28 December 1989a).

was low due to the minimal investment of the government in water quality improvement (*The Kyunghyang Shinmun* 1 July 1988).⁵⁹

Despite this sluggish condition of the EA, the phenol spills in the Nakdong River drastically changed the stalemate. Given the situation in which democratic and environmental discourse and aspiration had come to dominate in society, the regime could not ignore water issues. In fact, as shown in Figure 17, several major rivers in addition to the Nakdong River had significantly deteriorated in their water quality even before the phenol spills occurred. Thus, there was increasingly intense public outcry in people's everyday living spaces about the government's performance.⁶⁰ Eventually, the Roh Tae-Woo government and the ruling party considered the elevation of the status of the EA from an administration level to a ministry level to strengthen environment policy. The EA was thus elevated in January 1990 (*The Kyunghyang Shinmun*, 7 September 1989).⁶¹

⁵⁹ According to statistics, 4,869 of 25,624 businesses equipped with waste-water disposal plants either did not operate the plants or operated them infrequently, which contributed to water pollution (*Dong-A Ilbo* 10 August 1989).

⁶⁰ There occurred a so-called "tap water shock" in which heavy metals and carcinogens were detected in the water of the Han River in the summer of 1989 and 1990 (*Dong-A Ilbo* 3 July 1990). The fact that national bureaucrats who were affiliated with the MOC, the MOE and the Ministry of Health and Social Affairs participated as panelists in a televised debate titled "Can we drink the tap water?" demonstrates the extent of the government concern regarding the public opinion on the polluted water at that time (*Hankyoreh* 13 July 1990).

⁶¹ After the elevation, the number of staffs increased from 783 to 1,216, and several new sections was established (*The Kyunghyang Shinmun* 27 December 1989).

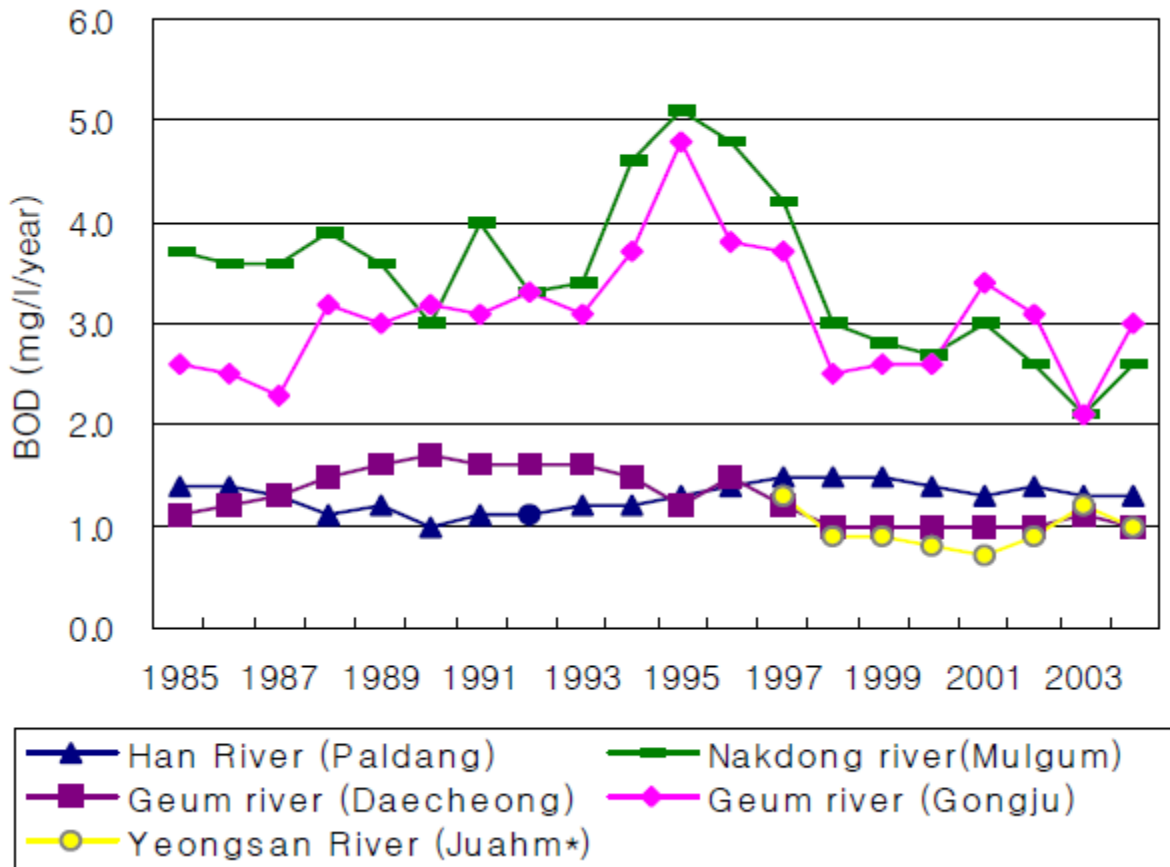


Figure 17: Changes in the BOD (Biochemical Oxygen Demand) concentrations in the four major rivers, 1985-2004.

Source: Kim et al. (2007: 9)

After the head of the Environmental Protection Agency (EPA) became a state minister, news media forecasted that “the minister of the EPA will suggest urgent policy goals and resolve differences among different ministries in cabinet meetings” (*The Kyunghyang Shinmun* 28 December 1989b). At the same time, the EPA urgently needed to work on unification of the dispersed environment-related work of other ministries to realise its goals effectively. However, contrary to the expectations of the media, each ministry, such as the MOC and Ministry of Home Affairs, regarded business transfer as the deprivation of their material interests that had been long accumulated, and reacted strongly against business transfer (*Dong-A Ilbo* 26 December 1989). Hence, contrary to the regime’s general stance that apparently aimed for an integrated

system for water management, powerful ministries such as the MOC blocked unification work to sustain their own interests.⁶² The EPA's elevation thus appeared to be largely nominal. This situation proves that influential ministries, which had grown under the past authoritarian regimes, did not want to abandon their interests and even took actions against the trend of democratization by making plan-rationalistic statements such as "Ministry of Home Affairs is *more effective* than the EPA" (*Dong-A Ilbo* 26 December 1989, italics added).

Finally, the national cabinet came to an alternative decision that the EPA could coordinate the environment-related work of other ministries by strengthening the role of the Environmental Conservation Commission to promote "a comprehensive environment policy", rather than by transferring business (*Dong-A Ilbo* 8 June 1990).⁶³ However, despite several institutional improvements, other ministries were still uncooperative with the EPA. For instance, the MOC unilaterally announced relaxation of regulations on the greenbelt, and the Seoul Metropolitan Government started subway construction without pre-environmental impact assessment (*The Kyunghyang Shinmun* 22 November 1990, 20 July 1991).

The conflict over the business affairs related to water management among ministries continued even in the Kim Young-Sam regime, the first civilian government after the 1987

⁶² In fact, the logic of organizational survival can be also applied to the EPA. One news article reported the anxiety of the EPA staff regarding organizational change after the elevation of status, quoting "We hope that at least one of staff members within EPA will be appointed to a vice-minister position. We are greatly concerned that strong ministries such as the Ministry of Home Affairs or the Ministry of Health and Social Affairs may push in new chief positions" (*Dong-A Ilbo* 18 November 1989).

⁶³ The Environmental Conservation Commission is composed of the Prime Minister (as the chairman of the commission), ministers who are involved in environment work and civilian committee members. Decisions of the commission have the same force as those of the cabinet. The minister of the EPA is appointed to the chairmanship of the administrative works committee, and the EPA has the right to adjust business (*Dong-A Ilbo* 8 June 1990). Although other ministries opposed the commission's functional intent, the minister of the EPA strongly advised the Prime Minister to strengthen the commission in spite of opposition (*Dong-A Ilbo* 9 June 1990).

democratization. In particular, as mentioned above, the phenol spills in the Nakdong River aroused the necessity for an integrated system for water management as well as other environmental management systems ahead of the presidential election (*Dong-A Ilbo* 22 March, 26 March 1991). Recognising the accident as “a matter of survival”, citizens and environmental NGOs in Daegu and Busan, which are adjacent to the Nakdong River, condemned not only the Doosan electronics factory but also the government, claiming that the person in charge should be punished (*The Kyunghyang Shinmun* 23 March 1991; *Hankyoreh* 23 March 1991). Although the MOC still opposed EPA-led water management, water conservation and wastewater treatment were transferred from the MOC to the EPA (MLTMA 2011: 21). In 1994, as President Kim said “I will streamline dispersed operational processes related to environmental and public health problems, including water quality, to clarify where the responsibility lies”, the government began to discuss the elevation of the status of the EPA to a ministry level (*Hankyoreh* 31 August 1993).⁶⁴ The fact that the opposition party also announced a comprehensive water management plan (including EPA’s elevation and an integrated system for water management) at approximately the same time demonstrates the importance of water quality issues at that time (*Hankyoreh* 18 January 1994).

The EPA requested the Presidential Transition Team to raise the status of the EPA before Kim’s inauguration (*The Kyunghyang Shinmun* 14 January 1993). After six months, the ruling party started to discuss the elevation of the EPA to “strengthen the comprehensive coordination and functioning of environmental tasks” and the EPA was raised to the status of a ministry in December 1994 (*The Kyunghyang Shinmun* 30 June 1994). However, except for official elevation, there was no change in EPA’s material condition, such as the creation of new sections or increasing of staff numbers. At approximately the same time, however, the MOC established new sections such as the director general for water resources and the Gyeongin (Seoul-Incheon)

⁶⁴ Although the head of EPA held the rank of a minister, the EPA was administratively under the Prime Minister’s office. After the elevation, the MOC was enlisted under the President.

Canal section⁶⁵ in 1994 (Seo 2002). This shows that the MOC still had greater material power than the MOE.

In summary, we have ascertained that after the democratization, the activation of local communities and civil society made water quality a hot button issue. In this vein, the elevation of the EPA's status could be explained as the response of the state that recognised the seriousness of environmental problems to its statecraft. However, as shown by the conflict over water management among ministries, despite the environment-oriented public opinion, development-oriented ministries strongly resisted possible deprivation of their material base. Put simply, the path-dependency of water resource policy under the authoritarian regimes lingered even after the democratization. In the next section, I explore how the MOC secured its position through the revision of the Specific Multipurpose Dam Act.

3. Case 2: The revision of the Specific Multipurpose Dam Act and the establishment of the Act on Dam Construction and Assistance to Neighborhood Areas

In the early 1960s, the Korean state needed a stable supply of water for industry and living to support reconstruction of the ruined national territory (cf. Chapter 4). For this purpose, it urgently needed large-scale multipurpose dams that could provide hydroelectric power, industrial water for factories, agricultural water and residential water at the same time. However, the extant River Act could not adequately support the construction of large-scale dams in time. Therefore, the government established the Specific Multipurpose Dam Act in 1967, a special law aimed at making the process of dam construction smoother and more efficient (cf. Chapter 4). Based on the act, the government built important dams that contributed to the nation's economic growth.

⁶⁵ The Gyeongin Canal Project aimed to construct an 18-kilometer-long canal linking Seoul with the western port city of Incheon. Although it emerged that this project was not economically viable, but rather environmentally harmful, the construction work was completed in 2011.

At the same time, the act gave rise to the occurrence of vast areas of submerged residences. As local sites accumulated more damage related to dams, this issue came under the spotlight in the 1980s, and many local community-based resistance movements arose at local sites in the 1990s (S.-H. Lee 2005). This emergence of a local voice affected the water policy of the government. For instance, a report in 1992 made by the Economic Planning Board, a control tower for promoting Korean economic development, stated that “dam constructions are delayed on account of many complaints from local residents’ resistance groups and compensation problems” (*Dong-A Ilbo* 28 March 1992).

In this situation, the MOC attempted to revise the Specific Multipurpose Dam Act to increase support for people whose houses were submerged (including provisions that part of the electricity and water generation revenue would be transferred to support local welfare projects in the neighborhood of a dam) (*Hankyoreh* 13 August 1994).⁶⁶ Article 1 of the revised act included new “support for people whose houses were submerged”.⁶⁷ It could be argued that the revision of the act occurred to better address the concerns of local residents. However, this does not mean that the increasing support provisioned to local people was tantamount to a retraction of the existing dam-based policy orientation. In 1996, the government announced that the MOC would prepare a new bill to boost dam construction, surpassing the Specific Multipurpose Dam Act.

“From now on, people whose houses were submerged, along with local government, can set up a tourist complex or amusement park in the neighborhood of a dam with the purpose of supporting

⁶⁶ The revision of the Specific Multipurpose Dam Act in 1993 was the second revision since 1981. The first revision in 1981 was to guarantee government investment institutions to join in the dam management institutionally (Ministry of Government Legislation homepage, <http://www.moleg.go.kr>).

⁶⁷ The full Article 1 states that “the purpose of this act is to contribute to the development of the national economy through the rational development and utilization of water resources by providing for the construction and management of dams, with special options regarding the River Act, the reuse of construction costs and *the support for people whose houses were submerged*” (italics added).

their livelihoods. ... Compensation includes not only direct compensation but also indirect compensation, including reparation for diseases to crops and decreases in their productivity due to metrological change. ... *Given that there has been an increase in the number of cases wherein dam construction was halted due to friction between the government and local residents, the tentatively named “Law for Accelerating Dam Construction” will be established before the end of the year*” (*The Kyunghyang Shinmun* 11 May 1996, italics added).

As a MOC bureaucrat said, the new act was needed for continuing dam construction. According to a previous chapter, dam construction was materially and discursively significant to sustain the MOC as a powerful ministry among government ministries because people regarded dam construction activity as part of nation building and growth of the national economy, one which needed significant financial investment in the 1960s and 1970s (cf. Figure 16). Dam construction *per se* was the *raison d'être* for the MOC, whereas compensation for local residents was not particularly a priority for the MOC. Figuratively, the fact that the tentative name of the new act was “Law for Accelerating Dam Construction” proves that the purpose of the compensation expansion provision was to gain legitimacy for continuing dam construction.

Therefore, the MOC delivered an establishment bill titled “Act on Dam Construction and Assistance to Neighborhood Areas” to the National Assembly in November 1997. After the submission, 36 environmental and citizen’s organizations launched the People’s Preparatory Committee for Stopping Indiscriminate Dam Construction and Damage Countermeasures on 6 November 1997.⁶⁸ At the same time, 100 leading public intellectuals in Korean society declared their “opposition to indiscriminate dam construction that destroys environment, culture, history, life and landscape” to pressure the National Assembly (*Hankyoreh* 7 November 1997). The participation of not only environmental organizations but also other citizen groups in the dam

⁶⁸ The committee members included the Korean Federation for Environmental Movement, Green Korea United, Korean Birds Association, Professors for Democracy, Lawyers for a Democratic Society and others.

issue can be attributed to its high profile at that time due to ongoing controversies about several dam construction sites at the local level (*Hankyoreh* 7 November 1997; for a summary, Lim and Tang 2002: 568-570).

Despite its clear development-orientation, the MOC's establishment bill could be interpreted as an environmentally friendly development in that the term "environment" appeared very often in the bill (*Hankyoreh* 14 November 1997).⁶⁹ However, in contrast to this rhetoric, the main cause of civil society's criticism remained that the bill intended to simplify dam construction procedures. More specifically, when a basic plan for dam construction or implementing plan was founded, the Specific Multipurpose Dam Act specified that mayors and governors' opinion should be taken into consideration. However, in case of the new act, with the obligation gone, there was no longer a means to officially communicate with the local public (*Hankyoreh* 14 November 1997). In addition, the MOC's push for bill passage created conflict with the MOE. Although the MOE asked the MOC to accept a clause stating that "the MOC should confer with the MOE before approval of implementing plans", the MOC rejected adoption of this clause (*Hankyoreh* 11 November 1997). In the end, the Construction and Transportation Committee of the National Assembly tentatively deferred its decision because there was no public consensus (*Hankyoreh* 14 November 1997).

In summary, the MOC was having a hard time sustaining the existing dam-based water policy due to the growing voice of local communities and civil society after the democratization and the establishment of the local autonomy system. Using the rhetoric of "environment", the MOC attempted to establish a new act to replace the Specific Multipurpose Dam Act to overcome its organizational crisis. In this process, the MOC clashed with civil society and the MOE, which blocked the progress of the new act. Through this case, we confirm that there were political

⁶⁹ For example, "environment countermeasures parallel to the construction of dams" is included in Article 1 of the bill.

contestations among diverse social forces related to establishing a water policy-related act. However, despite fierce opposition, after several years, citing a “water scarcity state”⁷⁰, the MOC continued pursuing passage of the new act and ultimately succeeded. The new act came into effect in March 2000. Based on the new act, the MOC achieved a foothold in the future water policy (*Dong-A Ilbo* 17 November 1997; *The Kyunghyang Shinmun* 14 December 1999).

4. Case 3: Long-term water resource plans

Seemingly, the long-term plan for water resources could be regarded as the product of plan-rationality of national bureaucrats to provide stable water and electricity for long-term economic growth. However, as seen above, there were fierce competitions among diverse social forces in establishing water resource policies such as the multipurpose dam act. In the same vein, the plan *per se* could be the site of political contestation and its outcome. After the 1987 democratization, the Long-Term Comprehensive Water Resources Development Plan (1991-2001) was established in 1990, particularly due to the increasing demand for clean water.⁷¹ Before 2000, the main water issues were conflicts over an integrated system for water management and the revision of the Specific Multipurpose Dam Act, as previously mentioned, rather than the long-term plan itself. However, after 2000, political contestations took place over the establishment process of the plan.

⁷⁰ The MOC claimed “it is expected that the water shortage will deepen in the future”. Therefore, the MOC stated that along with the three dams currently under construction at the time, it would pursue the construction of about 20 dams through 2011 to protect against water shortage (*Dong-A Ilbo* 17 November 1997). This discourse on the water shortage was to legitimize the new act (cf. Section 4 of Chapter 6).

⁷¹ More specifically, this was planned under the goals of 1) establishment of a stable supply of water 2) prevention of flood damage 3) establishment of a society for new water resource utilization 4) hydraulic energy development and 5) comprehensive development of water resources by watershed units (KWRA and KWRC 1997: 29).

Under the influence of the Korean democratization, the emergence of the local autonomy system and the increased attention paid to environmental pollution by civil society, not only several of the old actors, such as the MOC, but also newly unveiled actors (e.g., local residents, local governments, non-governmental organizations (NGOs), and the MOE) could now actively engage in water resource policy formation. However, this does not mean that the path-dependency of the former authoritarian regimes totally vanished after the democratization. We will see that old actors actively coped with the new actors so as to protect their interests in the process of water resource-related plan formulation.

According to the complete revision of the River Act in 1999⁷², the long-term plan for water resource became the first statutory plan⁷³ as the “upper-level plan for utilization, development, and reservation of water resources at the national level” (MOCT 2001a: 3).⁷⁴ The Long-Term Comprehensive Water Resource Plan (2001-2020), so called Water Vision, based on the revision of the River Act, was established to realize “a stable supply of clean water” as mentioned in the Fourth National Physical Development Plan (MOCT 2001a: 3). The plan’s specific strategies were divided into three parts: 1) promotion of projects that are suited to the characteristics and

⁷² Reasons for the complete revision of the River Act were “to supplement and improve on several imperfections, such as the River Management Committee’s role in adjusting conflicts over river utilization, relaxation of regulations on the riverside and procedural simplification of river conservation work, under the current system (Ministry of Governmental Legislation homepage). The main reason why the Specific Multipurpose Dam Act was established is that the River Act, which mainly focused on water management, could not institutionally support the construction of multi-purpose dams in the 1960s (cf. Chapter 4). Although the River Act was the highest-level law regarding rivers, it did not create direct conflicts with stakeholders.

⁷³ Although a long-term water resources plan existed from the Park Jung-Hee regime, the River Act was the first in regard to the water resources plan being considered as a statutory plan. This demonstrates the increasing importance of water resources at that time.

⁷⁴ According to section 1 of clause 11 in the revised River Act, “the Minister of Construction and Transportation shall formulate a ten-year unit water resources plan (hereinafter referred to as the “long-term water resources plan”) for the securing of stable water resources and efficient management of rivers, as prescribed by the Presidential Decree.”

environment of local areas, 2) promotion of projects cooperatively between the national government, local governments and local communities and 3) promotion of projects based on information sharing on water resources (MOCT 2001a: 14). It is noteworthy that the terms “local”, “community”, “cooperation” and “sharing” were seemingly included as value orientations of the plan. This was a significant departure from the existing nationally based long-term water resource plan initiated by the MOC. More specifically, the Water Vision includes a statement recognizing that “it is difficult to promote dam-based water resource development because of the public’s raised consciousness regarding the environment, the occurrence of vast areas of submerged residences, the changes to ecosystems, the limits of large-scale development and the insufficiency of land development” (MOCT 2001a: 22). In addition, through the organization of unprecedented public hearings, the government attempted to incorporate public opinion, and environmental NGOs could partly participate in the decision-making process for the plan (MOCT 2001a: 129, 131). It could be said that the active local movements against dam construction in the 1990s led to these changes in the government’s mode of operation (S.-H. Lee 2005). However, these changes did not mean that the state’s water policy orientation was completely transformed into a democratic and environmental one.

Although the Water Vision includes self-reflection on the existing multipurpose dam-based policy orientation while emphasizing democratic governance that includes local residents and civil society, as opposed to the previous plan, the same plan also argues the necessity of medium- and small-sized dams in accordance with the logic of a “water scarcity state” for which more dams were needed to store more water in case of water shortages (MOCT 2001a: 10, 64). In addition, the Long-Term Plan on Dam Construction, the action plan of the Water Vision, proposed 12 new midsized and small dam construction sites (MOCT 2001b: 26). The proposal brought about local, national and global⁷⁵ opposition to the plan, even though the plan suggested new concepts such as the construction of “environmentally-friendly midsized and small dams”

⁷⁵ For example, from IRN (International Rivers Network) and RWESA (Rivers Watch East and Southeast Asia) (C.-J. Lee 2013).

(MOCT 2001a: 64) and “environmentally-friendly local area around dams” (MOCT 2001b: 18), in contrast with existing perceptions that dams that had adverse effects on local environments and economies.⁷⁶ In this situation, capitalists revealed their interests in dam construction in the face of possible cancellation of projects. For instance, the Korea Chamber of Commerce and Industry, the nation’s largest private economic organization, submitted reports arguing the necessity of the dam construction to the government twice times between 2002 and 2003 (i.e. after the public controversy over the 12 proposed dam construction sites) (KCCI 2002, 2003). Through these tensions that surrounded the long-term plan, we can observe how it functioned as the point of contestation between various actors with their own interests.

In 2006, upon completion of a feasibility review required of the plan every five years, the revised Long-Term Comprehensive Water Resources Development Plan (2006-2020) was established. According to the plan (MOCT 2006), there were two reasons why it was revised. First, after the establishment of the 2001 plan, there were an increasing number of natural disasters such as droughts and floods.⁷⁷ The plan reflected a change in the national understanding of floods by arguing “it is impossible for structural tools [such as river banks and dams] alone to prevent a flash flood” (MOCT 2006, 104). This signifies that the government accepted the limitations of multipurpose dam-based flood control. Environmental NGOs’ participation in the plan revision

⁷⁶ Media played key role in diffusing the episteme that dams were good for local economies and local environments. For instance, civil engineers suggested that the dams were integral to sustainable development in the opinion section of a newspaper (*Dong-A Ilbo* 16 March, 14 August 1998). In addition, one editorial writer noted “[If an environmentally-friendly comprehensive leisure complex is constructed in the neighbourhood of a dam], local residents who live in the area will actively support dam construction because they will enjoy economic growth, rather than damage” (*Financial News* 10 September 2002).

⁷⁷ Natural disasters include the 2001 drought (in which 93,615 households suffered from water restriction), the 2002 drought (in which 27,678 households suffered from water restriction), typhoon Rusa (2002) that left 63,085 people homeless, and typhoon Maemi (2003) that left 61,844 people homeless.

also affected the change in the government's perception (C.-J. Lee 2013).⁷⁸ Second, the government regarded that it was necessary that the new water resource plan should accept various public opinions (MOCT 2006: 5). As mentioned above, after a fierce opposition to new dam construction, local residents at the proposed dam sites, environmental NGOs and specialists on water policy together began to study the water resource policy's problems. These activities eventually allowed civil society to participate in the revision process for the Long-Term Comprehensive Water Resources Development Plan (2006-2020) from 2005 onwards (C.-J. Lee 2013; *Ohmynews* 4 August 2011). After one year, the Long-Term Plan on Dam Construction (2007-2011), the action plan of the Long-Term Comprehensive Water Resources Development Plan (2006-2020), mentioned that planned mid-sized and small dam construction projects would be "reconsidered", i.e. effectively cancelled (MOCT 2007: 17; *Ohmynews* 4 August 2011).

Here, we should avoid the romanticized discourse regarding localization as the outcome of democratization. Localization should be seen as not only the output of democratization but also part of the old dominant actors' astute strategy to guard their interests. As shown by the case of the Water Vision, the plan was the contested outcome between old and new actors. Although the Long-Term Comprehensive Water Resources Development Plan (2006-2020) drastically accepted the democratic actions that were required by local communities and civil society, this plan also reflected the old social forces' intentions. The same plan states that when new dam construction needs occur, "considering local government and local residents' views, the government would push the project forward, including conducting surveys, design and basic planning stage by stage" (MOCT 2006: 49). In other words, the plan secured the legitimacy of dam construction not from national bureaucrats but from the local public by adding a condition that "dams will be constructed for *local people who want the dams*" (MOCT 2006: 51, italics

⁷⁸ An activist from the Korean Federation for Environmental Movement stated that "this was the first time that the government came recognize that flooding was as natural part of the river system. Until then, the government had tried to prevent flooding only by using structures like dams and river banks" (*Hankyoreh* 24 May 2013).

added). At the same time, the plan showed an attempt to reframe the reason of existence of dams from supporting the national economy to supporting the local economy and local environment by suggesting that the mid-sized and small dam model better fit local requirements (MOCT 2006: 94). More specifically, the Long-Term Plan on Dam Construction (2007-2011) included mentions of “mid-sized and small *familiar* dams that consider *local* character”, “dam projects that *improve the lives of local residents*” and “dam projects that are at one *with nature*” (MOCT 2007: 38, 39, italics added).⁷⁹ Interestingly, the Cheonggyecheon Restoration Project, which aimed to restore a 8.4km covered stream that runs through the heart of Seoul (cf. Chapter 7), was presented as an ideal dam development model for supporting a local economy and environment in the plan, even accompanied by a photo of the stream (MOCT 2007: 7), even though the Cheonggyecheon project involved no dam construction.

5. Case 4: The creation of a water scarcity state as a state-nature in South Korea

5.1. Introduction

This section explores why and through what processes the South Korean state has been constructed as a ‘water scarcity state’ during the last two decades. After the 1987 democratization movement, it became difficult for the Korean government to construct multipurpose dams due to the strong opposition of local communities and civil society. Therefore, the MOC and KWRC created a ‘water scarcity state’ thesis as a state-nature to gain legitimacy for continuing dam construction.

⁷⁹ This plan proposed nine “sustainable environmentally-friendly mid-sized and small dams” (MOCT 2007: 13). Among suggested dam sites, there was strong opposition against dam construction for reasons of ecological damage at three of the sites (*Yeonhap News* 21 June 2004; *Maeil Shinmun* 3 October 2006), demonstrating that the notion of the environmentally-friendly dam was disputable.

Water scarcity indicates that the volume of water that people need exceeds the volume of water available. Water scarcity could be regarded as a ‘pure’ physical phenomenon because areas with little rainfall are likely to experience water scarcity. However, water scarcity can also depend on the condition of water-related facilities, such as dams and reservoirs, and institutions that work to reduce water scarcity. In addition to physical elements, discursive elements are also significant to construct certain natural phenomena because people perceive natural phenomena through media such as television news, newspapers and politician and expert’s talks, rather than directly observing the phenomena. Thus, water scarcity should be seen as a socio-natural phenomenon (Alatout 2000; Kaika 2003; Giglioli and Swyngedouw 2008; Reis 2014).

The section makes four arguments. First, I argue that there were physical and discursive symptoms of water scarcity in South Korea after intense drought and flood before the ‘water scarcity state’ thesis appeared. Second, the ‘water scarcity state’ thesis was created by dominant social forces, such as the MOC and KWRC, to continue dam-based water policies. Third, the ‘water scarcity state’ thesis can be analysed in terms of spatial-temporal dimensions to understand the way in which people are persuaded of the necessity of dam construction. Fourth, the ‘water scarcity state’ thesis could be cracked by the political confrontations between dominant social forces and less powerful groups such as the local community and civil society. Verifying the South Korean case study is expected to supplement the lack of empirical research by revealing the dynamics among various social forces including less powerful groups in (de-) constructing the ‘water scarcity state’ thesis.

5.2. Symptoms of water scarcity in South Korea

The term ‘water scarcity state (*mul bujok guk-ga*)’ began to circulate in earnest in 1995. Although the term ‘water scarcity’ sparsely appeared in governmental reports in the 1960s and the 1970s under the Park Jung-Hee regime (Chapter 4), the appearance of this term outside of government circles had significantly increased by the 1990s. Representatively, in 1990, the government designated July 1st as Water Day – a decision suggested by the KWRC to remind people of the importance of water (*Maeil Kyungje Shinmun* 8 April 1991). Water scarcity and

water pollution⁸⁰ are the main reasons for the creation of Water Day, which periodically diffused and sustained water-related discourse as a crucial social agenda. Although it is an undeniable fact that water pollution was serious, it is important to note that the government emphasizes water scarcity as a main motive for establishing Water Day. As discussed below, the government actively mobilized the ‘water scarcity state’ thesis every Water Day.

Similarly, in their cooperative newspaper advertisement on the completion of the Juam multipurpose Dam, the MOC and KWRC said, ‘precipitation per capita in our country is lower than in other countries. Thus, dams such as the Juam Dam should be constructed every year to meet the increasing water supply needs that have grown to 4 million tons of water annually’ (*Kyunghyang Daily* 8 May 1992). This advertisement explicitly emphasizes the necessity of multipurpose dam construction to solve water scarcity. Not surprisingly, in a newspaper column written by the chairman of the KWRC, the opposition of the local community against dam construction was denounced as ‘NIMBY (Not In My Back Yard)’; according to the chairman of the KWRC, local opposition only hinders dam construction, which worsens the water scarcity crisis (*Kyunghyang Daily* 25 January 1993).

By coupling above mentioned discursive elements with material events, ‘water scarcity’ becomes a reality. The 1994 nationwide drought that lasted from summer to winter eventually convinced the people that the threat of water scarcity was a reality, not just rhetoric. According to newspaper articles describing the draught damage, people had difficulties in cultivation, electricity production and factory operation due to limited water and electric power (*Dong-A Ilbo*, 21 July, 25 September 1994; *Kyunghyang Daily* 26 July 1994, 29 December 1994).

⁸⁰ Water pollution became a critical issue in Korean society after the ‘tap water shock’ in which heavy metals and carcinogens were founded in the Han River in the summer of 1989 and 1990 and the phenol spills in the Nakdong River in 1991 (*Dong-A Ilbo* 2 July 1990; S.-H. Lee 2005).

다목적 댐 발전량

댐	6월1일~7월13일 日平均발전량(Kwh)		작년동기 대비비율 (%)
	94년	93년	
	수양강	61.9	
양간	167.2	423.1	39.5
수충조계	37.3	121.8	30.4
인화	13.7	33.8	40.5
	5.6	7.3	76.7
	35.9	19.3	186.0
	41.4	11.3	366.4
계	363.0	929.4	39.1

다목적댐 저수현황
(28일 현재) (단위: 백만 t)

	총 저수량	현 재 저수량	저수율 (%)	예년평 균저수 율(%)
소양강댐	2,900	1,380	47.6	58.4
충주댐	2,750	1,599	58.2	60.2
대청댐	1,490	596	40	57
안동댐	1,248	340	27.2	54.8
임하댐	1,248	153	25.7	53.6
합천댐	790	221	28	48.7
남강댐	136	72	52.9	28.7
주암댐	707	406	57.4	50.4
섬진강댐	466	25	5.4	38.2
총계	11,082	4,792	43.2	55.6

Figure 18 (18-1, 18-2): Tables indicating water crisis.

Sources: *Dong-A Ilbo*, 16 July 1994 (left) and *Kyunghyang Daily*, 29 December 1994 (right)

Figure 18 shows each dam's poor accommodation capacity, which implicitly emphasizes the need for more dam construction to avoid a 'national crisis'. More specifically, Figure 18-1 indicates that the total amount of electricity generation from multipurpose dams ('다목적 댐 발전량') between June 1 and July 13, 1994 is 363 kWh, i.e. 39.1% of the figure from the previous year. In the same manner, Figure 18-2 shows the status of multipurpose dams' water reserve ('다목적댐 저수현황') in December 1994, which was 55.6% of the figure from the previous year. By suggesting the use of these tables, these articles try to convince readers of the situation of water scarcity. Through interviews, the chairman of the KWRC argued that

multipurpose dams should be constructed for a stable water supply.⁸¹ Additionally, through editorials, the media noted that ‘the way to secure a stable water resource is that multipurpose dams and middle- and small-sized dams should be continually constructed’ (*Kyunghyang Daily* 14 January 1995).⁸² In other words, the government actively utilizes natural phenomenon as the basis for dam construction.

Eventually, given a situation in which a water scarcity phenomenon has materialized as a reality, the MOC could claim legitimacy for a water resource action plan including additional construction of approximately eight dams (*Hankyoreh* 8 February 1995).⁸³

5.3. The creation of a water scarcity state in South Korea

As mentioned in the previous section, the term ‘water scarcity’ was actively circulated in society during the early 1990s. In this section, I ascertain that how the term ‘state’ as a specific geographical entity is attached to the term ‘water scarcity’.

⁸¹ In an interview, the Chairman of the KWRC, Lee Yunsik, said “Now, we should not spend water like water” (*Kyunghyang Daily* 1 August 1994). Also, in an interview, the Chairman of the KWRC, Lee Taehyung, said “If we save water, we could endure until June” (*Dong-A Ilbo* 16 February 1995).

⁸² *Kyunghyang Daily*, in cooperation with the KWRC, published a series of features titled “Water is not enough” arguing that “additional construction of dams is needed to wisely overcome the crisis of water scarcity” (*Kyunghyang Daily* 28 February; 6 March; 13 March; 20 March 1995).

⁸³ However, after the 1995 flood, the MOC utilized flood events as the basis of dam construction for flood prevention (See *Maeil Kyungje Shinmun* 27 August 1995; *Dong-A Ilbo* 27 August 1995; *Hankyoreh* 29 August 1995), which shows how the MOC quickly and smartly mobilized natural phenomena for its interest.

Table 3: Types of states by per capita water use.

Above 1700 tons	1700 – 1000 tons	Below 1000 tons
Water-abundant country	Water-stressed country	Water-scarce country

Source: Engelman and LeRoy (1993: 48)

The term ‘water scarcity state’ officially appeared on the March 22 Water Day in 1995.⁸⁴ At that time, referring to the classification standard⁸⁵ for water-scarce countries⁸⁶ published by Population Action International (PAI), which is a non-governmental organization (NGO) based in the U.S. with a mission of promoting slow population growth to enhance quality of life, the Korean government declared that South Korea is ranked at a ‘water-scarce country’ level (Engelman and LeRoy 1993 48; see Table 3). Since that day, the government and media have continually used the phrase ‘South Korea is a water scarcity state’ every Water Day (*Dong-A Ilbo* 23 March 1995). Among media reports, particular attention should be paid to the most influential newspaper *Chosun Daily*’s a report on water scarcity:

According to the UN PAI report, the total amount of fresh water in South Korea is 630 million tons. By dividing the total fresh water by the total population, the per capita water use in 1955 is calculated as 2,941 tons. However, due to increasing population growth, per capita water use decreased by 1,470 tons in 1990. According to the classification standard for a ‘water-scarce country (*mul bujok guk-ga*),’ if per capita water use is below 2,000 tons, then that country is a

⁸⁴ As mentioned before, the Korean government established July 1 as Water Day in 1990. After the Rio Earth Summit in 1992, the UN made March 22 World Water Day beginning in 1993. Based on the recommendation of the UN, the Korean government has observed World Water Day since 1995.

⁸⁵ Per capita water use is a nation’s total fresh water use divided by the total population.

⁸⁶ Here, I use the terms ‘country’ and ‘state’ interchangeably. When I mention a PAI report, I use the terminology of water scarcity ‘country’ that is used by PAI. However, outside of PAI reports, I prefer to use water scarcity ‘state (국가, 國家)’ to emphasize the characteristics of state apparatus and governmental organization.

water-scarce country. Thus, our country has moved into the realm of a water-scarce country since 1990. Our country's annual precipitation is 1,274 mm, which is higher than the global average of 973 mm. However, due to a high population density, the total fresh water is 11%, i.e. 2,900 tons, of the global average of 26,800 tons, which means that the amount of water resources is classified as a very small amount (*Chosun Daily* 10 March 1999).

After the report in the *Chosun Daily*, the article was reproduced by several other newspapers, which initiated a particular discourse on water scarcity that influenced people's consciousness. Let me unpack the content of the *Chosun Daily* article in more detail. First, the article introduced the PAI as being part of the UN to emphasize that PAI is a reputable organization. However, the PAI is non-governmental organization, unrelated to the UN, even though UN organizations such as UNEP (United Nations Environment Programme) quoted PAI's reports (UNEP 2002). Second, in PAI's original text, South Korea was ranked as a 'water-stressed country,' not a 'water-scarce country.' Put simply, the original meaning of 'water-stressed country' that the PAI established was changed to a 'water-scarce country (*mul bujok guk-ga*)' in the process of translation from English into Korean (*Munhwa Ilbo* 21 March 2006). In fact, the meaning of the Korean term '*bujok*' is similar to 'scarcity' or 'shortage.' The term 'water-stressed country' does not indicate that there is not enough water. Rather, it means that the situation surrounding water is getting worse (*Naeil Shinmun* 14 September 2005). Thus, the *Chosun Daily* article seems to have intended to overstate the situation. Third, the article is incorrect to introduce criteria for water-abundant countries and water-stressed countries, i.e. '2,000 tons' is false and '1,700 tons' is true, as shown in Table 3. Additionally, PAI's criteria are not always reliable. PAI's classification standard for water scarcity country differs from that of 'suitable' water use suggested by other hydrologists. Indeed, PAI mentioned the differing opinion in the report: some hydrologists regard 1,000 tons as suitable per capita water use (Engelman and LeRoy 1993: 19).⁸⁷ Based on the hydrologists' opinion, it might be an exaggeration to classify South Korea as

⁸⁷ Calculating a 'suitable' amount of water use is beyond the scope of this paper. Rather, it is an important fact that the amount of suitable water use is disputable and changeable.

a water-scarce country. Last but not least, it is worth noting the organization's name - *Population Action International*: their expertise lies in population issues, rather than water issues.⁸⁸ Therefore, a possible explanation is that PAI suggested a more 'strict' standard to alert people that they could be trapped in an area of water scarcity if they do not consider population growth (Engelman and LeRoy 1993: 19; Yeom 2003).

However, regardless of what the original meaning was, after the *Chosun Daily's* report was published, Korean society no doubt accepted the scarcity thesis – 'South Korea is a water scarcity state *designated by the UN*' become common knowledge in society. Since this report, the term 'PAI' gradually disappeared from the press. Eventually, the term 'UN' alone was mentioned by the media. In my view, based on the Korean people's consciousness that the UN is a reliable international organization, the Korean media selected 'UN' as a signifier without fact-checking, even though the UN hardly has anything to do with the evaluation of water scarcity countries. Until the 'water scarcity state' thesis faced societal criticism in 2003, the phrase, 'water scarcity state designated by the UN' was quoted not only by national bureaucrats and experts such as the MOC and KWRC but also by ordinary people (*Kookmin Ilbo* 21 March 2004; *Hankyoreh* 22 August 2004; *Dong-A Ilbo* 18 March 2005). The 'water scarcity state' thesis gradually spread to the public and the experts alike,⁸⁹ and eventually was used to justify dam construction. Such legitimization is clearly shown in the Long-Term Water Resource Plan (2001-

⁸⁸ The PAI report notes that "as populations have grown, fresh water has become increasingly less available where and when it is needed" (Engelman and LeRoy 1993: 13). In other words, this report follows the neo-Malthusian perspective.

⁸⁹ President Kim Dae-Jung noted that 'the water problem is serious based on the fact that our country is designated as a water scarcity state by the UN' (*Money Today* 5 February 2001). In addition, the Minister and the bureaucrats of the MOC and even elementary school students repeated a phrase that 'South Korea is a water scarcity state designated by the UN' (*Hankook Ilbo* 21 March 2001; *Kyunghyang Daily* 25 March 1999; *Sonyeon Hankook Ilbo* 20 July 2005). This logic is also identified in many newspaper editorials arguing for dam construction. See *Maeil Kyungje* 12 July, 5 June 2001, 8 January 2002; *Kyunghyang Daily* 21 March 2003; *Dong-A Ilbo* 5 June 2001; *Hankook Kyungje* 12 July 2001.

2020), which includes plans for the construction of middle- and small-sized dams (MOCT: 2001a: 10, 64).

5.4. Dissecting the spatial-temporal dimensions of a water scarcity state

In this section, I dissect the spatial-temporal dimensions of a ‘water scarcity state’ thesis to analyse how this thesis is concretely hegemonized in society. First, I will examine the temporal aspect of the thesis.⁹⁰ The thesis is based on anxiety about an uncertain future. We have a limited amount of time to defuse the water scarcity bomb before it explodes. Anxiety about an uncertain future legitimizes current actions for a better future (Swyngedouw 2010; Hulme 2008; Müller-Mahn 2007). Certain legitimized actions could marginalize other voices that question a particular action. For example, by describing uncertain future climate effects as ‘catastrophe, danger and collapse,’ many media outlets and politicians intend to control the present in the name of making the future safe (Swyngedouw 2010). Similarly, the media, national bureaucrats and experts threw various time bombs to the public (see Table 4).

Table 4: News articles about the water scarcity state

Date of issue	Media	Contributor	Article title	Main argument
8 February 1996	<i>Kyunghyang Daily</i>	Senior staff of KWRC	After 5 years, a water scarcity situation will occur.	Even though the planned dams will be completed in 2001, it will be difficult to tackle increasing water demand, which will bring about a water scarcity of 2.5 billion tons in

⁹⁰ Although divided into spatial and discursive parts conceptually, the two mechanisms actually are intermingled.

				2011 and 3.3 billion tons in 2012.
22 March 1999	<i>Maeil Kyungje</i>	Minister of MOC	Without new water resources, restricting the water supply will be inevitable in 2005.	If we do not secure new water resources, building permits for apartments and factories will be difficult to obtain and restricting the water supply will be inevitable by 2005.
19 February 2001	<i>Maeil Kyungje</i>	Director of KIST (Korea Institute of Science and Technology)	The 'water war' is not someone else's business.	Our country is forecasted to have an annual water scarcity of 400 million tons in 2006 and 2 billion tons in 2011.
21 March 2001	<i>Yeonhap News</i>	Editorial	Time bomb: world water scarcity	Our country's water scarcity situation is dire. In only five years, in 2006, it is estimated that we will have an annual water scarcity of 400 million tons. The water problem is our time bomb that threatens us.
21 March 2001	<i>Hankook Ilbo</i>	News story	Nationwide water scarcity situation in 2004	According to the MOC, due to increasing water demand stemming from population growth, the expansion of water supply facilities and economic

				growth, a nationwide water scarcity situation will begin to occur in 2004. Although all water resources facilities currently being built will be completed in 2011, water scarcity of approximately 2 billion tons will occur.
14 March 2005	<i>Seoul Kyungje</i>	News story	Water scarcity of 4 billion tons in 2011	According to the KWRC, water demand will exceed water supply in excess of 1.7 billion tons in the next year. After that, it is estimated that the amount of water scarcity will increase (4 billion tons in 2011; 4.5 billion tons in 2016; 4.9 billion tons in 2020).

Table 5: The projection of the water supply (unit: 1 million m³).

Year	Demand	Supply
2006	36,338	34,626
2011	39,217	35,162
2016	39,709	35,169
2020	40,103	35,158

Source: *Seoul Kyungje* 14 March 2005, provided by KWRC

As shown in Table 4, MOC, KWRC and science experts from KIST warn that a ‘water scarcity situation’ or ‘water war’ will occur in the near future (after ‘5 years’ or ‘10 years’). Additionally, by seeing the projection of the water supply provided by the KWRC, readers had to wait the year ‘2006,’ ‘2011,’ ‘2016’ or ‘2020’ before the ‘water scarcity bomb’ would explode (see Table 5).

In addition, World Water Day has played a key role in sustaining the sense of temporality about the water scarcity bomb in society. At every World Water Day from 2004 until 2005, the MOC and the KWRC published their joint report, *Water for the Future* (MOCT and KWRC 2004, 2005), emphasizing the importance of water. They also organized commemorative events such as poster contests and commemorative stamps and postcards for World Water Day. For instance, postcard messages include ‘We need to prepare for water scarcity now (물 부족, 지금 준비해야 합니다)’ and ‘Environment-friendly dam construction will solve problems for a bright future without anxiety about water (물걱정 없는 밝은 미래, 친환경댐 건설로 해결하겠습니다)’ (Figure 19).⁹¹ In the same manner, the 12th World Water Day memorial stamp reminds Koreans that ‘Precipitation per capita in our country is just 10% of the global average, i.e. we are a water-scarce country’ (Figure 20) (Korean Postal Service webpage). Through these materials, people continue to be exposed to discourse on water scarcity.

⁹¹ On a postcard, ‘건설교통부’ means the MOCT and ‘한국수자원공사’ indicates the KWRC. ‘3 월 22 일은 세계 물의 날’ means that 22 March is World Water Day.



Figure 19: The 9th and 10th World Water Day commemorative postcards.

Source: Korean Postal Service



Figure 20: The 12th World Water Day memorial stamp.

Source: Korean Postal Service

The media informed readers of Water Day events and of the content of the *Water and the Future* report. Interestingly, according to a public opinion research poll of 1,000 adults across the country, 77.9% of the respondents agreed that “a water scarcity phenomenon will occur in the future” (*Yeonhap News* 28 January 2003). This finding shows that people are seriously concerned about the uncertain future of water.⁹² Finally, this situation makes people look to the state as a savior against an uncertain future.

Secondly, there is also a spatial aspect of this thesis. The state and its spatial scale are regarded as a specific alternative against the uncertain future of water. Dominant social forces can spread a nationalistic idea about water scarcity to the people. Statistics or geographical representations are effective to promote this idea (Whitehead et al. 2007). As mentioned above, water projection figures were different in each newspaper (cf. Table 4). Despite such differences, in 1996, the MOC coherently noted ‘1.8 billion tons’ or ‘2 billion tons’ as the estimated amount of water scarcity. This estimate is combined with the successfully settled belief that ‘South Korea is a water scarcity state designated by the UN’.⁹³

In fact, depending on geomorphologic and socio-economic characteristics of individual rivers and streams, each region’s water scarcity situation is different. In other words, Seoul, the capital city of South Korea, is less vulnerable to water scarcity shock compared to other underdeveloped regions of the country (cf. Chapter 5). However, the government only suggests ‘1.8 billion tons’ or ‘2 billion tons’ as total amounts on a national scale. Such loose statements not only mask each region’s particular situation, but create a geographic image that water scarcity will occur throughout our whole national territory.

⁹² In fact, this research poll was commissioned by the KWRC in commemoration of Water Day 2003. So, we should not totally trust the results of the research and survey methods.

⁹³ In other words, ‘South Korea, which is a water scarcity state designated by the UN, will have water scarcity of 1.8 billion tons or 2 billion tons’.

This imagined national territory regarding water scarcity is also strengthened by the spatial perception on *inter-national* relations. The *Water for the Future* report is organized into several parts (MOCT and KWRC 2004): First, the report introduces the global water situation by situating water conflicts on a world map (MOCT and KWRC 2004: 21). Second, the report only mentions the Korean situation after first introducing global situations, especially water conflicts on the global scale. Then, knowing the global situation, people may think that Korea could become one of the global water conflict cases. The media encourage this spatial perception. A column titled ‘After oil, it is water war’ written by an environmental engineer, states:

The countries that experienced water conflicts said that the probability of a water war is higher than the probability of an oil war because water is directly connected to people’s lives. There are substitutes for oil. However, there is no alternative for water, which supports people’s lives. Mankind lived for a hundred thousand years without oil. Even now, there are places unconnected to oil. However, because no state could endure without water, water easily could cause war. Regarding the water crisis, the Korean Peninsula is no exception (S.-S. Park 2003).

This column highlights the possibility of ‘inter-state’ conflicts about water by using the popular geopolitical terms ‘oil’, ‘war’ and ‘people’s lives’ that are often used to represent the Middle East (Khatib 2006). Then, the author notes that South Korea is ‘no exception’ to this danger. In other words, by transferring a narrative of inter-state conflicts to the South Korean situation, people may be led to think that as common soldiers they have to save their country as in wartime, which strengthens a perspective of the state as a knight that controls common soldiers against a possible water war.

5.5. Cracking the 'water scarcity state' thesis

In the above section, by ascertaining the spatial-temporal dimensions of the 'water scarcity state' thesis, I revealed that this thesis could significantly influence people's consciousness to recognize fictional water scarcity as a reality. However, once a certain socio-natural phenomenon has been hegemonized, it is not necessarily impossible to change or even overturn this calcified formation.

After the 1987 democratization movement, the Korean environmental movement sharply rose against state-led water policies emphasizing multipurpose dam construction (Koo 1996). In particular, the cancellation of the Youngwol Dam project, which could have destroyed the ecology of the Tong River, was the outcome of the local community and civil society's environmental movement against the government in 2000 (Lim and Tang 2002; Oh 2003a). However, before the early 2000s, environmental NGOs could not recognize that the MOC and KWRC's 'water shortage state' thesis was intended to justify the continuation of dam construction. Thus, without a doubt, the Long-Term Water Resource Plan (2001-2020) accepted the 'water scarcity state' thesis (MOCT 2001a: 129, 131).

In 2003, however, the Korean Federation of Environmental Movement raised a question about the thesis (Yeom 2003).⁹⁴ Political liberalization enabled citizens to actively participate in the decision-making process for the Long-Term Plan for Water Resources (2006-2020) (MOCT 2001a). Thus, a council was established to evaluate existing estimates of water demand and the amount of water scarcity calculated by the government. In addition to governmental ministries

⁹⁴ At this time, the reason why environmental NGOs began to question the 'water scarcity state' thesis is that the amount of water scarcity suggested by the MOC, '1.8 billion tons' or '2 billion tons,' in 1996 did not change until 2003. In terms of demand, the MOE had been continuously promoting 2.2 billion tons of water-saving plans since 1996. Even in terms of supply, the cancellation of dam constructions projects including the Youngwol Dam would bring about water scarcity of '1.5 billion tons' according to the MOC's estimates. However, the existing amount of water scarcity did not reflect these estimates (*Hankyoreh* 1 April 2003).

(MOC and MOE), national environmental NGOs (KFEM (Korean Federation for Environmental Movement), Environmental Justice and Green Future) also joined the council (MOCT 2006).⁹⁵ Eventually, due to societal pressure, the ‘water scarcity state thesis’ officially disappeared from the next long-term plan, which was established in 2006. Instead the term ‘water-scarce country,’ the term ‘water-stressed country’ is used in the plan (MOCT 2006). As a result, the MOC and KWRC had to delete the ‘water scarcity state’ thesis from the *Water for the Future* report of 2006 (MOCT and KWRC 2006; C.-J. Lee 2013).⁹⁶

6. Conclusion

This chapter has explored the way in which South Korean water policies, such as an integrated system for water management (Section 2), the revision of the Specific Multipurpose Dam Act (Section 3), long-term water resource plans (Section 4) and the creation of a water scarcity state (Section 5), have been dynamically (re-)constructed by continuing political contestations among diverse social forces acting in and through the state in the face of political and economic liberalization. This study is theoretically meaningful for empowering DST scholars to go beyond the two sides of the same coin of debate on the change in the Korean developmental state that occurred between the 1980s and the early 2000s (i.e. either “the continuance of developmental

⁹⁵ One newspaper article states that ‘Yeom Hyungchul, who is an activist of KFEM, and Roh Jaehwa, who is a bureaucrat of MOC, have acted as coordinators of a council, which makes promotion processes and information objective and transparent’ (*Ohmynews* 4 August 2011). In addition, an bureaucrat of MOE noted that ‘when revising the long-term water resource plan in 2006, domestic experts have attend and reviewed the plan together and they concluded that because the amount of water supply in our country does not exceed the amount of water demand, it has been decided not to use the term ‘water scarcity state’” (*Weekly Dong-A* 1 April 2009). Even *The Long-Term Plan on Dam Construction, 2007-2011*, the plan says, “by considering changed socio-economic conditions that emphasize social consensus, water demand was re-estimated to resolve misunderstandings about exaggerating the amount of water demand” (MOCT 2007: 37).

⁹⁶ An anonymous bureaucrat of MOC admitted that “the term ‘water-scarce country’ would not be used this year because the UN did not designate South Korea as a water-scarce country and estimates of whether or not there is water scarcity are different under different criteria” (*Munhwa Ilbo* 21 March 2006).

state” or the “decline of the developmental state”) (cf. Section 5 of Chapter 2). Also, the South Korean ‘water scarcity state’ thesis was materially and discursively created by influential social forces such as the MOC and KWRC to gain legitimacy for continuing dam construction, demonstrating that water scarcity is a socio-natural phenomenon. Additionally, this study demonstrates that less powerful individuals and groups could crack the hegemonized ‘water scarcity state’ thesis that reflects influential interests of societal forces. As a result, I argue that the state that produces certain socio-natural phenomena should be seen as the site of the political contestations among various social forces, rather than viewing the monolithic state *a priori*.

In closing, the reason why I focused on the period between the late 1980s and the early 2000s is so that this research could help explain the contemporary situation of South Korea. The Lee Myung-Bak regime (2008-2013) drove the Four Major Rivers Restoration Project forward as a “neoliberalized developmental state-nature” (cf. Chapter 7). Korean social scientists tend to emphasize the career of President Lee, who was the former CEO of Hyundai Engineering and Construction Corporation, in explaining the development of the project. In other words, they regard this situation as very “exceptional” after democratization, largely due to President Lee’s personality (for a summary, cf. Park 2011). However, from the perspective of the SRA, we should detach the president from his administration in our consideration, even though it is an undeniable fact that the president can legally command and control the administration. In other words, it does not necessarily follow that each ministry was fully aligned with the president’s intention. As revealed in this chapter, the MOC, which originated and matured under the past authoritarian regimes, took actions to save its own interests even under the democratic regimes. In fact, in justifying the project to the local public, the Lee regime resurrected the dead ‘water scarcity state’ thesis, despite the fact that this thesis was proven to be false. Thus, next chapter should explore the Lee regime’s water resource policy.

VII. NEOLIBERALIZED DEVELOPMENTAL STATE-NATURE: THE FOUR MAJOR RIVERS RESTORATION PROJECT OF THE LEE MYUNG-BAK REGIME (2008-2013)

1. Introduction: The fountainheads of the developmental neoliberalization of water in South Korea

In this chapter, I attempt to locate the fountainheads of the developmental neoliberalization of water before arriving at the junction of the Lee Myung-Bak regime to understand the path-dependency of Korea's water resource policy.

The Park Jung-Hee regime in the 1960s and 1970s attempted to discursively and materially produce a state-nature relationship by reframing water from being a free good to being a nationalized economic good and constructing the "Four Major Rivers" hydro-scale as a national project in the name of the "Modernization of the Fatherland", blocking potential local and national opposition and legitimizing large-scale multipurpose dam construction that entailed vast natural, economic and social changes at local levels (cf. Chapter 4). Multipurpose dam construction was an essential part of the MOC⁹⁷ and the KWRC, which was established in 1974 under the MOC for the purposes of this construction (KWRC 1994).

More specifically, Figure 16 indicates the profit structure of KWRC from 1969 to 1987. It indicates that KWRC's main source of income was water resource-related development. We should also keep in mind the fact that urban development counted for above 30% of total profit in 1969. It is because KWRC prosecuted a development of land in Seoul. Based on this

⁹⁷ The name of the MOC has changed a number of times; it has been the Ministry of Construction and Transportation (1994–2008), the Ministry of Land, Transport and Maritime Affairs (2009–2013) and the Ministry of Land, Infrastructure, and Transport (2013–present). To avoid confusion, I consistently use the term MOC in this thesis.

experience, KWRC could participate in developing the Gumi Industrial Complex (An 2004). In particular, as the state's accumulation strategy changed from import substitution industrialization to export-oriented industrialization which requires abundant industrial water, the profit structure of KWRC also changed. After 1973, more than half of KWRC's profits stemmed from industrial complex development through various industrial estates, such as the Gumi Industrial Complex (1969-1982), Yeochun Overall Chemical Industrial Complex (1974-96) and Changwon Overall Machinery Industrial Complex (1974-2001) (KWRC 1994).⁹⁸ At the same time, massive multipurpose dams, from Andong Dam (1976) to Chungju Dam (1986), key projects of the Four Major Rivers Development Plan, were completed. Additionally, from the late 1970s to the mid-1980s, the KWRC embarked on the constructing new towns such as Ansan New Town, the first planned city in Korea (see the urban development section in Figure 16; KWRC 1994). Through this experience, a construction alliance that included not only national MOC bureaucrats and state-owned enterprises such as the KWRC but also large construction companies in the large Korean *chaebol* conglomerate grew significantly, which strengthened the construction-oriented policy orientation in Korea's economy.⁹⁹ As will be explained below, this construction alliance has been deeply involved in promoting the 4 Rivers Project. Therefore, even after the 1987 democratization, as main state-nature creators, the MOC and KWRC did not want to abandon their interests, although they partially adopted institutional tools for democratic policy making and environment-friendly gestures, citing rhetoric such as "environmentalism" and "localization", in the face of the increasing demand for democratization surrounding water policy. Given a situation in which they had difficulty continuing to construct large-scale dams because of strong local and national opposition, the MOC invented the logic of a "water scarcity state" as a new state-nature for which more dams were needed to store more water in case of future water shortages. Based on the "water scarcity state" thesis, the MOC suggested new concepts such as constructing "environmentally friendly midsized and small dams" (MOCT

⁹⁸ According to An Kyung-Mo, former president of KWRC, due to the experience of making the Gumi Industrial Complex, KWRC could drive development of other industrial estates (An 2004).

⁹⁹ Some Korean critical scholars have used the term "the construction-oriented state" (Park 2011; Hong 2005) when explaining this phenomenon.

2001a: 64) and “dam projects that improve the lives of local residents” (MOCT 2007: 38-39), in contrast with the existing perception that dams had adverse effects on local environments and economies, to guard their interests under the liberal-democratic regimes from the 1990s to the early 2000s.

In the following three sections, I will show how the inherited developmentalist water policy and emergent stream of neoliberalism met at the junction of the Lee Myung-Bak regime. The three stages are as follows.

2. Stage 1: The Korean Peninsula Grand Waterway Project as an extension of Lee Myung-Bak’s persona?

As a key pledge in the 2007 presidential elections, the Korean Peninsula Grand Waterway Project (hereafter, the canal project) was suggested as the “brainchild” of President Lee Myung-Bak, nicknamed “the bulldozer” from his time as former CEO of the Hyundai Engineering and Construction Corporation (BBC News 2008). This project was composed of four canals (i.e. the Gyeongbu Canal, the Gyeongin Canal connecting Seoul with the western port city of Incheon, the Honam Canal linking the Geum River with Yeongsan River and the North Korea Canal). The key canal of the project was the 540-kilometer-long Gyeongbu Canal linking the port city of Busan with the capital, Seoul. According to Lee, the Gyeongbu Canal would flow across the country to connect the Han River, which flows through Seoul into the Yellow Sea, to the Nakdong River, which flows through Busan into the Korea Strait, which would significantly decrease logistical costs, create 300,000 jobs and revitalize depressed local economies (*The New York Times* 2008). Linking the Han River and Nakdong River required challenging engineering works, such as a 21-kilometer tunnel through a mountain, because of the height difference between the two rivers (*The New York Times* 2008), and this problem was a key argument against the project. In fact, the Gyeongbu Canal project was first proposed by the Sejong Institution, a university research institute, in 1995. Then, Lee Myung-Bak, who was a member of

the National Assembly, suggested the canal plan during an interpellation time in 1996.¹⁰⁰ After the KRIHS (Korea Research Institute for Human Settlements)—a government-affiliated organization for national land planning—estimated that the Gyeongbu Canal would not be economically viable in 1998, attention was drawn away from the project (M.-R. Cho 2007: 111-112).

However, because, during his term as mayor of Seoul (2002–2006), Lee Myung-Bak restored the 8.4 km Cheonggye Stream that runs through the heart of Seoul to attract foreign tourists and foreign capital, he became a strong presidential candidate from the major conservative party (M.-R. Cho 2010; Hwang 2014).¹⁰¹ In the process of restoration, there was a fierce debate on the lack of ecological and historical authenticity¹⁰², the undemocratic procedures and the excessive commercial re-development of the surroundings between the Seoul City government and a coalition of NGOs (M.-R. Cho 2010). Despite this strife, *Time Asia* magazine chose Lee Myung-Bak as one of its “Heroes of the Environment” because of the restoration of Cheonggye Stream in 2007, and people began to recognize that “the bulldozer went green” (*Time Asia* 2007). Here, it is outlined how contrasting developmentalism and neoliberalism coupled with each other in restoring the Cheonggye Stream. Many Seoul citizens supported the Cheonggye Stream project in spite of a fierce debate because they thought that if the economy were revitalized, they could readily accept excluding others such as street vendors, instrumentalizing nature, and not recovering it ecologically as appurtenances of urban spectacle and commercializing public space in the name of attracting foreign capital and tourists. In other words, there was the commonality of both ideologies’ prioritizing economic value over other values. Based on a halo effect of the

¹⁰⁰ Based on personal experience in Germany, Yu Woo-ik, one of Lee Myung-Bak’s closest allies and a Seoul National University geography professor, also suggested the canal plan to Lee (*Korea Joongang Daily* 1 January 2008).

¹⁰¹ For the Cheonggye Stream Project, 1,500 street vendors were forcibly relocated from the restoration area to a neighboring stadium (Hwang 2014).

¹⁰² Representatively, 120,000 tons of pumped water from the Han River every day is needed to maintain the Cheonggye Stream as a water-friendly space (M.-R. Cho 2010).

Cheonggye Stream, the canal project was resurrected as an important national agenda item (Cho 2007).¹⁰³

To support Lee Myung-Bak and his pledge, the Korean Peninsula Grand Waterway Study Group (KPGWSG), which was composed of roughly one hundred professors, was established as a policy advisory group. Lee publicized his canal project as his flagship campaign promise at a KPGWSG-sponsored symposium on 13 December 2006. In his congratulatory address, commenting on the restoration of Cheonggye Stream as his achievement, Lee argued that the canal project would unify the people and solve uneven regional development and that it would be environmentally friendly. His address intended to instill the perception that the success of the Cheonggye Stream model would be diffused throughout the “Korean Peninsula” to the people (i.e. voters). Iconographically, Figure 21, which was widely published in the press, shows Lee’s intentions by articulating his thoughts with discursive arrangements such as rose-tinted spectacles that show part of the completed canal project, similar to the Cheonggye Stream blueprint, and tantalizing texts (i.e., “the Korean Peninsula Grand Waterway (한반도대운하)” and “the prosperity of a nation (국운융성)”). As Lee Myung-Bak’s closest personal aide said, Lee would love the idea of “remodeling the peninsula” (*Korea Joongang Daily* 1 January 2008).

¹⁰³ In an interview with the media, Lee Myung-Bak reemphasized the necessity of the canal project before the Cheonggye Stream Project completion ceremony (Cho 2007).



Figure 21: Lee Myung-Bak at the KPGWSG-sponsored symposium.

Source: *Ohmynews*

It could be explained that Lee Myung-Bak and his followers attempted to discursively construct the “Korean Peninsula Grand Waterway” as a state-nature to win the election. As Lee said, there was no difference between the Cheonggye Stream project and the canal project from the perspective of developmental neoliberalism.¹⁰⁴ Thus, although they estimated environmental destruction at the local level, local-dependent actors might have positively attempted to attract the canal project for their local economies in accordance with the logic of developmental neoliberalism as follows:

¹⁰⁴ For example, in an interview with the media, Lee Myung-Bak said: “Personally, I think that the construction of Gyeongbu Canal would *be easier than* the Cheonggye Stream project that was carried out at the center of the city” (*Hankyoreh* 2005, italics added). This statement intended to instigate local-dependent actors’ desire for local development.

Until now, we saw no future, no way to turn around our economy ... Talk about possible environmental damage the canal might cause doesn't mean that much to me. I think more about all the engineers who will come in and eat at my place once construction starts (a local restaurant owner in the area around the Gyeongbu Canal, *The New York Times* 2008).

However, developmental neoliberalism is not confined to the realm of discourse, and we should avoid misdiagnosing Lee Myung-Bak's mind as the sole cause of the canal project. The activation of developmental neoliberalism is the assemblage of discursivity and materiality at diverse geographical scales (cf. Hill et al. 2012). As mentioned above, at the national level, a construction alliance benefited from multipurpose dam-based water policy for many years. Even faced with democratization in the 1990s, they attempted to adapt to the changed situation by transplanting rhetoric such as "localization" and "environmentalism" in the water policy. Once Lee was elected, five large *chaebol* construction companies (Hyundai, Daewoo, Samsung, GS and Daelim) met with the chief of the task force to manage the canal project affiliated with the presidential transition team on 28 December 2008. At that time, then CEO of the Hyundai Engineering and Construction Corporation Jongsu Lee announced that the five major construction companies would organize a joint task force for the canal project and that each company would soon establish an individual task force for the project on 3 January 2008 without worrying about competition for contracts with foreign companies (*Hankyoreh* 3 January 2008).¹⁰⁵ The pace of business was rapid in that each company's task force chief was appointed in a short period of time (*Hankyoreh* 13 January 2008). In particular, among five large companies, one Hyundai executive who was responsible for the Cheonggye Stream project was

¹⁰⁵ In an interview with a radio program, Chu Boo-gil, one of Lee Myung-Bak's closest allies, said that although a number of foreign companies had informed the presidential transition team that they would bid for the canal project, Lee Myung-Bak hoped that domestic rather than foreign companies could participate in the project (SBS News 2008).

reassigned to be the task force chief (*Hankyoreh* 3 January 2008).¹⁰⁶ Additionally, at the local level, there were vigorous actions by local-dependent actors, such as local governments, local chambers of commerce, local newspapers, local construction companies and local politicians to attract the canal project shortly after the election (Hwang and Koh 2008). For instance, local governments established task forces for the project. In particular, it is interesting that although the Honam-based dominant opposition Democratic Party strongly criticized the canal project at the national level during the presidential election, a provincial governor from the Honam region who was affiliated with the same Democratic Party was favorable to the project (Hwang and Koh 2008). Namely, there was a “scalar mismatch” (Hwang 2014: 86) between local and national needs within the same political party surrounding the canal project.

In summary, these nimble actions show that not only Lee Myung-Bak’s persona for his “political inspiration” (Cho 2007) but also a national-scaled construction alliance and local-dependent actors had strong influence on the canal project.

3. Stage 2: The conditions for producing the ‘Four Major Rivers’ hydro-scale: Dividing the Korean Peninsula waterway into territorialized regional hydro-scales

In this section, we identify common mechanisms at different local levels. That is, using a territorializing strategy at the local level, local-dependent actors attempted to divide the state-

¹⁰⁶ Originally, the Gyeongin Canal was a floodway construction plan because its surrounding area had been badly hit by flooding during the 1980s. Although the plan was changed to the canal plan during the 1990s by the KWRC, the construction was delayed because of opposition by local communities and environmental NGOs. Hyundai is a contractor for the Gyeongin Canal. Thus, it is assumed that Hyundai wanted to begin the delayed construction of the Gyeongin Canal as part of the Korean Peninsula Waterway Project (Seo 2002; *Hankyoreh* 3 January 2008). Eventually, the construction work was completed in 2011.

nature into local natures in the face of the possible failure of the canal project. This situation provided the conditions for producing the “Four Major Rivers” hydro-scale as an alternative state-nature.

After Lee Myung-Bak’s inauguration, there was a stronger likelihood than ever that the canal project would be started, which triggered the emergence of opposing forces for various reasons such as environmental destruction, fraudulent economic goals, etc. On 31 January 2008, a conference on the critical review of the canal project at Seoul National University, organized by a group of Seoul National University professors, had a key role in increasing publicity about the issue.¹⁰⁷ Before long, the Professors’ Group for Opposing the River and Waterway Project, which approximately 1,800 professors across the country attended, had organized to campaign against the project on 25 March 2008. Additionally, Buddhist religious groups also participated in the opposing forces because they felt that their temples would be disturbed by nearby canal construction sites (Buddhist Channel TV 2008). Leading up to the April general elections that had followed the Presidential election in December, members of the ruling party were afraid that the canal project as a main general election pledge could damage the ruling party’s National Assembly seats (Nature 2008). Eventually, faced with continuing opposition such as candlelight protests in the summer of 2008, the Lee Myung-Bak regime promised to drop the canal project on 19 June 2008 (Lee et al. 2010; Hwang 2011c).¹⁰⁸¹⁰⁹ However, this does not mean that the

¹⁰⁷ I attended in this conference as an audience member. Despite the constraints of time (Monday, 14:00-17:00 p.m.) and place (the southern end of Seoul), roughly two hundred people including reporters filled the conference room. The fact that many professors’ visible opposition to the government policy had been rare before this conference showed the gravity of the situation.

¹⁰⁸ I observed the candlelight protest at the center of Seoul during the summer. In addition to the canal project, the Lee regime’s other neoliberal agenda items, such as privatizing public enterprises and a Korea-USA Free Trade Agreement, especially in relation to importing American beef, caused strong repulsion in civil society. On the street, I could see printed materials and chants on these issues (cf. Lee et al. 2010; Hwang 2011c).

¹⁰⁹ At a press conference, President Lee said, “I made a pledge to construct the Korean Peninsula Grand Waterway. However, if the people object to it, I will not push it” (*Korea Joongang Daily* 23 June 2008).

canal project completely stopped. Although the project originated from Lee's presidential aspirations, it was out of his hands after the election. Instead, territorial local politics began to emerge to attract the canal project, regardless of the president's statements. Next, let us look at what happened at the local level.

As was mentioned briefly, local-dependent actors actively supported the Korean Peninsula Waterway Project, which was composed of a canal in each region, as a new state-nature. Before the general elections, the Democratic Party officially opposed the Lee regime's canal project.¹¹⁰ However, local politicians affiliated with the Democratic Party took different actions in contrast to the central party's official stance. At the site of the Honam Canal, local politicians objected to the Korean Peninsula Waterway Project while advocating the necessity to construct the "Honam Canal", "Geum River Canal" and "Yeongsan River Canal". According to their logic, the former was entirely different from the latter three. Affected by fierce criticism from civil society, the ruling party omitted the canal project in its list of general election pledges. However, local politicians at the site of the Gyeongbu Canal argued that the "Gyeongbu Canal" and "Nakdong River Canal" were dissimilar to the Korean Peninsula Waterway Project. Similar to the sites of the Honam Canal and Gyeongbu Canal, the opposition and ruling parties' candidates around the Gyeongin Canal advertised the canal's construction as a main pledge that was completely different from the Korean Peninsula Waterway Project (Hwang and Koh 2008, 219-236).¹¹¹ In addition to local politicians' using each local canal's name as a territorial term, local-dependent actors attempted to territorialize their local natures to divide between "us" (the local canal supporters) and "them" (the local canal opponents). For example, one could see a roadside banner with a slogan ("If you oppose the canal, you are not one of us") at Yeosu, a section of the Gyeongbu Canal (*The New York Times* 21 February 2008; Park 2011: 201). Additionally, when I

¹¹⁰ During the general election, the Democratic Party issued 136 comments about the canal project, and its think tank published a 65-page-long critical report on the project (Hwang and Koh 2008: 220).

¹¹¹ In an area of the Gyeongin Canal (close to Seoul), both political parties are competitive in every elections because both parties' political support is based on each Honam and Yeongnam, as explained later.

visited the construction site of the Gyeongin Canal on 28 August 2008, shortly after President Lee's declaration calling off the canal project in June 2008, the canal was under construction in the name of "floodway construction"¹¹² (see Figure 22-1). Near the construction site, I saw an office of the "Local Council for the Gyeongin Canal (경인운하지역협의회)", which was a group of local-dependent actors operating to attract the canal project (see Figure 22-2).



Figure 22 (22-1: Left) (22-2: Right): Gyeongin Canal construction site.

Source: Author's own photograph

Until now, we have ascertained that there were territorialized local politics around the canal project. However, this knowledge is still insufficient to answer how and why local-dependent actors were so active in territorializing local nature, even despite the fact that the opposition party opposed the canal project and that President Lee had backed away from his pledge. Here, we should recognize that territorialized local politics is not new in Korea. To better grasp the mechanisms of the emergence of territorial politics, a brief history of Korea's regionalist politics should be explained.

¹¹² Refer to footnote 106 in this article.

In the 1960s and 1970s, Yeongnam (a southeastern region composed of Busan, Daegu, North Gyeongsang and South Gyeongsang) was sharply industrialized, whereas Honam (a southwestern region composed of Gwangju, North Jeolla and South Jeolla) was underdeveloped because of the Park Jung-Hee regime's spatial selectivity, which was inherent in the state's industrial and regional policies toward the southeastern region (B.-G. Park 2003; cf. Figure 1).¹¹³ Korea's regionalist politics has been reproduced mainly in this spatial tension between Honam and Yeongnam. In particular, transportation infrastructure is important for regional development in Korea (Park 2011: 198). As a representative example, the completion of the Gyeongbu (Seoul-Busan) Expressway in 1970 was the starting point of a striking spatial division between economic growth in Yeongnam and economic decline in Honam. Therefore, the Honam-based local actors have long demanded the construction and expansion of the Honam railway line and expressway (Gimm 2013: 1160-1161). In this sense, in the name "Honam Canal", "Honam" is not simply a regional name but a social construction (Gimm 2013), and thus, when local-dependent actors utilized "Honam" as a territorial ideology, it was more effective to territorialize this region. After 1990, as Park (2008: 52-53) reveals, the spatial disparity between the Seoul Metropolitan Area and less prosperous regions including not only Honam but also other regions such as Youngnam intensified because of the change in the accumulation strategy from heavy and chemical industrialization to information-based and technology-intensive industrialization, such as semiconductors and computers. Therefore, in the remainder of the Seoul Metropolitan Area, territorialized local politics to attract state-supported infrastructure projects became commonplace.

¹¹³ The key reason the Park regime heavily supported and depended on Yeongnam is that this area was a foundation of its political support. Park Jung-Hee had seized control of the country in a military coup, which continually threatened the regime's political legitimacy. In this situation, the regime had to recruit national bureaucrats and politicians from this area and financially support this area to guarantee stable political support (B.-G. Park 2003). Under this context, Lee Myung-Bak emphasized the Gyeongbu Canal from among the four canals because his regime's political support was also based in Yeongnam, even though he mentioned the necessity of other canals in the name of "resolving uneven regional development".

The intimacy between territorial local politics and state-led infrastructure development as well as the construction-oriented tendency of the Korean state led to an impetus to resurrect the canal project in a new form called “the Four Major Rivers Restoration Project.”

4. Stage 3: The ‘Four Major Rivers’ hydro-scale redux?: The Four Major Rivers Restoration Project of the Lee Myung-Bak regime

4.1. Various rationales behind the 4 Rivers Project

After the summer of the 2008 candlelight protest, President Lee suggested the concept of Green Growth as a new paradigm on August 15, 2008, National Liberation Day. The Green Growth strategy was based on the concept of utilizing the environment to pursue further growth and at the same time to respond to climate change, the energy crisis and the economic crisis (Yun 2009). To realize this strategy, the government established an agenda for a National Strategy for Green Growth and a Five-Year Plan for Green Growth in 2008 (Hwang et al. 2013). Why did the Lee regime bustle to suggest a new growth paradigm?

Before President Lee’s inauguration, the South Korean liberal-progressive block had seized power over ten years (1997–2007). One of the main reasons for their defeat in that election was that the liberal-progressive block could not realize economic growth for the people while promoting economic liberalization such as the proposed Korea-USA Free Trade Agreement under the Roh Moo Hyun regime (2002–2007). Thus, many people selected a conservative candidate, Lee Myung-Bak, who propagated pragmatic politics and the so-called “747” plan, a plan to achieve 7% annual economic growth, increase the GDP per capita income to US\$ 40,000 and make the nation the 7th largest economy in the world (Doucette 2010). However, and in contrast to the people’s hopes, even Lee’s regime could not set an alternative path for economic growth because of its neoliberal orientation and the 2008 financial crisis in the USA. In other

words, the Lee regime faced not only a political but also an economic crisis at the same time. In this situation, the regime urgently needed a political-economic fix.



Figure 23: Four Major Rivers Restoration Project

At that moment, it could be estimated that the Green Growth strategy would discard the traditional construction-based economy that had prevented new economic strategies and would support a new field for growth, such as renewable energy, greening the smokestack industry or developing greenhouse gas emission technology.¹¹⁴ However, the Green Growth strategy is close to green washing in that in reality, its main project was the 4 Rivers Project (Hwang et al. 2013), which would give a substantial boost to the national construction industry. In other words, the path-dependency of the construction-oriented tendency of the Korean developmental state significantly affected the current economic system.

According to the government, the first purpose of the 4 Rivers Project was to secure 1.3 billion m³ of water to respond to future water scarcity caused by climate change (MLTMA 2009).¹¹⁵ In fact, the “water scarcity state” thesis was designed to legitimize dam construction by construction alliances such as the MOC, the KWRC and the mainstream media between the 1990s and the early 2000s. The thesis officially disappeared in the national water policy after 2006 because it was proven to be false by a council composed of national bureaucrats, civil society and experts who had evaluated the existing water demand that had been calculated by the government. The Lee government calculated that 1.02 billion m³ of water (80% of 1.3 billion m³)

¹¹⁴ A number of international journal articles (Mathew 2012; Jänicke 2012) introduced Korea’s Green Growth strategy as an ideal action for combating climate change to an international audience without exploring domestic political conflicts and academic debates around the strategy.

¹¹⁵ There was a fierce debate about whether the 4 Rivers Project was a detour for the canal project (C.-K. Park 2009; *Hankyoreh* 2010). One researcher at the state-funded Korea Institute of Construction Technology claimed early on that the 4 Rivers Project was nothing more than the canal project on a popular online discussion board—Daum Agora—in May 2008. After the newly elected government of President Park Geun-Hye, the Board of Audit and Inspection of Korea (BAIK) audited the 4 Rivers Project. According to the BAIK’s report, when the MOC submitted an early version of the master plan for the 4 Rivers Project to the Blue House, the Blue House insisted on dredging 6 m of the four rivers, not the 2.5 m the MOC had suggested. Six meters was considered the basic condition for the canal. Eventually, in accordance with the Blue House’s direction, the new master plan included dredging 6 m (*Hankyoreh* 14 July 2013), although former President Lee still argued that the 4 Rivers Project is completely unrelated to the canal project in his latest book of memoirs (Lee 2015). Here, the point is that regardless of original intention, these projects were designed in the interests of a construction alliance.

needed to be secured in the Nakdong River (MLTMA 2009). However, according to a civil engineering professor whose calculations included existing data published by the government (MOCT 2006), 11 million m³ would remain as a surplus in 2011, and even in 2026, the water shortage would be 21 million m³ before building eight dams and dredging sediments in the Nakdong River to secure 0.67 billion m³ (C.-K. Park 2009; cf. Figure 23). In other words, the government overestimated the amount of water scarcity. It could be assumed that a construction alliance would attempt to resurrect the dead water scarcity state thesis to encourage the dam's construction.

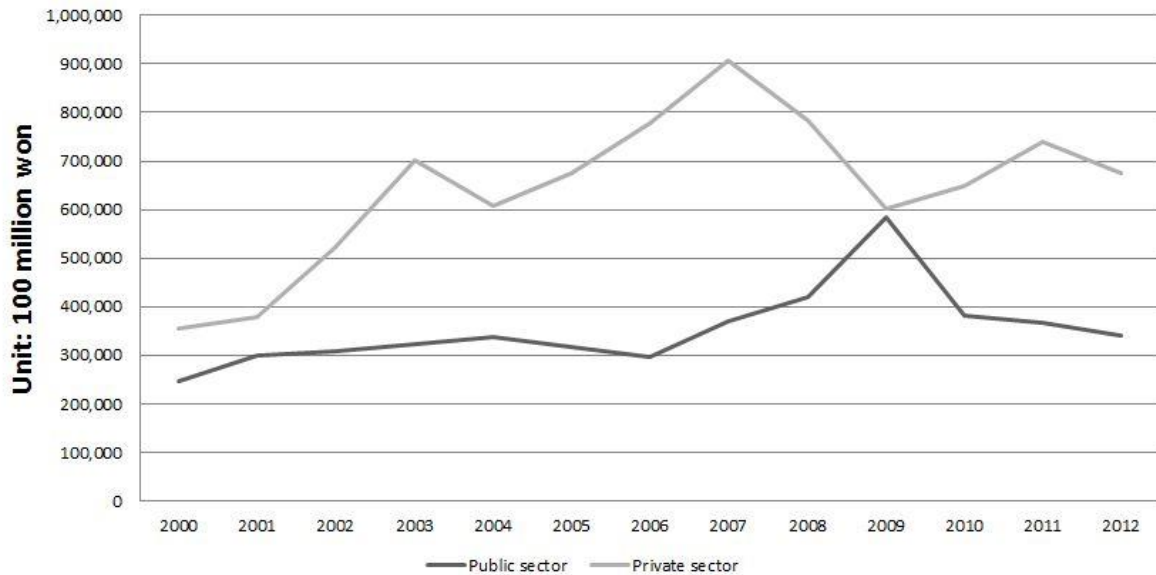


Figure 24: Trends for domestic construction contracts, 2000–2012.

Source: KOSIS

Figure 24 shows the trends in domestic construction contracts between 2000 and 2012. In this figure, we can verify that with 2007 as the peak, construction contracts in the private sector decreased, whereas contracts in the public sector increased exponentially until they peaked in 2009. That is, the government invested money in the construction industry, especially in the 4

Rivers Project, as a short-term economic stimulus plan.¹¹⁶ Additionally, the Lee regime ignored existing regulatory frameworks, such as the long-term water resource plan, environment impact assessments, cultural heritage surveys, etc., because these would have prevented the timely promotion of the project (i.e., during a presidential term).¹¹⁷ In particular, the Long-Term Water Resource Plan is a top-level plan for water resource policy from the 1960s (cf. Chapter 4). In this plan (2006–2020), there is no plan for sixteen dams on four major rivers (MOCT 2006). In this situation, it would have been difficult to begin the Master Plan for the 4 Rivers Project. Thus, the Lee regime intentionally delayed announcing the Long-Term Plan Water Resource Plan (2011–2020) and revised the plan in accordance with the regime’s aim (MLTMA 2011).¹¹⁸

In summary, we have confirmed that the regime’s political and economic crises, construction alliance situation and territorialized local politics conditioned by uneven regional development made the Four Rivers Project the political and economic fix. In the next part, I reveal the ways in which the “Four Major Rivers” hydro-scale was materially and discursively (re-)produced as an alternative state-nature by social forces acting within and through the state and nature.

¹¹⁶ When introducing the canal project, President Lee said that half of the total construction cost would be covered by private investment and half from selling gravel recovered from the project. Additionally, the related website stated: “Not a dime of taxpayer’s money will be spent” (Nature 2008). However, after the completion of the 4 Rivers Project using 100% public funding, the KWRC went into serious debt, from two trillion won in 2008 to fourteen trillion won in 2014. *Chaebol* construction companies were selected as contractors for the project and they colluded in bid rigging for contracts, which demonstrates that the 4 Rivers Project was merely a means to fast money for a construction alliance (*Korea Times* 2014). Despite this problem, President Lee advocated *chaebol* by stating that “Some NGOs are hindering efforts by Korean companies to obtain orders, but their acts are unpatriotic and go against our country’s interests” (*The Kyunghyang Shinmun* 18 January 2013).

¹¹⁷ One of the task executives for the 4 Rivers Project said, “If we followed all procedures, it would be difficult to complete the project within the target date” (*Weekly Kyunghyang* 2009).

¹¹⁸ Although the long-term water resource plan is hierarchically above the master plan, the plan (2011–2020) quotes the master plan for the 4 Rivers Project (MLTMA 2009) in legitimizing the need to secure the estimated water and to build sixteen dams on four major rivers, similar to a tail wagging a dog (MLTMA 2011, 40).

4.2. The Production of the ‘Four Major Rivers’ hydro-scale as an alternative state-nature

In promoting the 4 Rivers Project, we should be sensitive to the emergence of the term “Four Major Rivers” hydro-scale. According to the media, President Lee accepted the term “Four Major Rivers” by chance from a national ruling party’s assemblyman’s suggestion on May 2008 in the face of continuing opposition such as the candlelight protest (*Hankyoreh* 2009). In comparison with the “Korean Peninsula” Waterway Project, which includes both South and North Korea, the “Four Major Rivers” is more geographically specific to the people because it comprises only the Han River, Geum River, Yeongsan River and Nakdong River, which match the sum of the spaces of each territorialized local politics. In terms of hegemonic strategy, the project can be viewed as an alternative state-nature for resolving the abovementioned crises. More specifically, the production of the “Four Major Rivers” hydro-scale could be analyzed at the national and local levels.

At the national level, the Lee regime attempted to discursively frame the “Four Major Rivers” as a state-nature for national economic growth by referring to the “thesis of remodeling the land (강산개조론: 江山改造論)”¹¹⁹, which was suggested by a renowned popular Korean independence activist, An Chang-ho (1878–1938) (Y. H. Park 2009). As introduced above, the nationalizing mechanism around the “Four Major Rivers” was similar that for the “Korean Peninsula” Waterway Project. However, the difference between them is that the “Four Major Rivers” hydro-scale is not new; in the 1970s, the Park Jung-Hee regime attempted to produce this same hydro-scale as a state-nature to push for export-oriented industrialization and to realize the “Modernization of the Fatherland” (cf. Chapter 4). Although President Lee adopted the term “Four Major Rivers” by accident, his regime intentionally reused this established state-nature to legitimize the project because the people had recognized “Four Major Rivers” as a legacy of miraculous economic growth. For instance, *Weekly Gonggam*, a magazine for advertising government policy to the people, reported the fact that former President Park Jung-Hee had

¹¹⁹ In essence, “江山” indicates river (江) and mountain (山), and “江山” means national land.

pushed ahead with the Four Major Rivers Basin Development by introducing an interview with former Vice Minister of Unification Dong Hoon, of the Park regime, and an authentic letter from Mr. Park that Mr. Dong owned (*Weekly Gonggam* 2009).¹²⁰ Even in his book of memoirs, Lee Myung-Bak mentioned the names Park Jung-Hee and An Chang-ho to rationalize the 4 Rivers Project (Lee 2015).

Next, we should give an eye to the ways in which concrete local nature transformed into abstract state-nature at the local level. As mentioned above, there were supporters and opponents around the canal project at the local sites, and thus, the Lee regime needed more assertive measures to promote the project stably. One of the key arguments against the project was the possibility of local environmental destruction. In response to this, the regime designed the concept of “water-friendly space (친수공간: 親水空間)” in promoting the 4 Rivers Project.¹²¹ This concept was very effective in appealing to local people in that the existing water policy mainly focused on flood control and water utilization for *national* economic development while downplaying *local* residents’ lives (cf. Chapter 4). Specifically, the new concept configured the episteme that developing “water-friendly space” was not only for the national economy but also for local economies and local people’s lives. The Special Act on the Utilization of Waterfronts¹²², which was proposed by the ruling party’s assemblymen, was enacted for developing “water-friendly space”. This special act guaranteed the development of “residential, commercial, industrial, cultural, sightseeing and leisure functions” (Article 2) “within two kilometers of both banks from

¹²⁰ In an interview, Dong Hoon said, “the starting point of the 4 Rivers Project is connected with former President Park’s Four Major Rivers Basin Development” (*Weekly Gonggam* 2009). The article also shows a photo of President Park’s handwriting that magnifies the text “四大江流域開發” (i.e. the Four Major Rivers Basin Development). The article was introduced by conservative media (*Dailian* 2009; *New Daily* 2009).

¹²¹ In fact, the term “water-friendly space” began to sparsely appear in the late 1990s, but the Lee regime used the concept in earnest.

¹²² Although the Special Act on Water-Friendly Areas is closer to the Korean original than the Special Act on the Utilization of Waterfronts, I follow the government’s translation.

the boundaries of the river basin of a national river” (Article 2) “*in preference to other Acts*” (Article 3, italics added), such as the River Act and the National Land Planning Utilization Act.¹²³



Figure 25: 25-1 (Left): Busan Eco Delta City Project (Source: KWRC); 25-2 (Right): The Four Major Rivers Restoration Project memorial stamp (Source: Korean Postal Service)

As shown in Figures 25-1 and 25-2, by utilizing environmentally-friendly and apolitical images and rhetoric such as “water-friendly space”, “green growth” and “river restoration”, local opposition was lessened, although there was still the strong opinion that green growth was green washing. When I visited the construction site of the Gongju Dam (cf. Figure 25-2) on 30 March 2011, I found that there were activities by a small number of local opponents, such as local media reporters and local NGOs, against the construction. From the view of the project’s supporters, local people’s opinions needed to be eliminated in order to promote the project smoothly.

¹²³ Representatively, based on the Special Act on the Utilization of Waterfronts, the KWRC and the Busan City Government pushed ahead with the Busan Eco Delta City Project (see Figure 25-1). Without a preliminary feasibility test, the project aims to construct high-rise apartment complexes on the world-famous bird sanctuary located at the Nakdong River estuary. The KWRC anticipates that the restitution of the development gain from the Busan Eco Delta City Project will offset the debt from the 4 Rivers Project (*Hwankyung Ilbo* 2013).

In sum, we ascertained thorough collusion among diverse actors, including the MOC, KWRC, *chaebol* construction companies and local-dependent actors, around the state's active role in (re- and/or de-)regulating and commodifying local nature in the form of the "Four Major Rivers" hydro-scale.

5. Conclusion

Using the canal project and the 4 Rivers Project as case studies, this work has demonstrate that the state's role is very decisive in promoting neoliberal nature projects. More specifically, we confirmed that diverse social forces such as the MOC, KWRC and local-dependent actors as well as President Lee, at multiple scales, attempted to (re-)produce the "Four Major Rivers" hydro-scale by acting within and through the state and nature in the face of political and economic crises, which is referred to as the "neoliberalized developmental state-nature."

Then, does the "Four Major Rivers" hydro-scale become a hegemonic state-nature after the project's completion? A certain state-nature relationship does not mean that the state and human actors affect nature one-sidedly within human expectations. Nature may produce unexpected outcomes beyond human control in the dialectic process of state-nature relationships (Whitehead et al. 2007; Braun 2015). The "Four Major Rivers" hydro-scale as a hegemonic state-nature had a flaw. Crucially, because the speed of the four major rivers decreased considerably after the dams were constructed, the severity of algae blooms, which did not exist before, has been increasing even in the winter (Nature 2012). When criticizing the phenomenon of algae blooms, the people and the mass media coined the term "green algae latte" because the Korean expression for "algae bloom (녹조)" is very similar to that for "green tea (녹차)" (*Hankyoreh* 3 August 2013). This coined word encompasses people's anxiety about their drinking water, their

distrust of the government and their mockery about the 4 Rivers Project (Todayhumor 2008; *Ddanzi Ilbo* 2008).¹²⁴



Figure 26: 26-1 (Left): The Chilgok Dam (14 June 2012); 26-2 (Right): The appearance of algal brooms at the same site (15 June 2013)

Source: Wetlands and Birds Korea (<https://www.flickr.com/photos/sos4river>)

In addition, and in contrast to the Lee regime’s promise, the rose-tinted economic effects of the 4 Rivers Project—such as creating 340,000 jobs—were revealed to be a fraudulent: It never rains but it pours. It is possible that the KWRC owes an enormous debt that will be paid by the people in the near future (*The Kyunghyang Shinmun* 20 June 2013). Even for local construction companies, the 4 Rivers Project was futile except for *chaebol* construction companies (*Hankyoreh* 21 May 2013). For example, in a gathering at the National Assembly on May 20 2013, Head of the Daegu and North Gyeongsang Province chapter of the Korean Federation of Construction Industry Trade Unions said:

¹²⁴ For example, “the green algae latte” became a subject matter for satire in a popular Korean comedy program called Gag Concert (<https://www.youtube.com/watch?v=tML82Rw38IA>, last accessed 20 January 2015).

We are sorry that we were the ones who dug out the rivers for the 4 Rivers Project with our excavators and hauled away the dirt in our dump trucks. ... People think that the companies that were employed in the project made a lot of money, but the project was awful for us as well. ... Contractors had to deal with late payment on virtually every site that was part of the project. Illegal fuel was rampant, along with illegal equipment repairs and illegal invoices. If it wasn't illegal, it wasn't happening. While the large construction companies probably made some profits on the project, the construction workers who were actually doing the work on site are even now struggling as they wait to get paid (*Hankyoreh* 21 May 2013).

Under the Lee regime, newly elected provincial governors directly conflicted with the regime by halting work on construction sites on the Geum River and Nakdong River, and the Busan High Court declared that the 4 Rivers Project was illegal, although the Lee regime eventually completed the construction of the project (*The Economist* 2010). In this situation, after the inauguration of President Park Geun-Hye, the Board of Audit and Inspection of Korea audited the project. Seemingly, it could be assumed that the “Four Major Rivers” hydro-scale as a hegemonic state-nature is collapsing. However, we need to read ordinary people’s *mentalités* of ordinary people as follows:

He [Lee Myung-Bak] was a hero to people [of] my [own] age. ... He was in charge of the Gyeongbu Expressway and he restored the Cheonggye Stream. So when I heard that he was going to try and build that canal, I thought, why not. ... People at least want to believe that more jobs will be available once the canal project starts (a housewife in her 50s, *Korea Joongang Daily* 1 January 2008).

It appears that people will continue to long for the second 4 Rivers Project to gratify their desire in the name of development or growth, and a construction alliance will encourage people’s greed by producing various forms of neoliberalized developmental state-nature such as the “Four Major Rivers” to sustain their interest. In this sense, finding alternative pathways to

developmental neoliberalism is rocky. However, although I could not provide a panacea to change the current system, it is imperative that we take the state as a main unit of analysis. Penciling the state's role into Castree (2008a)'s map has not only contributed to the realm of theory but also closely relates to the political implications. In particular, given the situation in which some progressive scholars and activists have often been reluctant to regard the state as a foothold for a "socioecological transformation" (Braun 2015) (cf. Hardt and Negri 2001; Holloway 2005), it would be more difficult to locate cracks that could cause socioecological transformations in the present and near future systems without exploring the state as a unit of analysis and a site of political contestation (Smith 2010; Parenti 2014).

VIII. Conclusion

It is time to conclude this analysis of state-nature relations in a developmental state focusing on water resource policies in South Korea. This last chapter will summarize the main results of the investigations. Finally, future challenges for research will be formulated.

1. Summary

In this thesis, I have attempted to theoretically connect the SRA with state-nature literature, in order to clearly show the links between nature and concrete social forces acting in and through the state. Using a case study of Korean water resource policies, I have also emphasized that DST studies should consider the SRA and state-nature literature in order to avoid the territorial trap that tends to emphasize the role of the state *per se* and to better explain East Asian economic development. By answering the research questions formulated in the introduction, the implications of the thesis can be summarized as follows.

1.1. Revisiting question A: What were the state's intentions in advocating a certain water resource policy?

Although it is difficult to deny that developmental states have the characteristics of general capitalist states, such as a capital accumulation orientation, emphasizing only the capitalist imperative and its resultant economic development as the main motivation of a developmental state's practice is very limited in revealing the diverse purposes of the water resource policy of each regime. In this sense, different to the existing DST literature, the concept of plan rationality is much too blunt as an instrument for extracting various rationales behind policy decisions, such as organizational survival of the ministry. It is clear that each regime had different intentions as well as similar intentions, as follows.

The Park Jung-Hee regime promoted a particular water resource policy for the purpose of reconstructing the ruined territory after the Korean War in the name of "Modernization of the Fatherland." Chun Doo-Hwan utilized water policy as a means of extending his rule. After democratization in 1987, during the 1990s and the early 2000s, democratic regimes were more

concerned with democratic and environmentally friendly actions, such as civil society's participation in the process of making a national water policy plan. Lastly, the Lee Myung-Bak conservative regime (2008-2013) used water policy to avoid an economic, and especially a political, crisis through the 4 Rivers Project in a way similar to that of the Chun regime.

However, understanding the intentions of each regime at this level may make the mistake of generalization. As revealed in the above chapters, even under the same regime, there were entangled conflicts among social forces having different interests, such as the competition and contestation between the MOC and MCI surrounding plans for constructing hydroelectric power stations and thermal power generation plants (Chapter 4), the EPB and MOC regarding EPB's fiscal austerity program (Chapter 5), the MOC and EPA surrounding an integrated system for water management (Chapter 6) and the MOC and civil society regarding the 4 Rivers Project (Chapter 7). In other words, we should recognize not only each regime's intention, but also that each intention was the contingent outcome of political contestations among various social forces.

1.2. Revisiting question B: How was the relationship between the state and nature constructed?

In this thesis, we have ascertained that state-nature relations are constructed by social forces that pursue their own political and economic ends by acting in and through the state and nature. More specifically, under the Park regime, water became a nationalized economic good and the "Four Major Rivers" hydro-scale was produced. Under the Chun regime, the "Ten Major Rivers" hydro-scale was crafted as an alternative to the "Four Major Rivers". Under democratic regimes, the MOC and others attempted to construct the "water scarcity state" thesis. Finally, the Lee regime promoted the Korean Peninsula Grand Waterway and the 4 Rivers Project. In all these cases, three mechanisms are at work, framing, centralization and especially territorialization, as suggested in Whitehead et al. (2007).

Although this empirical study shows the active role of the state in constructing certain state-nature relations, it does not mean that the state can control or conquer all of nature and society and correctly estimate effect and direction of state-nature and state-society relations. Here, a

multi-scalar approach is significant. As shown in Chapter 4, the reason why the Park regime produced the “Four Major Rivers” hydro-scale is that *local* opposition to multipurpose dams may threaten *national* policy. Because of this “scalar mismatch” (cf. Section 4 of Chapter 2) between local and national needs, dominant social forces attempted to produce certain state-nature interactions to curb possible local and national opposition. Additionally, natural phenomena, such as flooding under the Chun regime (Chapter 5), or water pollution and water scarcity after democratization (Chapters 6 and 7), caused great or small changes in existing water policy orientations. In other words, the state, society and nature interact with each other dialectically in the (re-)construction process of state-nature relations. This contextualized understanding of state-nature relations may help DST scholars to avoid fetishizing the role of the state *per se*.

1.3. Revisiting question C: How did the former regime’s state-nature relationship impact the latter regime, and what changed this relationship under the latter regime?

Existing DST literature tends to see the developmental state as an ahistorical and timeless object by defining it as a state that possesses a high degree of autonomy and is insulated from private interests (cf. Section 5 of Chapter 2). Depending on this unchangeable definition, DST scholars accept or reject the concept of the developmental state to suit their personal convictions, in particular in explaining the change of developmental states after globalization. Although my critical stance is not new in social science, I argue that existing DST research has not paid sufficient attention to the dynamic relationship between the path-dependency and path-breaking moment of developmental states.

While both were authoritarian regimes, the Park regime produced the “Four Major Rivers” hydro-scale for capital accumulation, whereas the later Chun regime crafted the “Ten Major Rivers” hydro-scale in accordance with the politics of distribution to avoid an immediate political crisis. After political and economic liberalization, under democratic regimes, the legacy of the past authoritarian regimes significantly affected water resource policies, guarding the interests of influential actors who benefited from the extant developmental state system. Decisively, contrary to the dominant neoliberal dogma that the minimal state is a prerequisite for

invigorating neoliberalism, the active role of the state was crucial to promoting a neoliberal nature project such as the 4 Rivers Project under the Lee regime. Without considering its path-dependency and its interactions with emerging institutional property, it is difficult to more fully explain the present phenomena. Consequently, this thesis espouses pleads for a more contextualized analytical perspective that can detect the path-dependency that motivated the present developmental neoliberalism.

1.4. Revisiting question D: How does this perspective help us rethink the developmental state vis-à-vis nature?

As ascertained in the above three research questions, this thesis has tried to theoretically and empirically excavate veiled relationships between the developmental state and nature. This attempt is meaningful because despite its importance, the natural world has received little attention in DST research. Some might argue that this is simply putting a variable into the unchangeable DST. In other words, it could be regarded as one of examples that support “the role of the state” in East Asian economic development. In my view, this perspective only looks at one side of things. The main purpose of this dissertation is not to repeat the stylized developmental state thesis emphasizing the role of the state *per se* described by existing DST scholars. As briefly mentioned in Section 1 of Chapter 3, I suggest that we need to fundamentally reconsider a taken-for-granted concept of the East Asian economic miracle. Namely, did the miracle really happen? As revealed in the production process of state-nature relations, these relations are very important to promote economic growth. From the perspective of national bureaucrats, high GDP means economic prosperity, which continually legitimizes the necessity of state-nature. However, at the same time, I found that the production of state-nature involves nationalizing local nature and marginalizing local residents’ interests. As a result, there is uneven regional development today. In this sense, high GDP is futile from the local people’s angle. What is worse, “GDPism” (Sum 2013) shadows this negative aspect of reality beneath the miracle.

This epistemological problem is not confined to East Asia but also affects emerging countries. For example, African policy makers and scholars have recently tried to import the East Asian developmental state model into their countries (Mkandawire 2001; Zenawi n.d.). It is highly

possible, depending on the concepts and experience of East Asian developmental states, that the African governments may legitimize certain economic policies and state-nature projects that involve uneven regional development and marginalization of local nature and residents. Therefore, rethinking the developmental state vis-à-vis nature is meaningful for future developmental states beyond East Asia.

2. Outlook: Future directions of research

In this thesis, the main chapters do not mention the water policy of the recently-established Park Keun-Hye regime (2013-2018), which is dominated by the same conservative party as that of the former President Lee Myung-Bak. Because it is ongoing, it is difficult to evaluate the current Park regime in depth. However, I have outlined several noticeable movements. Despite the fact that the former regime faced fierce opposition to the 4 Rivers Project, the MOC has produced 14 new dam construction plans under the new regime (*Hankyoreh* 6 July 2013), which show strong path-dependency of a construction alliance including the MOC and the *chaebol*. Therefore, we need to pay attention to the Park regime in future research.

At the same time, influenced by the Lee regime's 4 Rivers Project, the Thai government made a contract with the KWRC on June 2013 to establish a large-scale water management project after the September 2001 flood. However, because of a new military regime, which seized control of the country via a coup in May 2014, it is uncertain whether the KWRC will continue to maintain the contract (*Yeonhap News* 27 October 2014). Beyond the Korean and Thai cases, there are an increasing number of large-scale dam constructions and related conflicts in Asia in the face of climate change (*The New York Times* 30 September 2011). Recently, international organizations and meetings such as the UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific), World Economic Forum and Asian Development Bank began to pay attention to water shortages in Asia in the context of climate change (World Economic Forum 2008; UNESCAP 2013; ADB 2013). I hypothesize that it is highly possible that certain Asian countries could mobilize discourse on climate change and its related socio-natural phenomena such as water shortage in promoting mega-projects such as multipurpose dams in their countries for the

dominant class' interest (Aiken and Leigh 2015; *The New York Times* 30 September 2011; *Yeonhap News* 27 October 2014). Therefore, evaluating Asian cases is not only theoretically but also politically significant. However, specific studies are still rare in critical hydro-politics literature, though we have already witnessed several cases worldwide, such as in Egypt (Mitchell, 2002), India (Klingensmith, 2007) and Israel (Harris and Alatout, 2010). In the future, more empirical studies in Asia beyond South Korea are required to 'abstract and/or contextualize' (Castree 2008b) the cases of Asian countries.

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