

Domestic Environmental Governance and Regional Environmental Cooperation in Northeast Asia

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Introduction

On January 13, 1999, the first Tripartite Environmental Ministers Meeting (TEMM) among the three major Northeast Asian countries—China, Japan, and South Korea—was held in Seoul. It was a product of a series of bilateral and multilateral meetings, workshops, and agreements between the three countries since the early 1990s. The three environmental ministers shared their concerns about regional environmental problems and decided to promote regional environmental cooperation such as information exchange, research, and various other activities not only at the central government level, but also at the local government as well as NGO and civil society level. They also agreed that not only international cooperation but also strengthening domestic environmental policy implementation in each country was required, especially to tackle climate change. They then decided to hold the Tripartite Environmental Ministers Meeting every year in turn, which was thought to be the first and critical step towards better institutionalization of inter-governmental regional environmental cooperation.

Since then, TEMM has been organized annually. The ministers and other participants have established various forms of discussion, such as working group meetings, bilateral meetings, and plenary sessions, shared domestic environmental policy achievement, discussed global as well as regional environmental challenges, and promoted specific projects and action plans.¹ In spite of these efforts, however, it can be said that TEMM has not produced many substantial outcomes to cope with regional environmental problems. Although there has been the common belief that environmental cooperation between the three countries could have enormous effect not only on the region's environment but also on the whole globe's environmental future,

¹ For the history of TEMM, see <http://www.temm.org/>.

TEMM has not been an effective tool for regional environmental cooperation.

Furthermore, TEMM is not the only attempt in the region which has not demonstrated substantial progress in terms of regional environmental cooperation. There have been many, perhaps too many, efforts to accelerate regional environmental cooperation at various levels -- such as international or regional formal organizations, NGOs and civil society -- and at the inter-governmental level.² However, scholars have pointed out that environmental cooperation in East Asia, and especially in Northeast Asia, has been relatively weak and less institutionalized than originally expected, in spite of the huge number of environmental problems that call for cooperation.³

What could be the reasons for the weak and under-institutionalized regional environmental cooperation in Northeast Asia? In this paper, I shall attempt to answer this question by focusing on the domestic environmental governance structures of the three major countries in Northeast Asia—China, Japan, and South Korea. I argue that the three countries share similar and relatively top-down patterns of domestic environmental governance structure, which makes it relatively difficult to build up effective regional environmental cooperation mechanisms. Therefore, even though there have been many efforts at regional environmental cooperation, these efforts have largely failed to produce tangible outcomes that effectively address the regional environmental problems that they have targeted.

At the same time, however, this paper also raises the issue of the multi-level nature of regional cooperation. I point out that regional cooperation can happen at any level, such as at the inter-governmental level, civil society level, local governmental level, and even individual level, and that it might not be safe to say regional environmental

² The examples include Acid Deposition Monitoring Network in East Asia (EANET), the Northeast Asian Subregional Program of Environmental Cooperation (NEASPEC), and North Asia-Pacific Environmental Partnership (NAPEP).

³ For example, see Campbell (2005); Lee (2002).

cooperation in Northeast Asia has been weak and under-institutionalized at all these levels. I suggest that, given the top-down pattern of domestic environmental governance structure of the three major countries, local government level cooperation can be a possibility for effective environmental cooperation in the region. I illustrate a specific case of city-to-city (C2C) cooperation between Kitakyushu and Dalian and discuss the key factors that enabled the cooperation to be successful.

In the next section, I shall first discuss the notion of latecomer's advantage in international environmental politics. The similarity between the domestic environmental governance structures will be discussed in the context of latecomer's advantage in the third section. In the fourth section, the case of Kitakyushu-Dalian cooperation is briefly illustrated, and some policy implications for possible regional cooperation on climate change mitigation and adaptation will be explored in the conclusion.

Latecomer's Advantage in International Environmental Politics

Although there is much variation among countries in regards to the timing of their initiation of national environmental policy, the majority of countries reached a turning point during two periods—from the late 1960s to the early 1970s and from the late 1980s to the early 1990s—particularly in terms of major progress in key environmental legislation. In many countries—both advanced and developing—major environmental laws and regulations were set up and/or substantially revised during these two periods. There is no doubt that the two watershed events in international environmental politics—the United Nations Conference on Human Environment, convened in Stockholm in 1972, and the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992—provided great momentum during these periods. Focusing on these two turning points, if we divide the countries that have

achieved a certain level of environmental institutionalization into two broad categories, the first group will consist of the forerunners, i.e., most of the economically advanced countries who initiated their environmental policy during (or before) the first period, and the second group will be the environmental latecomers, consisting of many developing and middle income countries that began to set up their environmental institutions and undertake environmental policies seriously during the second period. The distinction, to a large extent, corresponds to the North-South divide in international environmental politics.

There are at least two major advantages from which latecomers can benefit in their environmental protection efforts.⁴ First, simply due to the time gap, they can copy, borrow, and learn from the early experiences of various countries in the area of environmental institution-building (setting up an environmental legislative framework, building organizations and agencies, and developing the appropriate policy instruments). Second, not only the time gap but also the timing matters. The diffusion process of environmental norms on a global scale accelerated in the 1990s as the number of international environmental conventions increased, a variety of governmental and non-governmental actors played a significant role, and environmental issues became growingly intertwined with issues of international economic relations. Thus, it has become crucial for the environmental latecomers to set up and/or strengthen their environmental policies when environmental issues have become one of the critical issues on a global scale.

More specifically, O'Connor demonstrates that environmental latecomers have at

⁴ The notion of the latecomer's advantage originated from Alexander Gerschenkron (1962), who argued that different periods exhibit different types of economic development. Thus, given the coexistence of advanced and backward countries, the latter can skip several stages of economic development that the former had to go through, by adopting new advanced technology. For an application of this notion to the environmental policy area, see David O'Conner (1994).

least three advantages. First, they can bypass transitional technological problems/solutions and immediately adopt the latest technologies in the form of clean process innovations. In addition, they can enjoy lower unit abatement costs than their predecessors, for they have their choice of second generation abatement technologies which, compared to the first, can be less costly, more effective, or both. Second, they can benefit from the research, development and learning-by-doing of the early countries and thereby compress the timeframe. Third, they can benefit from the reduced scientific uncertainty about the impact of certain pollutants on people's health and the environment (O'Conner 1994: 32-35).⁵

In fact, there can be no surprise that developing countries have benefited from making their policies later, and it is almost impossible to study the environmental institution-building process in developing countries, and even some advanced countries, without examining the influence that their predecessors have had on them. However, what has been somewhat overlooked is the other aspect of the latecomer's status. Environmental latecomers are very often latecomers in terms of economic development, and are strongly motivated to catch up with their predecessors and accelerate the pace of their economic development, which very often seriously constrains their environmental protection efforts. Unlike their predecessors, latecomers have set up and developed their environmental policy structures at a time when environmental protection has already become a critical global issue, and thus the need for sustainable development has become a tough challenge that is not easily reconciled with their strong urge to catch up

⁵ In this sense, the term "latecomer's advantage" used in this paper is more comprehensive and broader than "environmental leapfrogging", which focuses on the technological and specific policy benefits of developing countries. The term "latecomer's advantage" includes technological leapfrogging, but it also includes other aspects such as global environmental norm diffusion, institutional changes in the global scale, and international environmental interactions at various levels. However, as is in the case of technological leapfrogging, latecomer's advantage is multifaceted and dynamic: it might not necessarily bring benefits to developing countries, and the consequence is affected by various international as well as domestic factors. For environmental leapfrogging, see Perkins (2003); Soete (1985).

economically. Since latecomers are directly exposed to international economic competition, their motivation to catch up swiftly is relatively strong, and so is their sensitivity to gains and losses in their international economic activities vis-à-vis their competitors. Not surprisingly, the global drive for sustainable development is perceived as a tough obligation for them because it might delay the pace of their economic development.

Furthermore, latecomers often learn not only specific policies, technologies, and norms, but also some pitfalls and mistakes that their predecessors have produced or have been producing. They are very sensitive to what their predecessors have been doing in addressing environmental problems, and it frequently becomes a useful reference point for the latecomers. Thus, the behavior of their forerunners simply becomes a justification for their own behavior in domestic environmental policy as well as international environmental negotiations. Internationally, latecomers attempt to excuse their actions by pointing to what their predecessors did in the take-off stage of their economic development. Domestically, they tend to justify their actions vis-à-vis society by emphasizing that their forerunners did (and are doing) the same things. In sum, the latecomer's situation in global environmental politics is dynamic and multifaceted. It provides latecomers with both favorable and unfavorable conditions for creating an effective environmental policy, and the outcome of these conditions depends on how well they manage and utilize the advantages.

There are many structural conditions as well as contingencies that affect the way environmental latecomers manage this multifaceted situation in their process of environmental policy. A country's domestic political structure and institutions, state-society relations, patterns of economic development, cultural and historical legacy, as well as the international situations and the preferences and beliefs of individual

leaders—all these may affect how they utilize the environmental latecomer’s advantages. The domestic political structure, political institutions, and state-society relations of latecomers can facilitate or delay the environmental influence from their predecessors. For instance, authoritarian regimes often put constraints on the creation and development of green activism, like environmental NGOs. Party and electoral systems might facilitate or delay the creation and growth of a “Green Party”.

However, beyond these, many other factors play a significant role in determining the outcomes of the latecomer’s utilization of the advantages. Strategies of economic development, such as exported-oriented or import-substitution industrialization, and the degree of economic openness matter greatly because they often confine the range of utilizable advantages. Furthermore, sometimes bilateral and/or multilateral economic relations play an important role in determining the pattern of learning from other countries. For example, the environmental as well as the economic policy frameworks of the North American Free Trade Agreement (NAFTA) affected Mexico’s domestic environmental policy.⁶ In the case of China, its economic and environmental connections with Japan have significantly affected the pattern of its learning from foreign environmental policies, technologies, and know-how. In addition, historical legacies or cultural traditions sometimes affect the process of foreign learning. India’s cultural heritage of self-sufficiency,⁷ for example, combined with the late opening up of its economy, has limited India’s chance to utilize foreign business connections that can support government policy.

In brief, domestic political conditions are important, but they alone do not determine the outcome of environmental advantages. Latecomers attempt to maximize

⁶ For the environmental impact of NAFTA on Mexico, see Husted and Logsdon (1997); Logsdon and Husted (2000).

⁷ For the evolution of India’s environmental norms see Rigby (1997); Guha (1999).

their advantages and minimize the risk of conflict between their catch-up initiatives and their environmental protection policy based on the various conditions that they are confronted with.

A long term consequence of the attempt of latecomers to maximize their advantages and minimize risk is the specific pattern of their environmental politics, policy structures, and institutional designs, which have been developed in the learning and adopting process. Although latecomers usually do not have a specific national model in mind when they begin to build their policy and institutions, the patterns that emerge are shaped in such a way that they resemble certain national models exemplified by their predecessors. In other words, their patterns of environmental policy structure and institutions do not typically come only from their deliberation and intentions. Decision-makers may choose a specific target country to follow, but the results of their policies may change depending on the various conditions that their country faces, as illustrated above. Therefore, while latecomers can choose specific types of policies, institutional practices, and technologies, and while they can select and adopt national policies from which they can learn, choosing a specific model of environmental politics is a long term, more structural consequence of the dynamic process of learning and adopting that they go through.

Focusing on the three major mechanisms that affect government environmental policy most, the environmental policy structures of the latecomers can be categorized into three types, which are also found among advanced countries. The three mechanisms—environmental NGOs, Green Party, and business—are the engines of domestic environmental policy process in most countries today: they monitor as well as support government policies, share information with government, and stimulate various channels to obtain capital, technology and other resources from both inside and outside

the country.

Domestic Environmental Governance Structure—A Northeast Asian Model?

According to a recent, comprehensive comparative study of environmental politics in the United States, Germany, and Japan by Schreurs, each of these three countries primarily uses one of the three major mechanisms mentioned above—environmental NGOs which are dominant in the United States, the Green Party in Germany, and business in Japan. In the United States, there are large and highly professionalized environmental NGOs and well-financed environmental research institutions, and they compete with other groups in society to win the attention of policymakers in government and congress. In Japan, the environmental NGO community is weak, and the government agency has had to do its best to promote environmental policy change on its own, gaining support where it can from the international community, domestic groups, and at times from environmentally-minded politicians. In Germany, the growth of environmental groups was followed by the birth of the Green Party and its election to parliament. This has resulted in a direct voice for environmental interests in the political system.

As for the relationships among government, business, and environmental NGOs, they are different in the above three countries. Germany has developed the most consultative approach, for the environmental community, scientists, businesses, and government interact with each other, in part because of the presence of the Green Party in parliament. In Japan, there is much use of administrative guidance, which links the bureaucracy to industry, but there has been little involvement of environmental NGOs in this informal decision-making process. In the United States, decision-making is highly pluralistic and often quite confrontational when compared to Japan or Germany, in part

because of the greater propensity to rely on the courts (Schreurs 2002: 242-243).

Many, although not all, latecomers can fit into one of these three national models, based on the predominant mechanism in their domestic environmental policy (see table 1). India, for example, bears much resemblance to the US model in that it has strong domestic and international environmental NGO networks but very weak participation by businesses and the Green Party, and in that all the key actors in environmental policy heavily rely on the courts. In contrast, Russia and some Eastern European countries are following the German model. Although still weak in terms of the number of seats they have in parliaments, the Green Parties in Russia, Estonia, Latvia, Czech Republic, and Hungary are becoming major actors in their countries' environmental politics, even though most of these parties were founded in the late 1980s and early 1990s. As for China, it bears much resemblance to the Japanese model. Business, particularly foreign invested enterprise, plays a significant role, but citizen participation and the activities of environmental NGOs are very weak. South Korea's environmental governance structure is a sort of mixture between the US and Japanese models, but it might still be difficult to say that NGOs are the key actors in environmental politics in South Korea. On the other hand, business plays a relatively significant role in assisting government regulatory policies and sometimes establishing networks connecting business and community, business and local government, and so on. In sum, the dynamic process of learning and adopting foreign environmental practices has resulted in distinctive patterns of environmental policy structures in latecomers, which can be broadly categorized according to the three national models.⁸

In Northeast Asia, although the three major countries share similarities in terms of

⁸ For Latin American countries, see McDonald et al (1997); Blauert and Zadek (1998). For Eastern European countries, see Auer (2004).

environmental governance structure, China's case is especially similar to the Japanese model in two important ways: i) the critical role of business in the environmental policy process; ii) the limited number of environmental NGOs and green activism.

In Japan, while the government constrains opportunities for citizen participation and effectively impedes the institutionalization of environmental movements into a Western-style environmental NGO community, it opens various channels for government-industry cooperation in environmental policy. As Schreurs pointed out, the implementation success in Japan's environmental policy was possible due to government support of industry in the form of administrative guidance, research, and tax incentives. Particularly at the local level, building consensus among industries and local government authorities is an integral part of environmental policy implementation in Japan. The central government allows local governments to create extralegal agreements on pollution control with industries, and such agreements result in the creation of more stringent pollution control standards than exist at the national level (Schreurs 2002: 72). During the 1970s and 1980s, these agreements proliferated, and in the late 1990s more than 30,000 polluting facilities had negotiated agreements with local governments. These agreements include special emission limits, the use of the best available technologies, and mandatory reporting. Furthermore, in the 1990s, a number of additional environmental issues, such as vibration and noise, were also included. In fact, many agreements often go beyond environmental quality, setting liability rules in the case of environmental accidents or mandating emergency response plans (OECD 2002: 46-47).

Close ties and interaction between the government and industry in Japan have also evolved around key areas of research, pollution control technology, energy efficiency improvement, and the development of environmental industries. These have become a

critical part of the input from the private sector to the government in Japan's environmental protection. In addition, unilateral commitments by industry organizations, mostly taking the form of voluntary action programs, have become common since the mid 1990s. The remarkable speed of increases in the number of ISO 14001 certifications in Japan is one of the examples of these commitments. Another example is Responsible Care, implemented by the Japan Chemical Industry Association (JICA) in 1995. At any rate, some 150 industry associations had made such commitments on various environmental issues by 2000. Keidanren has taken the lead on these voluntary commitments. It established its Global Environment Charter in 1991, summarizing the environmental principles to be respected by its members. In 1997, it launched the Keidanren Voluntary Action Program on the Environment, integrating sectoral commitments by 37 industrial branches. By 1998, all major branches of industry had put in place their own voluntary action plan (OECD 2002: 49).

The strong ties between government and business are also a pivotal part of China's environmental protection efforts. The foreign invested enterprises (FIEs) in particular play key roles in making and implementing environmental policies, by introducing new ideas and information, bringing international standards and their own environmental management systems, transferring environmental technologies, and investing in China's environmental industries. Given China's limited political, economic, and social resources for environmental protection, FIE input is critical for the Chinese government to develop its environmental protection institutions and policies.

These ties and interactions between the government and business have materialized and become effective by means of channeling institutions, which are directly affiliated or connected in various ways with the State Environmental Protection Administration (SEPA), including research institutes, university departments, and

environmental centers that have specific functions. Such channeling institutes, like the Center for Environmentally Sound Technology Transfer (CESTT), the Environmental Resources Management (ERM) China, the China-Japan Friendship Center for Environmental Protection, and the China Council for International Cooperation on Environment and Development (CCICED), mediate the relationship between government environmental agencies and business by facilitating the adoption of environmentally sound technology; helping foreign firms to perform environmental practices effectively in China; providing environmental, health and safety consulting services to the governmental, industrial, manufacturing, agricultural, and international development sectors in China; and providing government with information, research results, and policy implications on key new policy instruments and projects. Moreover, the role of these channeling institutes is also indispensable at the local level.⁹

Another important similarity between China and Japan is the weak and limited activities of the environmental NGOs. In Japan, although victim protest and citizen activism played a significant role in the initial period of Japanese environmental policy, environmental NGOs subsequently failed to become fully institutionalized. To date, except for a few large-scale environmental NGOs such as the Wild Bird Society of Japan, the World Wide Fund for Nature Japan, and the Nature Conservation Society of Japan, most environmental NGOs in Japan are characterized by small, local, informally organized, and single-issue citizens' neighborhood communities. As a result, voices from citizens and environmental NGOs have been excluded to a large extent from the decision-making and implementation process of government policies.

One of the explanations on the causes of the fragmentation and political

⁹ The discussion on the importance of the government-business ties in China's environmental protection efforts in the above two paragraphs is based on Sangbum Shin. (2004).

marginalization of environmental NGOs in Japan is that the government made a preemptive response to pollution and civil activism. According to Upham, the decrease in environmental litigation in Japan after the peak period of the “big four cases” was due to the success of the government in alleviating pollution problems, which were the root causes of popular discontent (Upham 1987: 28-67). Indeed, the Japanese government was extremely successful in eliminating these causes, particularly in regards to the air pollution that was so obvious during the 1970s. In response to pressure from below, the Japanese government co-opted the movements’ agenda and took the initiative in the environmental policymaking process by convincing the citizens that the government had dealt with environmental issues very seriously.

However, this cooperation argument does not explain the weakness of environmental NGOs in Japan sufficiently because there are still many environmental problems unsolved in Japan that could be quickly turned into a movement agenda. A more persuasive explanation is the role of the Japanese government in controlling the resources available for environmental movements. According to Schreurs, most of the key resources for successful activities of environmental NGOs have been tightly controlled by the government in Japan. These resources include information, media coverage, financial donations, and institutional factors such as the tax system, government grants and contracts, and foundation support. In Japan, it is extremely difficult to gain tax exempt status for environmental NGOs. Environmental NGOs need to obtain approval from the competent authorities before they can obtain non-profit status, and this has proven a tremendous barrier of entry for national level environmental groups (Schreurs 1996). Furthermore, the Japanese government has limited channels for citizen participation in the key decision-making process in environmental policy, and citizen activities are focused on environmental education and

some voluntary actions at the neighborhood community level, such as recycling.¹⁰

In China, in spite of the recent growth of environmental NGOs, citizen complaints, and other forms of citizen environmentalism, participation in the environmental policy process is still extremely limited. As Ho (2001) pointed out, the government is, on the one hand, suspicious of the growth of environmental NGOs, because it might result in mass movements and conflicts that would add to the recent demonstrations caused by unemployment in certain local areas and the Falun Gong protest. On the other hand, the government does not (and cannot) entirely repress green activism because it is under increasing pressure to devolve certain government functions to society. Thus, “awareness of its own limitations has also led the central state to tolerate and even cautiously encourage citizens’ voluntary actions (Ho 2001, p. 915).”

In this context, the most central, and perhaps the only, utility that the Chinese government officially acknowledges on the part of environmental NGOs is that they raise public awareness of environmental issues and educate citizens. At the same time, however, it is also true that the business sector—particularly the FIEs—and foreign business connections significantly support the government, which needs additional help to facilitate effective policy implementation. As long as the government is able to utilize foreign resources intelligently, it might need less support from environmental NGOs and other forms of green activism.

This apparent trade-off between business and NGOs in China today might be temporary in the sense that, once the level of citizen awareness is increased, the environmental NGOs will get more power and influence in the future. On the other hand, current relations between businesses and NGOs might be consolidated, as in Japan, in the sense that the government’s preemptive strategy to co-opt key environmental

¹⁰ For this point, see Feinerman and Fujikura (1998).

agendas, if successful, can delay and weaken environmental NGO activities. Eventually, all of this will depend on various domestic and international factors that will shape the future of China's environmental policy. But at least to date, the government has received critical support from foreign business connections, which has reduced its cost of regulation significantly, while citizen participation has been considered to occupy a complimentary role by government environmental leadership until recently.

Presumably, one of the consequences of the institutional similarities between the three major Northeast Asian countries--especially between China and Japan--might be weak and under-institutionalized regional environmental cooperation. These two countries' influence on regional environmental cooperation is huge, although South Korea's role of mediation could also be important. The fact that in both countries the central government plays a significant role in their domestic environmental politics and civil participation is relatively weak can make it difficult to build a regional environmental cooperation mechanism, especially with civil society initiatives.

Of course, it can also be said that the US and German models do not necessarily provide favorable domestic conditions for regional environmental cooperation. However, they might have a better possibility of producing a certain amount of tangible outcome of cooperation, because a more diverse set of actors are involved in the cooperation activities in more diverse levels of cooperation. Therefore, at least one of the reasons for weak and less institutionalized regional environmental cooperation in Northeast Asia can be the fact that the domestic environmental governance structures of the major three countries is the so-called Japan model, in which government and business play a key role while civil society participation is relatively limited in the domestic environmental policy process.

At the same time, however, it does not mean that, in all levels of cooperation, the

regional environmental cooperation in the region is weak and under-institutionalized. Perhaps, if the central government is a dominant actor while civil participation is weak in the three major countries, then local government initiative could be a possibility for effective regional environmental cooperation in the region. In the next section, an example of local government level environmental cooperation shall be briefly discussed.

Local Government Initiative—A Possibility for Effective Regional Cooperation¹¹

Just as most of the regional environmental cooperation attempts in Northeast Asia at the central government level has failed to produce tangible outcomes of cooperation, successful local government level cooperation for environmental protection in the region is also relatively uncommon. In this sense, the case of city-to-city (C2C) environmental cooperation between Kitakyushu city, located in Fukuoka Prefecture of Japan, and Dalian city, located in Liaoning Province, China, is exceptional. Therefore, I do not argue that C2C cooperation is more effective than the central governmental level cooperation in Northeast Asia. Instead, in this paper, I shall suggest that given weak civil participation in the domestic environmental policy process in the region, C2C could be a strategy for regional environmental cooperation. In particular, it could be a policy alternative for developing regional strategies for mitigation and adaptation of climate change in the future.

Kitakyushu city and Dalian city effectively established well-institutionalized environmental cooperation activities such as plant diagnosis and research projects, environmental technology transfer, specialist exchanges, personnel training, and knowledge exchange between 1996 and 2000. This covered a variety of environmental

¹¹ This section based on my former research on the Kitakyushu-Dalian cooperation case. See Shin (2007).

issues, such as air and water pollution, solid waste, urban greening plans, natural protection areas, environmental monitoring, noise pollution, vehicular pollution, and establishment of environmental demonstration zones. Furthermore, this specific case of bilateral city level cooperation became a platform for establishing the “Kitakyushu Initiatives Network for a Clean Environment,” including more cities in Japan, China, and South Korea. The cooperation was planned, initiated, and managed by the two local governments, their respective environmental protection departments, and local semi-governmental organizations such as the Kitakyushu International Techno-Cooperative Association (KITA). Although the cooperative projects were made possible by the support from the Japanese Official Development Assistant (ODA), it was Kitakyushu city’s experience of addressing industrial pollutions during the 1960s and 1970s and the city government’s willingness to share and transfer its knowledge, know-how, and especially pollution control technologies to other cities in developing countries that drove the cooperation.

The success of C2C cooperation brought a lot of benefits to both sides. Kitakyushu city, and also Japan to a certain extent, was able to improve its international reputation for environmental performance and cooperation. Also, the cooperation brought the city more opportunities to promote environmental business, especially environmental technology transfer, by holding a series of exhibitions and business talks in Dalian and other Chinese cities. On the other hand, Dalian city has benefited more from the cooperation. It was one of the more heavily polluted cities in the northeastern part of China, but eventually became one of the cleanest cities in China, selected for the United Nations Environmental Program (UNEP) Global 500 award in 2001.

There are a lot of systematic as well as contingent factors that enabled this successful regional cooperation case, such as historical background and contingencies,

the timing gap of environmental policy implementation between the two countries, and asymmetric resources for environmental policy implementation such as capital and technologies. However, there are a couple of factors to be considered in terms of policy implications for further regional cooperation, especially at the C2C level.

First, in order to promote C2C environmental cooperation, a certain degree of decentralization of environmental policy in the involved countries is a precondition. In other words, the local governments should have a certain degree of autonomy in the environmental policy process. At the same time, however, this does not necessarily mean that the central government is of no importance in C2C cooperation. The central government sometimes promotes or constrains C2C cooperation. Therefore, the local government should carefully manage any possible central government factor effectively.

Second, the timing gap between the local governments in terms of initiating and developing environmental policy can be a facilitating factor for effective C2C environmental cooperation. Since Japan began to address its domestic environmental problems first and South Korea and China then followed, its interest in transferring its early experience to latecomers can be good motivation to trigger regional environmental cooperation. However, at the same time, as was mentioned in the second section, the latecomer's advantage in international environmental politics is multifaceted. The latecomers often learn some pitfalls and mistakes that their predecessors have produced or have been producing. Also, the predecessor-latecomer relationship between the cooperation parties shape the pattern of cooperation, as was exemplified in the above case—KITA, the local governments, and local business were involved in the cooperation, but not NGOs and civil actors.

Third, it should be noted that, although C2C cooperation might be an alternative in Northeast Asia due to the top-down pattern of the domestic environmental governance

structures of the major three countries, in the long-term perspective, all three countries should be able to reinforce better institutionalization of civil society participation in their domestic environmental policy process. It could be a part of a larger transformation of civil society in the three countries, and thus, might be a long-term process. However, if it happens, it can eventually change the pattern of regional environmental cooperation in Northeast Asia.

Conclusions

Climate change mitigation and adaptation as a national strategy is a complex and multi-layered process, in which a variety of different issues and problems are intertwined. If it is considered as a regional strategy, it could be more complex and more interdependent in nature. It is also true that regional strategy for climate change mitigation and adaptation is influenced by regional patterns of environmental cooperation (or non-cooperation). In this paper, I show that regional environmental cooperation in Northeast Asia has been relatively weak and less institutionalized, especially at the central government and civil society level, due to the top-down pattern of domestic environmental governance structures of the major countries in the region. I also show that local government level cooperation could be a possibility for making regional environmental cooperation effective, and specifically, promoting a regional strategy for climate change mitigation and adaptation.

As a microcosm of global environmental cooperation, C2C regional environmental cooperation contains a variety of different issues and problems, and involves different actors with different interests and expectations. However, at the least, it could be less difficult for actors to figure out the complex nature and interconnectedness of the problems in climate change mitigation and adaptation. Scaling

down global environmental problems into a manageable size and seeking a way to build effective cooperation can be a small but important step toward bigger cooperation. At this moment, as was discussed in the above sections, a possible C2C cooperation for coping with climate change in Northeast Asia could be led by local government or the business sector. Already, many action plans are being taken, especially in the cities of Japan and South Korea, in order to cope with climate change. The issue then is how to put these efforts together and later on, expand them to the national government level. Also important is that although currently civil society participation is relatively limited, in the future the region should definitely reinforce civil society initiatives in C2C cooperation.

Table 1. Three Models of Domestic Environmental Governance

	US Model	German Model	Japan Model
Dominant actors	Government Environmental NGOs	Government Green Party	Government Business
Relationships among key actors	Pluralistic, fragmented, and often confrontational	Consultative, well organized	Government centered, well organized but exclusive
Role of environmental NGOs and civil forces	Very Strong	Strong	Weak
Key characteristics	Active roles played by NGOs, interest groups and citizen participation	From movement to party, parliamentary debates on environment	Strong tie between government and business
Environmental latecomers	India, Latin American countries	Eastern European countries	China, South Korea, and East Asian countries

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