

# Japan's Asian Strategy: Japan's Asian Environmental Strategy and a Soft Power of the 21<sup>st</sup> Century

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## Abstract

This article examines Japan's Asian strategy from the perspective of the establishment of Asian environmental institutions. Generally speaking, "de jure integration and institutional integration" have been emphasized with regard to the European integration, while the Asian integration has been characterized by "de facto integration and functional integration". However, the time has come for Asia to consider institutional integration given the advance of both globalization and regionalization.

Japan's Asian environmental strategy started in the form of support for the development of East Asian countries' social environmental management capacity through bilateral environmental cooperation following an increase in environmental ODA that began in the latter half of the 1980s. That was in line with Japanese companies' advance into Asia, which was prompted by the yen's high appreciation triggered by the 1985 Plaza Accord. A typical example of Japanese environmental ODA is the Environmental Center Approach taken in Thailand, Indonesia and China. The Environmental Center Approach was intended to enhance environmental monitoring capacity in order to ensure environmental management in individual countries. Later, Japan's environmental cooperation expanded from bilateral cooperation to multilateral cooperation and led to the establishment of regional environmental institutions. A typical example of a regional environmental institution established under Japan's initiative is the Acid Deposition Monitoring Network in East Asia (EANET).

Japan started to pursue its Asian environmental strategy in earnest at a time when the global environment started to attract worldwide attention because of the 1992 Earth Summit. As a result, South Korea and the ASEAN also started efforts to establish regional institutions for environmental cooperation, posing competition to Japan's Asian environmental strategy. Japan itself failed to exercise initiative in establishing an epistemic community because of such domestic problems as vertically segmented administration. In addition, Japan was also unable to strategically determine the geographical scope — Northeast Asia, East Asia or the Asia-Pacific — of regional cooperation.

Consequently, regional environmental institutions in East Asia have the following three problems:

- (1) There are overlapping institutions, some of which are operated under Japan's initiative and others under the initiative of South Korea or other countries.
- (2) There are various similar institutions with different membership by regional scope, such as Northeast Asia, East Asia, Southeast Asia and the Asia Pacific region.

- (3) The management organizations of regional environmental institutions are weak both institutionally and financially.

Regional environmental governance in East Asia is expected to be support by two pillars — specialized environmental institutions and environmental institutions as part of frameworks for political cooperation intended to realize regional integration and create a regional community. However, unless there is an Asian strategy for utilizing both types of institutions in a coordinated manner, international transaction costs will grow, making it difficult to create a sustainable Asian society.

Key words: Environmental cooperation, environmental governance, regional institutions in Asia, Asian University Institute

JEL classification: Q58

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## **I. Introduction: Issues in Japan's Asian Environmental Strategy**

### *(1) Japan's Asian Strategy and Domestic Institutions*

This paper investigates Japan's Asian strategy from the viewpoint of building Asian environmental institutions. While “de jure integration” (institutional integration) is emphasized as an attribute of European regional integration, Asian regional integration has been characterized by “de facto integration” (functional integration). The formation of de facto “regional integration” and functional integration in East Asia has been narrated from the viewpoint of deepening economic interdependent relationships through trade, direct investment, and the like, and of developing multilayered, multifaceted networks in social relations including exchanges of people, information, and culture (Mori and Morikawa, 2006).

With regards to this functional integration, there is naturally much attention being garnered by progress in Asian economic integration resulting from free trade agreements (FTAs) and economic partnership agreements (EPAs), the Trans-Pacific Partnership (TPP) and the Regional Comprehensive Economic Partnership (RCEP), and the like, but behind such economic integration lie typical pollution problems in the form of air and water pollution resulting from rapid economic growth, transboundary air pollution problems in the form of yellow dust, acid rain, and PM 2.5, and global environmental problems in the form of the release of greenhouse gases such as carbon dioxide. The East Asian region, whether in the form of ASEAN (Association of Southeast Asian Nations) +3 (Japan, China, and South Korea), or ASEAN +6, which further includes India, Australia, and New Zealand, East Asia today is a Global Asia as the growth center of the world economy, as well as a Global Asia as the central region for worldwide pollution.

The continuation of developmentalism as a strong characteristic of the sociopolitical system of the Asian countries will eventually result in coming face-to-face with the limits of

environmental resources, not only in Asia, but also as a global society. The formation of a sustainable East Asian region is indispensable for the formation of a sustainable global society. To achieve this, the formation of a social environmental management ability in each Asian country and the promotion of effective environmental policies are essential, but in the Asian region, where Japan had long been the sole developed country, the formation of a social environmental management ability in the Asian countries had come to be seen as the result of bilateral environmental cooperation with Japan, which shifted into high gear from the mid-1980s (Matsuoka and Kuchiki, 2003).

Thereafter, from attention to regional environmental cooperation sparked by the Earth Summit (United Nations Conference on Environment and Development) held in Rio de Janeiro, Brazil, in 1992, Japan has also developed its Asian environmental strategy to the establishment of global environmental governance through a hub-and-spoke structure (multilateral) as an evolution of conventional bilateral relationships. Based on the environmental center approach (bilateral) in Thailand, Indonesia, China, and the like, as is introduced in this chapter, the formation of the Acid Deposition Monitoring Network in East Asia (EANET) proposed and led by Japan exemplifies the Asian environmental strategy of Japan.

However, the 1990s were also when South Korea, which has been achieving economic growth, set out to build a regional environmental cooperation institution centered on Northeast Asia, and ASEAN has come to make serious efforts in promoting regional environmental cooperation within the ASEAN region. Also, starting from the 21<sup>st</sup> century, China has risen economically and politically, and even while having severe environmental problems domestically, the country has embarked on the exportation of low-cost environmental technology to the countries of Asia as a package deal with Communist single-party ruled developmentalism. In this way, the primary state (and state federation) players in Asian environmental strategy in the first half of the 21<sup>st</sup> century are Japan, South Korea, China, and ASEAN.

Japan has been the “world’s best” environmentally advanced country through the anti-pollution technology (desulfurization technology and denitration technology for sulfur oxides (SO<sub>x</sub>) and nitrogen oxides (NO<sub>x</sub>) emitted from factories and thermal power plants, factory wastewater treatment technology, anti-automobile-exhaust technology, and the like) and experience of success in overcoming pollution from the latter half of the 1960s to the 1970s, as well as energy-conserving technology innovation that has progressed amidst overcoming the twin oil shocks of the 1970s. Japan was indeed an environmentally advanced country at the end of the 20<sup>th</sup> century, and can be said to have had a competitive advantage in the international market in social institutions, environmental policies, and environmental technology.

However, from the 21<sup>st</sup> century, Japan saw South Korea and China catching up, and the Western environmental businesses catching up and staging a comeback, and so Japan’s advantage in the international market for environmental technology and environmental business has been greatly shaken. For example, the value of exports of environment-related

goods from Japan to the world declined slightly from \$15.9 billion in 2004 to \$15.4 billion in 2009, whereas that from Germany during the same period skyrocketed (by a 1.7-fold increase) from \$15.7 billion to \$26.9 billion. Looking at the EU as a whole as well, the value of exports of environment-related goods during this period expanded 1.6-fold (*Asahi Shimbun*, October 1, 2010).

What are the causes for this stagnation and fallback of the Japanese environmental industry in the international market? Despite being called a country built upon environmental protection, are not the fundamental factors an unclear vision (national form) and a deficiency in strategy? If so, the factors behind the weak vision of the future and the lack of strategy must be looked into.

On this point, the chronic illness in the Japanese organization in the form of a weak top and a strong bottom (on-site location) was discussed in relation to WWII in the author's *The Failure of the Fukushima Nuclear Power Plant*, in which the Fukushima nuclear accident is analyzed from the standpoint of a social scientist (Matsuoka, 2012b). Organizational culture is strongly affected by historical and institutional path dependency, and is quite a deep-rooted problem. Taking into consideration such institutional path dependency, when considering the factors behind the deficiency in Japan's Asian environmental strategy, this chapter considers the domestic social institutions and the relationship between environmental policy and environmental technological innovation that are to support an outward environmental strategy in the future.

For example, consider the case of the relationship between environmental regulations and technological innovation with respect to automobiles in the 1970s (Nakamura, 2008). Starting in the latter half of the 1960s, the problem of air pollution including NOx pollution worsened in the major urban centers of developed countries, and in the US, civic activists such as Ralph Nader bitterly criticized the automobile industry. In response to this civic movement, the Muskie Act, which was a landmark law regulating automobile emissions, was established in 1970 in America. However, due to strong opposition from the automobile industry including the Big Three saying that there would be technical and economic difficulties in achieving the regulatory requirements, the Muskie Act was discarded in 1974.

However, the Japanese automobile industry seriously engaged in environmental innovation, and the Honda CVCC engine was developed in 1972, meeting the Muskie Act standards in 1976. Toyota and Nissan were extremely negative towards emissions regulation just as were the American Big Three. Nevertheless, due to the appearance of a new competitor through Honda's success, Toyota and Nissan were forced to proceed with emissions countermeasures. With these technological developments by major corporations as the jumping-off point, the Muskie Act standards were implemented in Japan starting in 1978 (in the Japanese version of the Muskie Act). This strengthening of environmental regulations by the Japanese Central Council for Environment Pollution Control in the 1970s, as well as the success in engaging in environmental innovation by the Japanese automobile industry in response to those regulations were major factors behind the technological wellspring for the competitive advantage of the Japanese automobile industry as it later took the global

automotive market by storm. The differences between Japan and the United States in environmental regulations towards automobile emissions and in the response by the automobile industry towards environmental regulations led to the subsequent rise of the Japanese automobile industry and the loss of ground by the American Big Three. The nature of environmental policy in society and the behavioral pattern by industries (corporations) as the subjects of regulation are major factors that determine the international competitive strength of those industries.

What subjective conditions and social conditions are necessary in the suitable operation of institutions and policies in order to resolutely follow through with anticipatory environmental policies? Furthermore, what are the subjective conditions and social conditions for achieving environmental innovation as a result of incurring regulations, and thereby enabling a corporate competitive advantage? The Porter Hypothesis addresses this. In 1991, the noted Harvard economist Michael E. Porter announced the theory that properly designed environmental policies (Porter envisioned a market means such as pollution surcharges or the creation of a market for trading emissions rights) would eliminate waste in corporations (cost offset) and promote environmental innovation (innovation offset), resulting in the relevant corporations having a competitive advantage (Porter, 1991). Thereafter, this idea became a powerful theoretical hypothesis in the study of environmental-economic policy as the Porter Hypothesis (Matsuoka, 2002).

The Porter Hypothesis notes the importance of creating competitive market conditions based on environmental policies, and depicts the process of environmental innovation resulting from such conditions of competition. However, environmental innovation in the 21<sup>st</sup> century has progressed further from the Porter Hypothesis, and in contrast to environmental innovation based on traditional environmental regulations, it is becoming a social norm for companies themselves to announce to society a target higher than the socially regulated levels based in law on the basis of initiative and creativity in the form of “corporate social responsibility (CSR),” and to aim to achieve that target. This is not governmental regulation, but rather there is a strong will to achieve higher environmental targets than those called for by the formal institution of law due to social pressure (informal institution) on civil society for an environmental vision and target values based on a company’s own initiative. The CSR activities of corporations lacking in a strong “will” become superficial, and do not connect to environmental innovation.

This paper pays particular attention to the relationship between domestic environmental policy and environmental innovation as described above when considering the problems of Japan’s Asian environmental strategy.

## *(2) The Fukushima Nuclear Accident and the Future of Japan and Asia: A Soft Power of the 21<sup>st</sup> Century*

There is another important point when considering Japan’s Asian strategy. This is the lesson of the Fukushima nuclear accident of March 11, 2011. It is extremely important that it

be determined what the lessons of the Fukushima nuclear accident are, and that Japanese society properly learns those lessons and takes advantage of them in the future. The greatest lesson from the accident is that if the handling of a major social problem is left to a closed community of a few power-holders and experts, an extraordinarily large social calamity will result (Matsuoka, 2012b). As long as the structural malady of Japanese society in the form of impotence at the top and brilliance on-site (at the bottom) is not fundamentally cured, Japanese society will return to its repeated world-history-level mistakes in the form of the 15 year war including the Pacific war, which began with the Mukden Incident in 1931, and the Fukushima nuclear accident in 2011.

A “Japan without a strategy” cannot sustain continued development amidst 21<sup>st</sup> century global competition or secure an honorable international position. The Fukushima nuclear accident, as an iconic incident of “Japan without a strategy,” caused many issues for Japanese society, but from the viewpoint of “forming a vision” and “formulating and implementing a strategy,” the greatest issue in the future will be strengthening outward soft power through a revolution in knowledge management (KM) in the form of knowledge production, knowledge sharing, and knowledge utilization in Japanese society.

The Fukushima nuclear accident of March 11, 2011, was a powerful shock to the author, who for many years has been an expert in environmental economics and Asian environmental cooperation studies. The author felt that the very nature of the academic field and the university that he has been involved with for so many years was called fundamentally into question. As someone who teaches at a university, he considered what would result from reconsidering everything using new, creative methods. These thoughts were sparked by a message to Japanese society by the American historian John Dower, known for his work *Embracing Defeat*, delivered a month and a half following the Great East Japan Earthquake and the Fukushima accident.

“Although true in the life of an individual as well, in the history of a country or society, sudden accidents and disasters are moments when something important is realized. The space arises in which it is possible to re-think everything using new, creative methods. Historical moments such as the Great Kanto Earthquake and the defeat in WWII opened up this kind of space. And now, this has happened again. However, if one dilly-dallies, the space eventually closes up. There are probably powers that would attempt to control the space in order to protect vested interests. Although I do not know what the result will be, I would like for this to be properly understood as a historical juncture.” (Interview, “Beyond the Historical Crisis,” *Asahi Shimbun*, April 29, 2011)

In John Dower’s message, the “space in which it is possible to re-think everything using new, creative methods” is an intellectual space in which innovation of the social system is possible, and signifies revolutionizing social knowledge and soft power.

When discussing “Japan’s Asian strategy” from the viewpoint of the design of environmental systems, this chapter deals with the formation of Asian environmental

governance and the role of Japan, while at the same time focusing on Japanese environmental policies and the environmental technologies that support them. At that time, not only are the development of environmental cooperation institutions in the Asian region and the role that Japanese environmental policies and environmental technology have played discussed, but the nature of knowledge in a society that is determining the design of such regional cooperation institutions as well as the nature of soft power in terms of academics, art, and culture are debated.

Previous studies regarding regional integration theory and environmental cooperation theory conducted by Peter Haas and the like have emphasized the importance of forming a trans-national epistemic community where scientific findings by scientists/experts are shared. In recent years, the importance of including not only natural scientists and academic experts as members of the epistemic community, but also highly expert NGOs, civil society organizations (CSOs), and the like, has been discussed. This also agrees with the argument of going from a humanities-science fusion theory (interdisciplinary: the fusion of humanities knowledge with scientific knowledge) in academic research towards the creation of “integrated knowledge” resulting from humanities-science social cooperation (transdisciplinary: not only a humanities-science fusion, but also practical knowledge through cooperation between scientists/experts and civil society).

When debating “Japan’s Asian strategy” at the point in time of 2013 in the 21<sup>st</sup> century, it is thought that what is most called for is to clarify such a vision, and form an intellectual platform that is a way of being for “comprehensive knowledge” for designing a strategy and is for society to create “comprehensive knowledge.”

The outline of this paper is as follows:

- I. Introduction: Issues in Japan’s Asian environmental strategy
- II. Global Asia and Asian regional integration
- III. A viewpoint of the formation of institutions for Asian regional cooperation
- IV. Asian regional integration and European regional integration
- V. Regional governance and environmental governance
- VI. The formation and development of institutions for regional environmental cooperation in Asia
- VII. Japan’s Asian environmental strategy and Asian environmental governance
- VIII. Conclusion: Japan’s Asian strategy and an intellectual platform

## **II. Global Asia and Asian regional integration**

Since 1970, and particularly since the appreciation of the yen resulting from the 1985 Plaza Accords sparked the advancement of Japanese corporations into East Asia and globalization progressed, the East Asian region has been achieving economic growth dubbed the “East Asian miracle” (World Bank, 1993). Asia had long been called “stagnant Asia,” but now became “growing Asia,” becoming the growth center of the world (Watanabe, 1985).

The economic growth of East Asia has not been limited to just material and quantitative growth, but has been bringing about rapid changes in societal structure such as urbanization, the rise of the middle class, the popularization of higher education, a reduced birthrate, and an aging population, and has been effecting a dramatic transformation from a “rural Asia” to an “urban Asia.” However, the “growing Asia” and “urban Asia” have been simultaneously exacerbating environmental problems such as the destruction of the natural environment, air pollution, water pollution, and waste problems accompanying the rapid economic development in the Asian region, and so Asia has become the world’s largest greenhouse gas emitting region. Whether in the “positive aspect” of economic development or the “negative aspect” of environmental problems, Asia has literally become Global Asia.

Today, to know Asia is to know the world, and solving the problems of Asia is connected to effectively solving global problems. One effective method for resolving various problems faced by Asia is in the form of regional cooperation and regional integration (Matsuoka and Katsumata, 2011). This chapter stands on the value premise that effective Asian regional cooperation and regional integration are possible, and is based on the presumption that regionalization proceeds simultaneously within globalization, and regionalism promoting regional cooperation and regional integration also evolves simultaneously. Furthermore, this chapter is a study having a strong policy bent with regards to how Asian regional institutions should be designed to effectively handle regional issues such as the various economic issues, social issues, and security issues in Asia, and what is asked of Japan’s role in it.

However, there are diverse definitions and means for the words “regional integration,” and particularly among sociologists and the like, there are many who have discomfort or an unfavorable image towards the term “integration.” Also, in the Asian region, there is also the idea by powerful Asian economists that regional integration should be a policy objective aiming towards political integration like that in Europe (Watanabe, 2008). Nevertheless, even scholars who make such assertions are in favor of the promotion of Asian economic integration by concluding FTAs and EPAs. Asian regional integration in this chapter is used in a flexible sense of “the formation of an integrated space for Asia as the result of a collection of a variety of regional cooperation institutions in the region.”

The geographic/spatial range of the Asian region is also an important point of debate, but this chapter considers the East Asian region (the region centered on the ASEAN+3) as the core (nuclear region), while understanding the Asian region as an ambiguous and multi-layered space encompassing the range of the ASEAN+6, which includes Oceania (Australia and New Zealand) and South Asia (India and the like), and furthermore the Asia Pacific (ASEAN+6+2 [EAS], APEC) including the US and Russia.

### **III. A Viewpoint of the Formation of Institutions for Asian Regional Cooperation**

When focusing on environmental institutions in discussing Japan’s Asian strategy, the question naturally arises of why the various regional cooperation institutions in Asia are discussed. The response is that there is an institutional theoretical interest in the problems of

what mechanisms have formed the various regional cooperation institutions, and in what way development and stagnation have occurred (Matsuoka and Katsumata, 2011). The traditional institutional theoretical approach emphasized path dependency in institutional development, and there were many studies focusing on the difficulty in changing institutions once they were completed (rigidity and inertia), and the concept of lock-in.

However, institutional theory in recent years has come to have a stronger interest in the mechanisms of institutional change and institutional development (Mahoney and Thelen, 2010). Here, there are studies focusing on the nature (governance) of multi-actors in the roles and relations of states/governments, corporations, and civil society, and on the multi-level structure of the relationship between global institutions and regional institutions (including sub-regional institutions) and the relationship between regional institutions and state institutions (Watanabe and Tsuchiyama, 2001; Kanno and Sawai, 2004; Endo, 2008a; and Yamamoto, 2008).

In these studies, the occurrence of interactions and friction between various institutions amidst a variety of actors and a multi-level structure is garnering attention as an important mechanism for institutional change. In particular, the inter-disciplinary relationship between political institutions and economic institutions is an important point, and in this chapter as well, when discussing Japan's Asian environmental strategy, the spotlight is not only put on the environmental field in the form of the formation of various regional environmental cooperation institutions, but it is considered desirable to pay sufficient attention to the inter-relation between political cooperation institutions such as ASEAN+3, economic cooperation institutions such as FTAs and EPAs, and environmental institutions.

#### **IV. Asian Regional Integration and European Regional Integration**

In the changes in regional institutions amidst globalization, another important perspective is the phenomenon known as the "standardization of institutions." In "institutional imitation," European integration becomes a regional institution model imitated by other regional institutions, and the European Union (EU) itself is actually causing European regional integration to become a societal norm as a standard regional model that is spreading through the world as a sociopolitical model. As a result of the financial/economic crises in Europe, significant doubts have been cast on European regional integration as a model, but including the awarding of the 2012 Nobel Peace Prize to the EU. There is a very strong zeal in pursuing the universality of the European regional integration model of the EU and spreading it worldwide.

In contrast to European regional integration, which has promoted *de jure* integration and rules by laws through the formation of formal institutions, East Asia is said to have promoted *de facto* integration through the formation of informal institutions. Also, there are great differences between Europe with its "closed regionalism" that strictly selects member countries, and the East Asian region, which is based on "open regionalism" that includes many members under relatively loose conditions. However, for the Asian region to form

effective regional cooperation institutions, there is naturally much to be learned from the experience of European regional integration, and it is an undeniable truth that European regional integration serves as a tremendous reference point (Endo, 2008b).

However, East Asian regional integration, which differs greatly in historical context and social context from Europe, is tracing a different path from European regional integration, and by contrast to the rigid regional integration institutions of Europe, Asian regional integration is materializing as loose, flexible regional cooperation institutions in a variety of areas. Nevertheless, the Asian regional cooperation institutions certainly cannot be said to be sufficient for effectively resolving regional problems. What is being called into question is how the countries of Asia will cooperate to orient towards problem-solving based on “regional interest” rather than being stubborn about “national interest,” how they will achieve a sustainable Asia, and furthermore how Asia can contribute to realizing a sustainable global society. Also, in the process, how Japan can be actively involved and make a contribution is being asked.

## **V. Regional Governance and Environmental Governance**

### *(1) Governance, Institutions, and Regimes*

The keywords for this paper are region, environment, and government. Here, the concepts behind these keywords will be organized in order to develop the argument surrounding them.

Governance has many definitions, but in this chapter it is understood that “governance is the nature of societal rule on a variety of spatial levels by means of various actors such as the government, corporations, civil society, and the like.” Focusing on these actors, the actors of governance are not only the conventional state or government, but rather it is notable that there is a diverse, multi-faceted actor structure and function including corporations and civil society. Also, turning to the spatial levels of governance, a multi-layered structure and function of local, national, regional, and global can be seen.

Institution and regime are also terms pertaining to governance (Yamamoto, 2008). In this paper, institutions are defined as “social mechanisms that restrain and regulate the actions of actors.” Institutions include those that are formal, such as the law, and those that are informal, such as social norms and culture (North, 1990). Of course, formal institutions have higher effectiveness, but in order to maintain them, there is the cost of monitoring whether the laws are being upheld, and the cost of implementing sanctions in a step-wise manner when there has been a violation of the laws. Consequently, if an attempt is made to run a society with only formal institutions, massive transaction costs would be incurred, and a suffocating society such as a police state would result. For a society to run efficiently and effectively, it is important for not only formal institutions, but also informal institutions to be skillfully utilized.

There are many definitions for “regime,” but for example, Young defines it as “a system of rule intended to handle a more limited problem group or a single problem region” (Young,

1994). Problems are recognized as being international problems, international exchanges are promoted between actors, and these exchanges result in a treaty, accord, or international agreement as the building block for a regime, thus leading to the formation of that regime (Mitchell, 2010). Consequently, a regime is a subsystem of a governance system, and is characterized by being related to a specific problem region. In this sense, “regimes are also mechanisms that restrain the actions of actors,” and have a similar definition to institutions, but in the social sciences, when emphasizing the formal aspect and social mechanisms of governance, the term “regime” is often used.

From the above, “institutions” exist as the broadest concept, and the idea of governance arises when focusing on the nature of societal rule. Governance is not necessarily formed from formal institutions in every case, but rather there is a type of governance that depends on informal institutions such as culture and social customs. Within this governance, the comparatively formal subsystems are called regimes.

Of course, the definition and method of use for governance, institutions, and regimes differ by scholar to a greater or lesser extent, and so the definitions herein should be understood as just one example thereof, but nevertheless the definitions here are explicit.

Based on the above, this paper discusses governance based on institutional theory, and also considers regimes as necessary.

Additionally, as a related phrase, the term “social capital” is often used in the social sciences today, but this refers to the bonds and relationships of trust from person to person formed through history. If a company has abundant social capital due to its degree of accumulation of social capital, this signifies that the company has strong social connections, and low transaction costs. Social capital is garnering attention as one factor determining the avoidance of the giant tsunami generated by the Great East Japan Earthquake of March 11, 2011, and the speed of the subsequent recovery. However, the old communities based on connections by land or by blood also have a tremendous accumulation of social capital, and at the same time are strongly exclusionary and so do not uniformly have positive aspects. In either case, in creating norms for human behavior in this way, social capital can be said to be an informal institution.

## *(2) Regional Governance and Environmental Governance*

As stated by Young, there is a diversity of positions and locations for governance depending on the nature of an environmental problem, and certain environmental problems are too large for a local (regional) response and too small for a national (country) one, so the concept of a region becomes important (the mindset and approach of Japan’s metropolitan areas and regional system are close to this) (Young, 2002, p. 11). Also, other environmental problems are too large for a national response and too small for a global action, so a regional approach becomes notable.

From the above mode of thought, there is domestic regionalism as well as international regionalism. The regionalism and economic region approach of British Fabian Society

member G.D.H. Cole is an example of the former (Tsuji, 1965). The mode of thought and approach of the EU and the East Asian Community are examples of the latter. Domestic regionalism is predicated on national sovereignty, and so it frequently has a strong separatist bent as seen in the Basque region and Catalonia in Spain. Conversely, international regionalism is predicated on an anarchic international society without a single sovereign, and so political unions as in the formation of supranational functions resulting from limitations on national sovereignty such as in the EU are frequently noticed. In either case, regional governance, based on the formation of these sorts of regions (regionalization) and regional problems, is the nature of regional rule (regionalism) by a variety of actors. In this chapter, international regional governance is the subject.

Also, environmental governance is the nature of governance by a variety of actors in response to environmental problems. Environmental problems, exemplified by the problem of pollution, are to begin with based on externality and space, and have had the structure where corporations are the polluters, the citizenry are the victims, social pressure such as through civic movements, acts on governments, and the strengthening of pollution regulations proceeds. This signifies a structure such that citizen participation in the policy-making process in response to environmental problems and a partnership between corporations and governments are formed easily, and the problems can be said to have been conducive to a mode of thought and an approach in terms of governance instead of government. As a result, environmental governance studies can, among various governance theories, be said to have played a leading role, and has achieved a unique evolution.

Asian regional environmental governance as the subject of this paper as discussed above on the one hand enriches regional governance theory through the perspective of environmental governance, and intends to propel Asian regional integration studies and regional cooperation studies through the accumulation of research regarding environmental governance.

On the other hand, there is also the intention of enriching traditional environmental governance studies from the perspective of regions, in other words the regionalization of environmental governance studies. The regionalist approach to environmental problems (environmental regionalism) in international society was formed together with heightened international interest in environmental problems, and in particular it can be said that the 1972 Stockholm Conference on the Human Environment, the first environmental summit held by the UN, was a major launch point (Elliot & Breslin, 2011, p. 6). In this sense, environmental regionalism has been called a post-Stockholm phenomenon. The United Nations Environment Programme (UNEP), which was one of the successes of the Stockholm Conference, developed diverse environmental regionalist approaches such as the Regional Sea Plan (the Med Plan; Mediterranean Action Plan) is the most famous, but the Northwest Pacific Action Plan (NOWPAP) in Northeast Asia was another component).

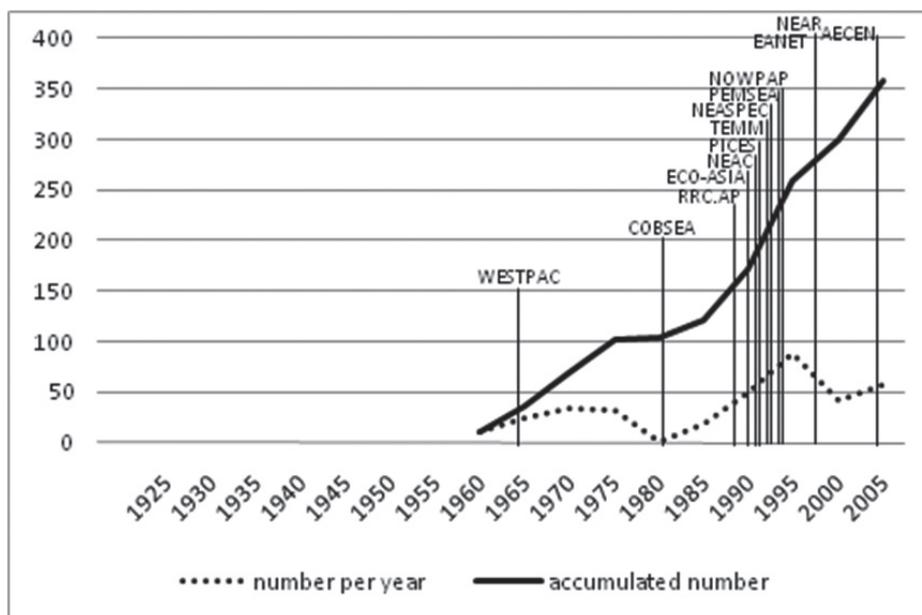
This paper examines the interaction of environmental governance theory and regionalism with the subject being the East Asian region from the viewpoint of Japan's Asian environmental strategy, and intends a new development in environmental governance studies and regional cooperation institution studies (Elliot and Breslin, 2011).

## **VI. The Formation and Development of Institutions for Regional Environmental Cooperation in Asia**

### *(1) The Positioning of the Problem*

First, the positioning of the problem should be confirmed. Figure 1 indicates the state of participation by the East Asian countries (the subjects being Japan, South Korea, China, and Russia; the dotted line indicates the number of signatories per year, and the solid line indicates the accumulated number of countries) in international environmental treaties, and the year of formation of regional environmental institutions. Regarding the state of participation of the East Asian countries in international environmental treaties, the ratification of natural conservation (green) international environmental treaties such as the Washington Convention (CITES, adopted in 1973, went into effect in 1975, and joined by Japan in 1980) and the Ramsar Convention (adopted in 1971, went into effect in 1975, and joined by Japan in 1980) in the 1970s given momentum by the 1972 United Nations Conference on the Human Environment in Stockholm formed one peak, and thereafter, participation in international environmental treaties responding to global environmental problems, such as the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil, in 1992, formed another large peak.

Figure 1. The state of participation by East Asian countries in international environmental treaties, and the formation of regional environmental institutions



Notes: 1. The East Asian countries here are Japan, South Korea, China, Mongolia, and Russia.

2. The broken line indicates the number of members (that have signed, ratified, or the like) of international environmental treaties each year starting in 1960 among the East Asian countries. The solid line indicates the cumulative number of members of international environmental treaties following 1960 among the East Asian countries. The key for the abbreviations is as follows:

Sub-Commission for the Western Pacific	WESTPAC
Northwest Pacific Action Plan	NOWPAP
Coordinating Body on the Sea of East Asia	COBSEA
Partnerships in Environmental management for the Seas of East Asia	PEMSEA
North Pacific Marine Science Organization	PICES
Acid Deposition Monitoring Network in East Asia	EANET
Northeast Asian Subregional Program for Environmental Cooperation	NEASPEC
Northeast Asian Conference on Environmental Cooperation	NEAC
Tripartite Environment Ministers Meeting	TEMM
Asian Environmental Compliance and Enforcement Network	AECEN
The Environment congress for Asia and the Pacific	ECO-ASIA
Association of North East Asia Regional Governments-Environment Subcommittee	NEAR
Economic and Social Commission for Asia and the Pacific-Ministerial conference on Environment and Development	ESCAP
Regional Resource Center for Asia and the Pacific	RRC AP

Source: Lee, Alice Park (2010), "Development Path of Asian Regional Environmental Institutions", Mimeo

Another point that should be noted is the fact that regional environmental institutions representing the East Asian region in the form of the Acid Deposition Monitoring Network in East Asia (EANET, 13 members, proposed by the Japanese Environmental Agency in 1993, first expert meeting in 1993, monitoring network test run in 1997, First Session of the Intergovernmental Meeting [IG1] in 1998, full scale startup in 2001) and the Northwest Pacific Action Plan (NOWPAP, 5 members, founded in 1989, plan adopted at the 1994 Intergovernmental Meeting) were formed from the latter half of the 1980s to the 1990s. Considering that the LRTAP (1979 treaty) and the Med Plan (Mediterranean Action Plan, 1976), which are regional environmental treaties dealing with similar environmental problems in Europe and are often contrasted with the EANET and NOWPAP, were formed in the 1970s, it can be considered that Europe proceeded with forming regional environmental institutions amidst the first rise of international environmental problems in the 1970s, while East Asia proceeded with forming regional environmental institutions against the backdrop of the transmission of societal norms relating to regional environmental cooperation and the heightening interest by international society in global environmental problems in the 1990s.

In the debate over the characteristics of Asian regional environmental institutions, the “viewpoint of comparison” with other regions is an unavoidable fact, and during that debate the comparison with the European region is an important point of discussion. In this report, it is desired that the mechanisms of evolution of the East Asian region itself and the conditions for those mechanisms be considered without falling into a simple typing in the form of “the advanced European region and the lagging Asian region,” but the positioning of the problems seen in comparison with Europe will for now be reviewed.

One is the position in history in which the regional environmental institutions discussed above were formed. For Europe this was the 1970s, but for East Asia, these formed primarily in the 1990s. To understand this nearly 20-year difference, the greatest factor is the fact that the economic growth in East Asia itself accelerated from the 1980s to the 1990s (World Bank, 1993), and environmental degradation and pollution problems became more severe. In East Asia in the 1970s, only Japan had severe pollution problems as an advanced country, and this was when solutions for combating pollution finally began to be seen. The other Asian countries were at the stage where an export-oriented industrialization strategy gradually strengthened, and awareness of environmental problems as issues common to the region was scarce. With this background of the progress of industrialization and amidst the response to global environmental problems in the 1990s, it is also important that there was an increasingly widespread awareness of the importance of responding communally to environmental problems common to the region. The great flow of globalization in the 1990s in the form of economic globalization and the globalization in environmental awareness can be thought to have promoted the formation of regional environmental institutions in East Asia.

However, the European regional environmental institutions formed in the 1970s and the East Asian regional environmental institutions formed in the 1990s are not only different in historical timing, but it is also noted that there are a number of significant differences in the character of those institutions as well. The European LRTAP (Convention on Long-range

Trans-boundary Air Pollution) and the Med Plan are institutions having legal binding force based on international treaties (“formal institutions” when described in the style of Douglass North), whereas while the East Asian EANET and NOWPAP do involve intergovernmental agreements, these have not been put into the form of an international treaty with legal binding force, and so are instead loose institutions (informal institutions). The informality widely shared in East Asian regional institutions is a second characteristic, and how to place and theorize these informal institutions from the perspective of the formation and development of regional environmental institutions is a major issue.

Relating to this informality of the East Asian regional environmental institutions, the “effectiveness of the institutions” naturally becomes an issue. LRTAP (including the related Helsinki Protocol) and the Mediterranean Action Plan include policy coordination for actual pollution reductions, and so they have an institutional “effect” in the form of a visible contribution towards resolving real-life regional environmental problems (although there are recent quantitative studies that repudiate such an effect), whereas the EANET and NOWPAP in East Asia primarily aim to monitor and exchange information and do not have the direct goal of cooperating and coordinating environmental policy in each country in order to reduce pollution. As a result, the funds and head offices for running institutions are meager, and it is often doubted that there is an “effect” towards actually resolving environmental problems in the region. How to understand this low and weak effect by East Asian regional environmental institutions is also a major point of debate.

Next, the manner in which these points of debate have been discussed traditionally will be elucidated while touching on a number of representative prior studies.

## *(2) The “Weakness” of East Asian Regional Environmental Governance*

Important prior studies debating regional environmental governance in Asia are: Chung (1999), who discusses the contrasts between the Mediterranean Action Plan and NOWPAP (Northwest Pacific Action Plan), Kim (2007), who discusses a comparison between LATAP and EANET, and Takahashi (2002), who discusses the acid rain problem in Northeast Asia.

As factors behind the success of the Mediterranean Action Plan from an international relations perspective, Chung (1999) analyzes that the political, economic, and intellectual leadership of France, which was a regionally hegemonic country during the initial period of institution formation, the role of the United Nations Environment Programme (UNEP) in the increased momentum by the institution subsequently, and in particular the role played by the formation of a regional epistemic community by UNEP were significant. Additionally, Chung argues that it would be difficult to ask that the East Asian region have the conditions and factors behind the success of the Mediterranean Action Plan, and that the model of that plan cannot be applied to the East Asian region.

Chung’s method for analyzing regional environmental institutions with the Mediterranean Action Plan as the specific case placed importance on leadership in institutional formation played by dominant countries based on a realist approach during the period of formation.

Also, during the institutional development period, Chung places importance based on a constructivist approach on the production of knowledge and the sharing of knowledge in the form of the presence of the UN and UNEP, which were able to act neutrally, the formation of a trans-national collection of experts (epistemic community) including scientists led by UNEP, the formation of scientific shared knowledge regarding the resulting environmental problems, and the effect of the scientific shared knowledge on policy makers.

A study by Chung regarding NOWPAP places importance on initiative by a hegemonic state in the period of institution formation, and as a result, considers that leadership of the sort exhibited by France could not be exerted by China (due to a lack of environmental policy and scientific knowledge), Japan (due to the history problem and the lack of political initiative) or South Korea (due to a lack of political/economic influence) in East Asia. However, there are regional environmental cooperation institutions in East Asia that were formed under Japanese leadership, namely the Acid Deposition Monitoring Network in East Asia (EANET).

Kim (2007) analyzes the problems of the formation and development of regional environmental institutions such as the EANET, which is for handling cross-border air pollution problems in Northeast Asia such as acid rain, from the viewpoint of the costs and benefits of participating in international environmental policy based on a liberalist, functionalist approach (Kim calls this an interest-based approach) of recognizing and determining countermeasure costs and the uncertainty in environmental problems, and a constructivist approach placing importance on the community of scientists and experts (epistemic community) forming the scientific knowledge that supports policymaking.

Kim poses the problem that while it is conceivable that the same type of cross-border air pollution problems exist in East Asia as in Europe, East Asia does not have an effective regional environmental institution comparable to the European Convention on Long-Range Transboundary Air Pollution (LRTAP). Kim notes, as a domestic factor in each country for the lack of effective progress in the formation of East Asian regional environmental institutions, the uncertainty of environmental problems or, in other words, the “benefits” from taking effective countermeasures are uncertain, while the costs necessary for those countermeasures are conceivably large. Although not explicitly stated by Kim, basically, in the developing countries with dramatic social changes due to rapid economic growth as in East Asia, the social discount rate is high (generally speaking, it is common for roughly a 3% discount rate to be used for advanced countries, and at least a 10% rate to be used for developing countries), and so there is a tendency to evaluate the current value of benefits obtained over the long term at a low level by contrast to a large current value of the costs necessary in the short term. Also, it must be said that in the running of a “developmentalist state,” the motivation behind promoting environmental policies having such a small cost-benefit ratio is low.

However, the relationship of a large short-term cost and a small long-term benefit would change due to a deepening scientific recognition of the relevant environmental problems and the accumulation of expert knowledge regarding environmental policy, and in this sense, the role that should be played by the formation of an epistemic community, which is Kim’s second approach, is large. In particular, Kim’s evaluation is that even while paying attention

to Japan's leading role, this role is ultimately "active but subdued" (active but lacking in vision or strategy), and is a drag on pressing forward with institutional formation and development. Furthermore, in the formation of a trans-national epistemic community, it is noted that the nature of vertically segmented research dependent on the Japanese ministries and agencies decisively obstructed the formation of common knowledge. Specifically, it is noted that although the acid rain research of the National Institute of Environmental Studies under the Ministry of the Environment and the acid rain research of the Central Research Institute of Electric Power Industry under the Ministry of Economy, Trade and Industry were conducted at a large scale at around the same time, there was almost no mutual organic exchange of research, and there was no contribution to the formation of shared scientific knowledge.

When considering the formation of a knowledge platform in East Asia, what Kim points out is extremely important. Japan, which has previously been in a position to lead the formation of an epistemic community, was not able to concentrate domestic intellect because of the vertical segmentation and divided state of knowledge due to academic cliques and the ministries and agencies domestically were not able to clarify an outward vision, and ended with action lacking in strategy.

This very situation exemplifies why there is and inevitably has been a "Japan without a strategy." This has been much discussed regarding the nature of Japan's science and technology policy and Council for Science and Technology Policy, and has been similarly debated with regards to the Fukushima nuclear accident. In short, there is a lack of a "quarterback," a dispersion in resources, and sequential inputs of strength. As a result, a clear vision for a future society is not formed, and there ends up being a narrow, myopic response with the vision and strategy remaining nebulous.

Additionally, Takahashi (2002), who discusses a regional environmental institution pertaining to the acid rain problem in East Asia, notes the following three points: (1) With respect to the same environmental problem, there are "parallel institutions" in that Japan has groups that take the initiative, South Korea has groups that take the initiative, and the like. (2) There is a "multilayer structure and different members" in the form of Northeast Asia, East Asia, Southeast Asia, the Asia-Pacific, and the like. (3) The majority of organizations running regional institutions have "weak institutional/financial structure."

The prior research including Chung (1999), Kim (2007), and Takahashi (2002) as discussed above have differences in expression to some extent, but they note the lack of Japanese leadership, and the weak initiative towards the formation of an epistemic community that Japan should achieve beneath the surface in the future. In other words, the very weakness of Japan's Asian environmental strategy is a large factor behind the "weakness" of East Asian regional environmental institutions.

In the next section, specific developments and issues regarding Japan's Asian environmental strategy are considered while paying attention to Japanese environmental ODA.

## VII. Japan's Asian Environmental Strategy and Asian Environmental Governance

### *(1) Japan's Environmental ODA and the Environmental Center Approach*

A major means within Japan's Asian environmental strategy has been environmental ODA. Japan has supported the formation of a social/environmental management ability in Asian developing countries such as Southeast Asia and China through bilateral environmental ODA, and has arranged regional public goods such as environmental centers for environmental monitoring. Based on the arrangement of regional public goods in East Asia and the formation of a social environmental management ability in each country, Japan has moved from bilaterally to multilaterally building regional environmental institutions. This Japanese environmental ODA has been supported by Japan's experience of overcoming pollution and its high level of environmental technology. In this section, the deployment and problems of Japan's Asian environmental strategy are discussed while confirming the deployment of Japan's environmental ODA.

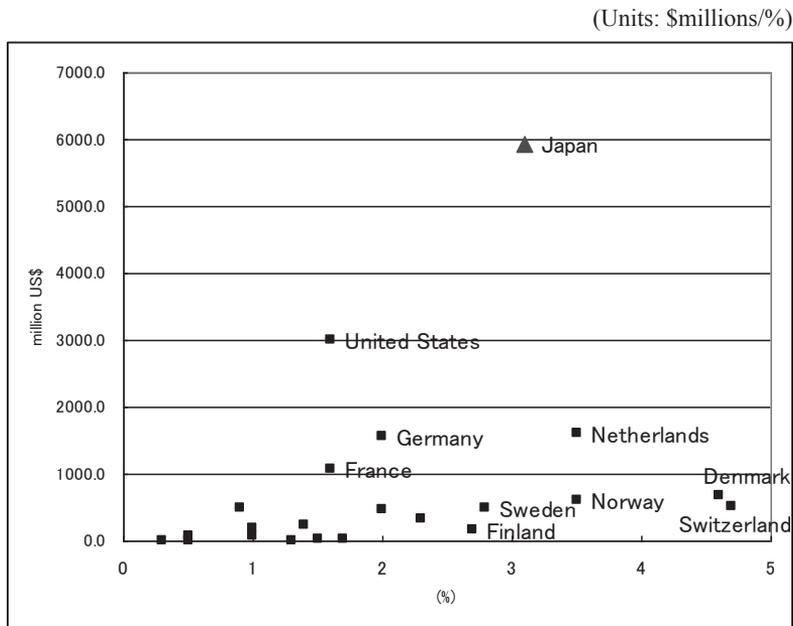
The history of Japan's granting of Official Development Assistance (ODA) began in 1954. In 1954, Japan joined the Colombo Plan, which is a technological cooperation institution targeting South Asia and Southeast Asia, and started its history as an ODA donor. At the same time, 1954 was the year that wartime reparations to Burma began, focusing on rendering services, granting goods, and economic cooperation. Based on the foundation of the wartime reparation institution to the Asian countries, a system of developmental assistance centered on the greatest feature of Japanese ODA, the yen loan, began to be formed.

Japanese ODA increased together with the high level of economic growth, but it was in 1985, when the rise in the value of the yen and a plan to return the surplus in the international balance of payments resulting from the Plaza Accord provided the spark for Japan to become a big global donor. In order for the global economy to grow stably, there were calls for Japan to increase its ODA as a policy to return its international balance of payments surplus to the world. Reflecting this trend, Japan became the top donor in the OECD/DAC (the Development Assistance Committee of the Organization for Economic Co-operation and Development, the so-called donor community) for the first time in 1989, and while the US retook its spot as the largest donor country in 1990, Japan reigned as the top donor for the decade from 1991 to 2000.

Japanese ODA has the characteristics of being Asian-centric, commercial (high proportion of tied aid), and economic infrastructure-centric, and has been fundamentally request-based (Matsuoka, 1996). However, Japan itself has the successful experience of having overcome the severe pollution problems of the 1960s and the twin oil crises of the 1970s through various pollution countermeasures, energy-conserving policies, and environmental infrastructure maintenance, and reflecting the increased interest in international environmental problems such as during the UN Rio Conference in 1992, the position of environmental ODA within Japan's ODA gradually became more important.

Figure 2 indicates on the horizontal axis the fraction of the total ODA from the OECD/DAC countries from 1990 to 2006 that were environmental ODA, and the vertical axis indicates the cumulative total. Japan together with Switzerland, Denmark, the Netherlands, and Norway formed the top donors having the greatest ratio of environmental ODA, and with an absolute value of nearly double that of the second place country, the US, Japan has by far the largest value. Additionally, environmental ODA as discussed here is an environmental field based on the traditional CSR categories of the OECD/DAC and is directly related to the environmental field including pollution countermeasures and natural conservation, and so it must be noted that it has a very limited coverage. As a result, the ratio of environmental ODA in all ODA is a number limited to around 3-5% even in the top group including Japan.

Figure 2. Cumulative total and fraction of environmental ODA by DAC countries (on a CRS basis, from 1990 to 2006)

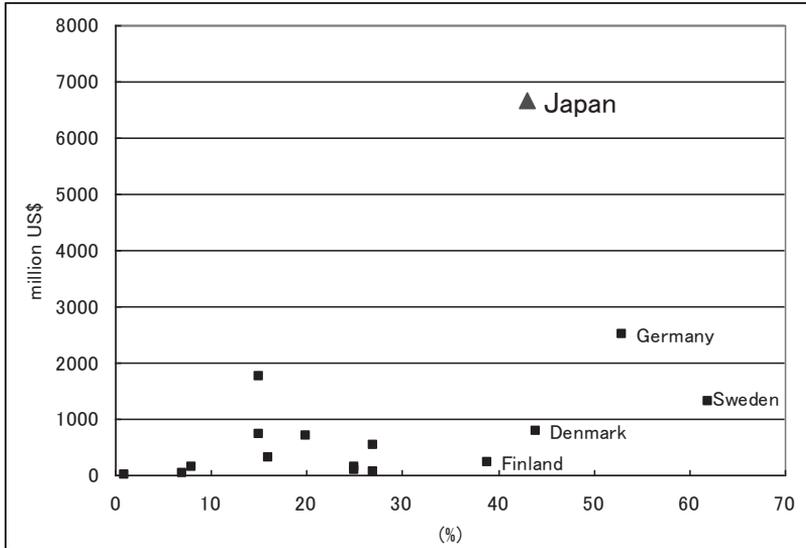


(Source) Created by author based on the OECD/DAC-CRS Online Database.

Figure 3 indicates the relative position of Japan’s environmental ODA based on a somewhat looser definition of environmental ODA (including not only that which primarily targets the environment, but also includes that which has the environment as one of the main objectives). Even when examining environmental ODA based on this classification known as an Environmental Marker, Japan is in the top group of countries that place importance on environmental ODA together with Sweden, Germany, Denmark, and Finland, and stands out in absolute value as well. The environmental ODA ratios in this figure are from 40%-60% for the top group including Japan, indicating that about half of the assistance is in the environmental field.

Figure 3. Cumulative value and fraction of environmental ODA by DAC countries (on an EM basis, from 1990-2006)

(Units: \$millions/%)



(Source) Created by the author based on the OECD/DAC-CRS Online Database.

The above was based on OECD/DAC data, but Table 1 below indicates the distribution by field of Japan’s environmental ODA based on data from the Japanese Ministry of Foreign Affairs. The primary fields were originally anti-pollution measures and the residential field pertaining to infrastructure of daily life, including the water supply, sewer system, waste, and the like, but from FY 2001, climate change countermeasures was set as a new tabulation item, and ODA in this area had a 56% share in FY 2003.

Table 1. Distribution by field of Japanese environmental ODA

(Units: ¥billions)

Fiscal year	Residential		Forest conservation		Anti-pollution measures		Disaster countermeasures		Climate change		Other	
	Value	%	Value	%	Value	%	Value	%	Value	%	Value	%
1990	43.2	26.1	12.7	7.7	74.1	44.8	15.6	9.5	-	-	19.6	11.9-
1991	60.5	53.7	15.8	14	5.1	4.5	19.6	17.4	-	-	3.9	3.5
1992	163.3	58.2	18	6.4	30.2	10.8	54.6	19.5	-	-	3.7	1.3
1993	137.4	60.3	16.9	7.4	39.1	17.2	13.6	6	-	-	4.8	2
1994	112.8	66.9	8.7	5.2	36.2	21.5	5.8	3.4	-	-	5.2	3.1
1995	129.6	54.9	25.2	10.7	18.3	7.7	45.3	19.2	-	-	17.6	7.5
1996	280.3	62.6	37.2	8.3	60.9	13.6	42.9	9.6	-	-	26.6	5.9
1997	99.3	43.4	22.3	9.8	34.5	15.1	38.4	16.8	-	-	34.1	14.9
1998	53.8	13.9	8.2	2.1	235.3	60.7	22.6	5.8	-	-	67.6	17.4
1999	130.3	25	8.9	1.7	209	40	65.6	12.6	-	-	108.3	20.7
2000	102.5	23.4	16.8	3.8	60.8	13.9	42.1	9.6	-	-	216.7	49.5
2001	45.2	16.3	14.3	5.2	64	23.1	29.5	10.7	114.7	41.4	9.2	3.3
2002	117.6	30.6	47.4	12.3	92.4	24.1	7.3	1.9	110.6	28.8	8.9	2.3
2003	65.1	19.6	26	7.9	35.4	10.7	5.9	1.8	186.6	56.3	12.1	3.7
2004	126.8	29.4	36.1	8.4	70.1	16.3	21.5	5	167.2	38.8	9.4	2.2
2005	84.4	28.1	18.3	6.1	70.5	23.5	22.7	7.5	93.7	31.2	10.8	3.6
2006	242.5	60.1	48.5	12	62	15.4	12.5	3.1	32.9	8.1	5.4	1.3

Notes: (1) Includes aid to Eastern Europe. (2) Targeting bilateral aid. (3) Percentages are the share by field of the total environmental ODA of each fiscal year. (4) "Other" until FY 2000 includes the natural environment, environmental administration, water pollution, and global warming countermeasures. "Other" from 2001 onwards includes biodiversity and environmental administration support.

(Source) Created based on the Ministry of Foreign Affairs, *ODA White Paper* (various years).

The makeup of Japan's environmental ODA by the form of aid provided is indicated in Table 2. The final line indicates the yen loan share of environmental ODA. Yen loans constitute a large percentage of 75-88% of environmental ODA. As a simplification, the magnitude of Japanese environmental ODA relies on yen loans. A large portion of the yen loans is for water supply and sewage system infrastructure construction for enhancing the living environment. Urban transportation infrastructure construction including providing subway systems under the banner of CO<sub>2</sub> reduction is also considered environmental fieldwork, and so Japan has become a leading country for environmental ODA.

However, with regards to whether Japanese environmental ODA, which went into high gear from the 1980s, was solely yen loans for infrastructure projects or the like, this was in fact not necessarily the case.

Table 2. Japanese environmental ODA by form of aid

(Units: ¥billions)

	2000	2001	2002	2003	2004	2005	2006
Grant aid	24.4	24.3	25.3	19.6	20.5	25.5	20
	-22.5	-22.6	-25.2	-23.8	-25.2	-30.5	-24.5
Yen loans	386.1	220.3	332	286.6	385.1	250.8	364.9
	-44.5	-32.8	-52.8	-51.4	-58.8	-44.3	-43.3
Technological cooperation	28.4	32.4	26.9	25	25.4	24.2	18.9
	-18.2	-20.3	-18.4	-17.7	-16.9	-15.7	-12.5
Contributions to international organizations	13.6	15.8	12.6	11.2	8.5	8.8	9.8
	-4.7	-5.5	-10.7	-10.2	-8.3	-9.3	-10.8
Total environmental field	452.5	292.7	396.8	342.3	439.4	309.2	413.6
	-31.8	-23.9	-34.1	-38.4	-44	-29.4	-35.4
Yen loan share (%)	85.3	75.2	83.7	83.7	87.6	81.1	88.2

Notes: (1) Grant aid and yen loans are on an exchange of notes basis, technological cooperation is on a JICA expenditure basis, and international organization contributions are on a fiscal expenditure basis. (2) Percentages in parentheses are the share held by the respective forms in environmental ODA. Additionally, grant aid does not include non-project grants such as debt reductions, economic structural reforms, or grassroots grants. Yen loans include project and non-project loans, but do not include debt relief loans. (3) The yen loan share (%) on the last line is the share held by yen loans out of all environmental ODA as a whole.

(Source) Created based on the Ministry of Foreign Affairs, *ODA White Paper* (Edition for each year).

It is important that in the reality of Japanese environmental aid free funding cooperation, technological cooperation, yen loans, and the like were intentionally linked, or alternatively even if it was not intentional, they ultimately became linked, and were useful in increasing the environmental management abilities of East Asian countries. This representative approach is the environmental center approach indicated in Table 3 (JASID Evaluation Committee on Environmental ODA, 2003).

Table 3. The development of Japan's environment center approach

	The Sino-Japan Friendship Center for Environmental Protection Project	The Thai Environment Research and Training Center (ERTC)	The Indonesian Environmental Management Center (EMC)	The Mexican National Environmental Research and Training Center (CENICA)	The Chilean National Center for the Environment (CENMA)	The Egyptian Environmental Monitoring and Training Center	
Grant aid agreement	6/1992	7/1989	12/1991		11/1995	3/1997	
Project period	Phase I (9/1992-8/1996) Phase II (2/1996-1/2001) Phase III (4/2002-3/2006)	Phase I (1/1990-3/1995) Extension period (4/1995-3/1997)	Phase I (1/1993-12/1997) Follow-up period (1/1998-3/2000)	Phase I (7/1995-7/1997) Phase II (7/1997-6/2000) Follow-up period (7/2000-7/2006)	Phase I (6/1995-5/2000) Follow-up period (6/2000-5/2002)	Phase I (9/1997-8/2002)	
Project objectives	Collection/analysis of environmental monitoring data, study of anti-pollution technology, fostering environmental conservation human resources	Strengthening and promoting environmental research, training, and monitoring activities (contributing to an improved environment)	Strengthened environmental monitoring ability and an improved environment through environmental research, monitoring, environmental information systems, and environmental training	Establishing a means for reducing and monitoring pollution (improving environmental administration)	Support for providing environmental research, monitoring, information, and training in order to form and support the execution of environmental policy	Support for establishing an environmental agency, environmental monitoring institution, and the like	
Targeted environmental quality, etc.	The overall environmental problems handled by SEPA are the following cooperation projects: (a) Environmental monitoring (b) Anti-pollution technology development (c) Providing an environmental information network (d) Environmental strategy/policy research (e) Environmental education and educational activities	Water pollution Air pollution Noise/vibration Solid waste Harmful substances	Water pollution Air pollution Harmful substances	Air pollution Harmful waste	Air pollution Water pollution Solid waste	Water pollution Air pollution Industrial waste	
Project type	Grant aid, technological cooperation	Grant aid, technological cooperation	Grant aid, technological cooperation	Technological cooperation	Grant aid, technological cooperation	Grant aid, technological cooperation	
Input	Grant aid (¥millions)	10,500	2,300	2,687	1,300	915	
	Equipment provision (¥millions)	218	203	408	515	496	161
	Experts (long-term)	22	25	32	14	11	14
	Experts (short-term)	64	42	78	19	31	22
	Counterpart training	49	32	40	25	26	39
Local implementing organization	NEPA/SEPA	MOSTE	BAPEDAL/MOE	SEMARNAP/SEMARNAT	CONAMA, University of Chile	EEAA	
Notes	Excluding Phase III		Excluding Phase II				

(Source) JASID Evaluation Committee on Environmental ODA, 2003.

The environmental center approach has been taking shape since the latter half of the 1980s, and is a representative approach in the environmental field, primarily combining grant aid with technological cooperation. In the environmental center approach, environmental centers are provided by taking advantage of grant aid schemes, in that “vessel,” a technological cooperation scheme is conducted of providing/improving environmental monitoring abilities, developing environmental information, and training government employees in the environmental field, thus supporting increased social ability in the environmental field in developing countries. Also, such actions as the development of environmental model cities (Chongqing, Dalian, and Guiyang in China) and the development of monitoring equipment in regional areas (the Regional Monitoring Capacity Development [RMCD] project in Indonesia) taking advantage of the yen loan stream in Indonesia and China have been executed in lockstep with the environmental center approach (Matsuoka, 2007a; Matsuoka, 2007b; Mori, Ueda, and Yamamoto, 2008).

First, the environmental center in Thailand was put into business, the Thai Environment Research and Training Center (ERTC) was established under the Ministry of Science, Technology and Environment (currently the Ministry of Natural Resources and Environment) through grant aid, and the role as a center came to be fulfilled through training environmental administrative officials, developing environmental information, promoting environmental research, and transferring environmental monitoring technology for water pollution, air pollution, and the like.

Subsequently, the Environmental Management Center (EMC) in Indonesia and the Sino-Japan Friendship Center for Environmental Protection in China were established with the objective of improving environmental monitoring capability and supporting environmental administration, and technological cooperation took place. The environmental center approach thereafter was implemented not only in Asia but also in Mexico, Chile, and Egypt, and became an environmental cooperation approach representative of Japan. Also, although not developed as a center in the form of a building, approaches similar to environmental centers focusing on the aquatic environment and water pollution countermeasures have been implemented in Vietnam, the Philippines, and the like.

This development of the environmental center approach in East Asia developed a type of regional public good in the East Asian region pertaining also to the other Japanese environmental ODA, and formed the underpinnings for regional environmental cooperation institutions such as the EANET, as discussed next. Through the environmental center approach, the Japanese Environmental Agency (now the Ministry of the Environment) contributed to the formation of human networks with the environmental ministries and agencies of each country, and together with the technological cooperation pertaining to environmental monitoring, was a major factor in the formation of environmental cooperation institutions led by Japan in East Asia (Matsuoka and Kuchiki, 2003).

## *(2) Japan's Asian Environmental Strategy by ODA*

### *1) Japan's Asian Strategy by Environmental ODA*

An exemplary case of Japan's Asian environmental strategy based on environmental ODA is the Acid Deposition Monitoring Network in East Asia (EANET), which is representative of an Asian regional environmental cooperation institution. The EANET today has 13 members in East Asia, including Russia, Japan, South Korea, China, and ASEAN (see Matsuoka, 2012a for the details regarding the following).

Against the backdrop of air pollution accompanying rapid industrialization in East Asia following the 1980s becoming a social problem, the EANET was conceptualized centered on the Japanese Environmental Agency based on the environmental center undertakings in the East Asian countries resulting from Japanese environmental ODA. The EANET is modeled on the Convention on Long-range Trans-boundary Air Pollution (LRTAP; 1979), which is a regional cooperation institution for the acid rain problem in Europe. The EANET was formed having been influenced by the international norm of disseminating the LRTAP experience to other regions as in the Agenda 21 adopted at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro in 1992.

Specifically, through the proposal of the EANET concept by the Japanese Environmental Agency around 1993, the convening of the First Expert Meeting in 1993, and the convening of the First Session of the Intergovernmental Meeting (IG1) in Niigata City and the start of the EANET test run in 1998, the process developed to the full-scale startup of the EANET in 2001. Initially, this had a hub-and-spoke structure with Japan at the center, but in recent years, there have gradually been moves towards a uniform institution.

In 2003, the leveling of the burden of EANET finances (the introduction of a UN-style assessed contribution, implemented from 2005) was targeted, and the organizational activity plan and operational methods have been put into document form. At the 13<sup>th</sup> Session of the Intergovernmental Meeting (IG13) held in Niigata City in 2010, a document (which is not a treaty) titled an "instrument" was adopted, a process of signing this document by representatives of the environmental ministries of each member country was held, and thus the formalization (in a legal structure) of the institution was undertaken.

Analyzing this formation of the EANET institution from an institutional theory framework, the "critical juncture" as the taking-off point for institutional formation can be considered to be the First Session of the Intergovernmental Meeting and the institutional test run in 1998. From there, path dependency stipulating the subsequent activities of the EANET was molded in the form of the strength of Japan's organizational/structural initiative (reliance on Japan), the organizational/functional monitoring, and the emphasis on information exchange. At the same time, to the other participant countries other than Japan, the formation of social environmental management capability of each member country made progress through the transfer of the advanced environmental technology of Japan as an advanced country, and it was this capacity development that can be considered to have been a self-strengthening mechanism for the EANET, which has lasted to today for over 10 years.

In order to understand the path dependency of the EANET, the relationships with other

institutions during the process of forming the EANET are important. The North-East Asian Subregional Programme for Environmental Cooperation (NEASPEC), which was formed under South Korean leadership during the same period is an important regional cooperation institution similar to the EANET. The NEASCAP was proposed by the South Korean government in response to the 1992 Rio UN Conference on Environment and Development, and was established in 1993. The six countries of South Korea, Japan, China, North Korea, Mongolia, and Russia are members, and wide-ranging regional environmental cooperation programs for the air pollution problem, biodiversity conservation, and the like are being carried out.

Furthermore, the Tripartite Environment Ministers Meeting (TEMM) of Japan, China, and South Korea, which was based on the UN and advocated by South Korea in 1998, is held as a rotating annual Environment Ministers Meeting, and at the 12<sup>th</sup> TEMM held in Hokkaido in May 2010, an action plan was agreed upon for the 10 fields of emphasis of environmental education, climate change, biodiversity, the yellow dust, pollution management, a recycling society, electronic waste, chemical management, Northeast Asian environmental governance, environmental industry, and environmental technology. The Joint Communiqué of the TEMM also mentions the EANET.

Also, the situation is that aside from the EANET, NEASPEC, and TEMM, a variety of regional institutions are overlapping, including the Northwest Pacific Action Plan (NOWPAP), which is concerned with maritime pollution in Northwest Asia (founded in 1989, led by UNEP and South Korea, the formal planning decision being made at a 1994 intergovernmental meeting, and with the members being Japan, South Korea, China, Russia, North Korea [as an observer], and UNEP), the ASEAN+3 Environment Ministers' Meeting (held annually, since the first meeting in 2002), and the East Asia Summit Environment Ministers' Meeting (EAS-EMM, held biannually since the first meeting in 2008).

When considering the formation of Asian environmental governance from the perspective of institutional theory, an important point of debate is whether these regional environmental institutions are a "bundle of institutions" having some sort of cornerstone institution, being in a complementary relationship, and pertaining to the regional environment of East Asia as a whole, functioning as a building block, or whether they are in a relationship of competing with, scattering, and counteracting each other as a stumbling block (Pempel, 2005, p. 17). Currently, if one had to choose, the situation would have to be evaluated as a stumbling block, and a clear future form for Asian environmental governance cannot be seen.

If this point is considered as being the weakness of the EANET and the weakness of Japan's Asian environmental strategy, the following problem points arise. First, in the formalization (codification in international treaty) of the EANET, which was produced with much effort under the initiative of the Japanese Ministry of the Environment using environmental ODA and the like as a lever, there was a difference in level of enthusiasm between the Ministry of the Environment and the Ministry of Foreign Affairs, resulting in a unified direction not having been clearly made within the Japanese government (Kanie and Sodenno, 2013). Second, the community of experts supporting the EANET is limited solely to

research organizations and researchers affiliated with the Ministry of the Environment, and so it has not become a broad, “all-Japan” organization. Third, in the high prioritization of avoiding external conflict, there was insufficient engagement towards defining a mobile mechanism for broad-regional pollution. The first point is an adverse effect of the vertically segmented administration of the ministries and agencies, and is a problem of the lack of a quarterback, the second point is the lack of wide-ranging domestic sharing of knowledge due to the prioritization of the benefit of the ministry, and the third is the lack of social support and trust.

Furthermore, not only for domestic problems, but externally as well, the fact that a Japanese vision for the future of Asian society has not been completely settled is significant. In the current Asian regional environmental cooperation institutions, there are both institutions founded for environmental problems such as EANET, NEASPEC, and NOWPAP, and in parallel there are regional institutions in the environmental versions of summit meetings (political summits) in the form of the Japan-China-South Korea TEMM summit, the ASEAN+3 Environment Ministers’ Meeting (ASEAN+3-EMM), and the East Asia Summit Environment Ministers’ Meeting (EAS-EMM). The future regional environmental governance of East Asia can in a certain sense be conceived of as developing due to the twin wheels of an “environmental institution as a partial/complementary institution” of a political cooperation institution oriented towards regional integration and a regional community, and an “environmental expert institution,” but the lack of a strategy moving on both wheels will only unnecessarily increase international negotiation costs.

For Japan to consider Asian regional integration, the directionality of the ASEAN+3, which can be considered to play the central role thereof, is important. Furthermore, the East Asian Summit meetings (corresponding to ASEAN+3+3, namely the ASEAN+3 members plus Australia, New Zealand, and India), which began in 2005 as an institution complementing ASEAN+3, were joined by the US and Russia in 2011, and considering the change in circumstances in having a spatial structure of ASEAN+6+2, regionalism in the region, including the directionality of APEC which began in 1989, is fluctuating between East Asianism and “Asia-Pacificism” among globalism/globalization and regionalism.

## *2) Japan’s Asian Environmental Strategy and Environmental Policy/Environmental Innovation*

In the 1990s, Japan embarked on the formation of Asian regional environmental institutions with environmental ODA at the core, even while lacking a clear vision, and has founded a variety of informal regional environmental institutions such as EANET, the Asia-Pacific Forum for Environment and Development (APFED), and the Northeast Asian Conference on Environmental Cooperation (NEAC). Meanwhile, South Korea’s Asian environmental strategy has placed importance on environmental cooperation institutions in the Northeast Asian region such as the Northwest Pacific Action Plan (NOWPAP), the Tripartite Environment Ministers Meeting (TEMM), and the Northeast Asian Subregional

Program for Environmental Cooperation (NEASPEC). Compared to that of South Korea, Japan's Asian environmental strategy is scattered among Northeast Asia, East Asia, and the Asia Pacific. In a sense, it could be said that because Japan's national power is far greater than that of South Korea, it has the strength to deal in a variety of regionalisms, but rather Japan was not able to decide on a regional space to be the foundation of its own Asian regionalism, and lacked concentration. When Japan was at its full national power, it may have been able to search for an optimal point while engaging in omnidirectional diplomacy. But today, when Japan's national strength has become relatively lower, "selection and concentration" is indispensable.

What is yet more important is the fact that the superiority of the environmental business and environmental technology supporting Japan's regional environmental strategy has been greatly shaken in the 21<sup>st</sup> century amidst the catching up by South Korea and China and the comeback by the West. As discussed in the Introduction to this chapter, the value of exports of environmentally related goods from Japan to the world has dipped slightly from \$15.9 billion in 2004 to \$15.4 billion in 2009, whereas that from Germany has grown from \$15.7 billion to \$26.9 billion. For the EU, during this period the value of environmentally related exports expanded 1.6-fold (*Asahi Shimbun*, October 1, 2010).

A major factor behind this stagnation and recession of Japan's environmental industry in the international market is the weak innovation of Japanese corporations. Environmental innovation does not only signify product innovation in the form of developing groundbreaking products with the best performance in the world. In developing countries, developing low-cost products even if the performance suffers to some extent, referred to as frugal innovation, is effective for environmental improvement. However, Japanese corporations remain fixated on high-spec, high-cost environmental systems, and so in this sense have worsening "Galapagos syndrome" and are not able to adapt to the needs of the environmental markets of the rising and developing countries.

For example, compared to Japanese flue-gas desulfurization devices which eliminate 99% of SO<sub>x</sub> and are both high-performance and high-cost, Chinese devices have an 80% elimination at 60% of the cost, and so are more easily introduced, furthering environmental improvement. According to one study investigating the top 20 Chinese flue-gas desulfurizing manufacturers, only three had introduced Japanese technology, 9 used German technology, 5 used US technology, and 5 used Australian technology (Horii, 2010). Japanese corporations were wary of an outflow in intellectual property, and so insisted on exporting their own products, whereas Western firms aimed for a market expansion through actively joining with Chinese businesses.

This decrease in the share of Japanese environmental system exports in the Asian market and the weakness of Japanese corporate innovative strength do not have only minor in-company causes, but also major societal causes. As a major societal cause, if an appropriately designed environmental policy is based on the Porter Hypothesis of promoting environmental innovation and creating an international competitive advantage for corporations, it is necessary to pay attention to the nature of Japanese domestic environmental policy,

environmental technology, and environmental business.

Japan's environmental policy was not able to extricate itself from its own experience of success in overcoming pollution in the 1970s, and so they created a command and control (CAC) system that was rigid and refined to an extremely high level. Initially as stated by the OECD environmental policy review of 1976, Japan's CAC was "uneconomical but not anti-economical", but from the 1980s onward rapidly became a high-cost, inefficient institution. Also, Japanese command and control was effective against traditional pollutants such as SO<sub>x</sub> and NO<sub>x</sub>, but was not effective against PM<sub>2.5</sub> or trace chemical pollutants. In short, Japanese environmental policy became outdated both economically and environmentally.

From the 1980s onwards, amidst the trends of small government and market environmentalism, global environmental policy set out to actively take advantage of market-based instruments (MBIs) in the form of pollution surcharges and pollution cap and trade institutions. Also promoted was a voluntary approach (VA) in the form of the ISO14000 series (environmental certification institution) and corporate social responsibility (CSR), which have been called the "third way" for environmental policy. During this period, Japanese environmental policy did engage in the voluntary approach, but fell greatly behind in market-based instruments.

The author believes that this lagging behind of Japanese environmental policy is one major factor that brought about the stagnation and regression by Japanese environmental businesses and environmental technology. Falling behind in policy innovation invited falling behind in environmental innovation. This is also closely interlocked with the weakness of Japanese Asian environmental policy.

The international environmental cooperation policies of the US and European countries such as Germany are not simply to aid in raw materials technology or environmental systems, but rather are strategically executed in the export of the country's own environmental policies and environmental institutions (including official methods for environmental measurements such as monitoring). For example, Germany did not only aid in the environmental technology of Indonesia and China, but also supported the building of policies and institutions themselves through supporting the creation of laws for cleaner production (CP), and succeeded in exporting Germany's CP technology and environmental systems to Indonesia and China (*Asahi Shimbun*, October 1, 2010).

In Japan as well, the Ministry of Foreign Affairs and JICA came to emphasize the importance of policy/institution support only after the dramatic reductions in the ODA budget starting at the end of the 1990s. However, the fact that Japan does not have experience in market-based environmental policies of the sort that the Asian countries call for is a major impediment for Japan's Asian environmental strategy.

## **VIII. Conclusion: Japan's Asian Strategy and an Intellectual Platform**

Above, the development and problems surrounding Japan's Asian environmental strategy were examined relying primarily on an institution theory approach. Based on the foundation

from the 1980s onwards of the development of regional common goods through building bilateral relationships resulting from environmental ODA, assisting in the establishment of environmental centers, and the like, Japan's Asian environmental strategy has built regional environmental institutions with a hub-and-spoke structure in the 1990s with Japan as the hub and the Asian developing countries as the spokes.

However, the vertically segmented administration in the form of opposition between the Ministry of the Environment and the Ministry of Foreign Affairs within Japan has led to a lack of a quarterback for environmental strategy, and has not only obstructed the formation of an epistemic community internationally, but has also hindered the sharing and production of knowledge domestically. Furthermore, in the building of regional cooperation institutions, Japan has faced a variety of issues and has established diverse regional institutions. Japan simultaneously carried out three regional strategies for Northeast Asia, East Asia, and the Asia-Pacific, but has formed regional environmental institutions while the answers to what is to be the cornerstone institution in the building of regional institutions and what regional unit to put strategic emphasis on has been left unclear. This scattered investment may have had value for hedging risks during the period when Japan was the sole advanced country in the Asian region, and had strong national power including economic might, but in the 21<sup>st</sup> century when South Korea, China, and the ASEAN countries have been marking economic growth and have each been setting out to form regional environmental institutions, Japan needs more "selection and concentration."

It goes without saying that this Japanese Asian environmental strategy should be closely linked to Japan's security strategy, political strategy, economic strategy, sociocultural strategy, and the like as an Asian strategy. It is through clarifying Japan's fundamental vision of the future and mode of thought regarding the nature of the Asian region and creating an overall strategy for manifesting that vision that enables the debate over strategic management in the form of how to create and position regional cooperation institutions in each field, and then link those institutions to an overarching whole. The weakness of Japan's Asian environmental strategy is in fact the weakness of Japan's Asian strategy itself. What should be done?

Given the situation of territorial problems with China and South Korea as well as the thorn of historical perception, it is difficult for Japan to improve bilateral political relations with China and South Korea through bilateral responses alone. Japan should place importance on regional frameworks such as the ASEAN+3, which further includes the ASEAN countries, or ASEAN+6, which includes India and Australia as well. When doing so, it is important for Japan to seriously conceptualize the nature of the future of the Asian region, and to indicate a grand design for future Asian regional cooperation institutions. When designing such regional institutions, the fostering of graduate-level expert human resources with an assured power to design based not on narrow national interest, but on the Asian "regional interest" is indispensable.

As a powerful idea to develop graduate-level human resources to design such Asian regional institutions, the author is proposing an Asian University Institute (AUI) concept. This was previously proposed as an East Asian University Institute (EAUI) concept of a

federation of universities based on nation-states (Matsuoka, 2013b), but currently, what is being proposed is an Asian University Institute (AUI) as an international regional graduate school based on an international treaty transcending nation-states and on the basis of ASEAN+6. Also, an Asian University Institute (AUI) promotion mechanism (AUI promotion mechanism) has been established (on June 7, 2013) as a private proposal organization. For details, see the “Asian University Institute (AUI) concept, AUI promotion mechanism, and charter” at the end of the chapter. Nevertheless, it is now that Japan is able to take political, economic, and social initiative in Asia that the country should join hands with the countries of Asia and propose and work tirelessly towards the creation of the Asian University Institute (AUI) as an intellectual platform for the Asia of the future in order to recover from the earthquake and revitalize Japanese society.

Looking at the soft power of the 21<sup>st</sup> century in terms of academics, art, and culture, a US-style university model swept the world from the latter half of the 20<sup>th</sup> century, and as long as the American model is taken as a precondition, it is difficult for universities in Japan and Asia to escape from a second or third rate subcontracting position. It is now that Asia has economic strength that a uniquely Asian innovative intellectual platform based on Asian diversity should be formed, and an Asian university model should be presented as the Asian University Institute (AUI).

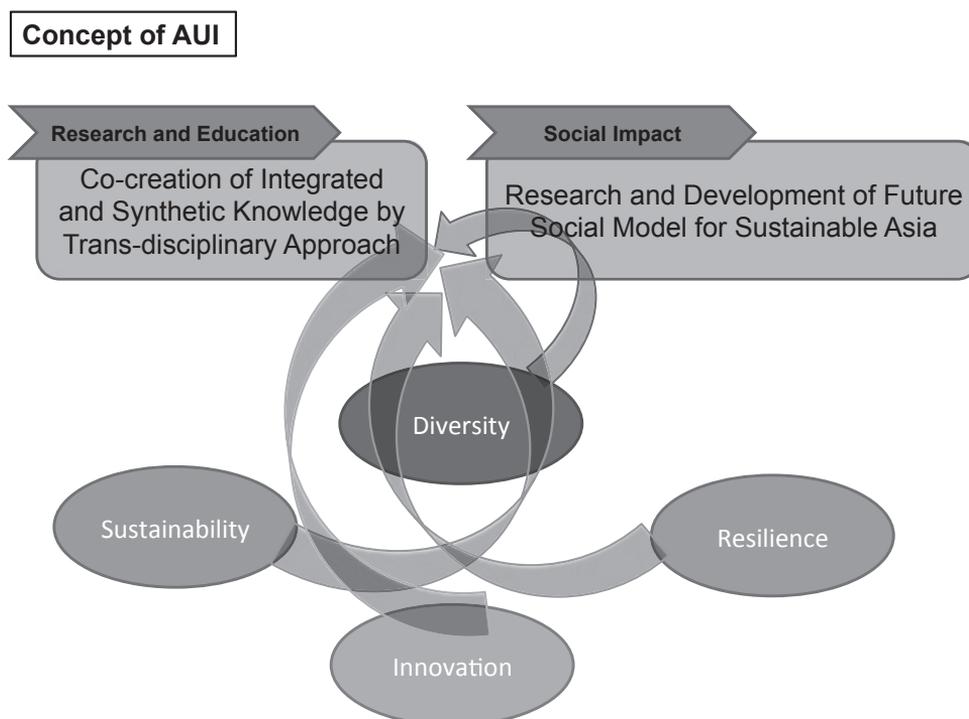
For this purpose as well, Japanese universities should come out and compete more, and Japanese universities still have competitive strength. Japan has the positive history of university self-rule and free academia, which other Asian universities do not have, and has superior interdisciplinary studies in the form of regional studies, environmental studies, and disaster studies. However, the regional studies and interdisciplinary research that were strengths for Japan in the 20<sup>th</sup> century at this rate will not hold water in the 21<sup>st</sup> century world, in which it should be said that there has been an “explosive increase in knowledge.” For example, regional studies should evolve from the study of one country (area studies) to studying a broader region (regional studies). Also, the greatest lesson of the Fukushima nuclear accident is that a closed knowledge community solely of experts will lead to large social disasters, and interdisciplinary research in the 21<sup>st</sup> century should develop from the conventional humanities-science fusion (interdisciplinary) to the co-creation of integrated knowledge through humanities-science social cooperation (transdisciplinary) between scholars of the humanities and the sciences as well as civil society.

In order to co-create this knowledge innovation and integrated knowledge, the most powerful method is to found the AUI as a regional organization based on an international treaty transcending the nation-state. To widely display to the world knowledge revolution based on the diversity of Asia is an important mission for Japanese academia and universities, and the AUI is positioned as that which will instruct and create a new scholarship. Japanese universities and Japanese society should present to Asia and to the world a sustainable social model for the future. Now is the time to take the challenge, for now is the final chance.

## Appendix

### Organization for Creating Asian University Institute (AUI) Statement

#### Vision of AUI



#### **Five-Point initiative of Asian University Institute (AUI)**

**a.** Seeking sustainable development with peace, fairness and vigor in Asian countries, establishment of institutions of regional cooperation is required, fostering specialized leaders at the postgraduate level. For this, it is important to create an international regional university within a graduate school, as an intellectual platform, not only taking in existing graduate schools and students' exchange at the national level, but also promoting Asian countries' cooperation at the international level; thus founding Asian University Institute (AUI).

**b.** AUI will establish a new academic field, "Co-creation of Integrated and Synthetic Knowledge", from the idea of coproduction in arts, sciences and society (trans-discipline by collaboration among specialists in arts and sciences and civil society), based on diversity in Asian countries. Through instruction of such Integrated and Synthetic Knowledge, we will foster Professional Regional Designers who will become key players in the field of Asian

regional cooperation in the future.

- c. AUI will provide innovation based on diversity in Asia and conduct research on “social models of the future” for sustainable employment, industry, and organization in the 21<sup>st</sup> century. AUI introduces such a model focusing on the Asian region and international society.
- d. It is significant for Japan to establish AUI, which aims to form a sustainable and hopeful future in Asian society, collaborating with Asian countries. This effort will bring Japan, not only intellectual cooperation toward these countries, but also a policy of reconstruction from disaster with them and a development strategy to rebuild its society.
- e. Considering formation of the ASEAN Community in 2015 and relationship between neighboring Asian countries and Japan, now is the time that the last one introduces the initiative of the AUI to the first ones, and takes a historical step to found it.

## **1. Background of Asian University Institute and its necessity**

Once branded “Stagnating Asia” for a long time, the region has now become “Booming Asia” through industrialization and regional specialization since the end of the 20<sup>th</sup> century. Today, Asia achieves its status as the growing center of the world and has literally become what the world knows as “Global Asia.” However, “Global Asia” has various social problems, such as environmental pollution and human rights issues.

The Asian Financial Crisis, which occurred in 1997, was such condition, revealing vulnerability and the lack of a system for cooperation in this region, which shed light on the necessity to create resilient regional institutions against risk. These institutions aiming for sustainable development in Asia are indispensable for “the common good” not only in this region, but also around the world, to realize a sustainable global society.

To establish a fair, vigorous and sustainable Asian society, it is important to exploit a “social model of the future” and to make a regional intellectual platform to foster specialized leaders who can conduct regional cooperation. Hence, we emphasize the creation of an International Regional University Institute such as AUI, which goes beyond existing graduate schools at the nation state level.

## **2. What is Asian University Institute?**

Going forward with the institutionalization for sustainable Asian regional cooperation, it is necessary to foster specialized regional leaders who carry out regional organization (including both public and private ones). Such leaders should be Professional Regional Designers, experiencing exchange studies in Asia through close cooperation of each country and university, having sensitivity about diversity in this region and acquiring the “Integrated and Synthetic Knowledge” from coproduction in arts, sciences and society (trans-disciplinary of collaboration among specialists in arts, sciences and civil society), at the MA or PhD level.

Thus, the Asian University Institute serves not only as an educational institute to foster

specialized regional leaders, but also as a research institute, like a Global Research Center (COE) in this region, to propose policies, having a dual-role of regional think tank, and to publish its own international journal, etc.

Furthermore, AUI invests in innovation based on the diversity of Asia and a “social model for the future” for sustainable employment, industry and organization. Thus, through AUI, we will create a social industrial congregate as such a model, and introduce it toward Asian and international society.

Therefore, through such education, research, and social contribution based on the diversity of Asia, we present the AUI, as a new global intellectual platform, which is an Asian style university of the 21<sup>st</sup> century, beyond the American Style University of the 20<sup>th</sup> century.

### **3. Educational research policy**

The AUI takes its stand on “Open Regionalism.” It offers the highest and the latest academic learning through the “Integrated and Synthetic Knowledge” from coproduction in arts, sciences and society to graduate students, to seek creation of a model for sustainable regional cooperation in Asia based on the diversity of this region from global aspects.

Academic research of the 21<sup>st</sup> century should aim to create “Synthetic Knowledge,” not only from existing interdisciplinary research conducted by specialists in arts and sciences, but also from trans-disciplinary ones co-produced by specialists in arts, sciences and civil society: AUI will take a role of creation and learning of such “Integrated and Systematic Knowledge”.

### **4. Reconstruction disaster and development strategy in Japan through AUI**

Within the “Lost Two Decades” after the collapse of Japan’s bubble economy, Japanese society is predicted to struggle as a result of its depressed economic situation. On top of this, Japanese universities are losing their competitiveness within the international sphere. The Great East Japan Earthquake and the Fukushima nuclear accident, which occurred on March 11, 2011, made Japan, reflect on the shape of its university, research and science technology. Having to face huge damage and economic loss from the aftermath of such a disaster, Japanese society is still far from reconstruction. Thus, it is important that Japan reconstructs itself and rebuilds its society, with the power of Asian countries, which have offered strong support to this country.

AUI is a very important initiative that Japan can offer as a repayment to Asian countries for their help and support by creating a symbiotic relationship with them. For decades, science and technology has been considered a way to resolve the problems arisen from disasters. But, today, post-Great East Japan Earthquake and the Fukushima nuclear accident, it is evident that “Integrated and Synthetic Knowledge,” including humanity, importance of community, cognition of history and multicultural symbiotic relationship, is required for societies to regain energy including Japan which is rebuilding its society with the cooperation of Asia. Introduction of such new “Co-creation of Integrated and Synthetic Knowledge,” in the world is the mission of Japanese universities and scientists of the 21<sup>st</sup> century; the AUI

will focus on this field of study.

Additionally, based on the core conception of AUI, which offers education and research through the “Integrated and Synthetic Knowledge” from cooperation in arts, sciences and society and the diversity of Asia, we aim to produce continuously various innovations, corporations, and industrial clusters. This includes a “social model of the future” including a sustainable living and working conditions of the 21<sup>st</sup> century, which would be a rebuilding model for the economic society of Japan, in cooperation with Asia. This would become the core concept for a development strategy of Japanese society.

## 5. Timeline

From the above mentioned goals and necessity of such a global platform such as AUI, should be founded as soon as possible, combining the bottom-up process, such as the civil society organization’s activity by various people from university and industry, and the top-down process such as the political process by the East Asian Summit (EAS) or ASEAN+3 meeting. Whatever the case, we will move quickly to prepare the establishment of AUI, as an international institute (regional system), pursuing international treaties. AUI aims to establish a sustainable Asian regional society and global society.

## 6. Foundation of AUI as part of Asian Collaboration

Historically, considering Japan’s academic record, it is important that Japanese universities and society take leadership and strive to establish an intellectual cooperation framework and platform; AUI is an international contribution to Asia from Japan. Therefore, Japanese society and government should launch full-scale efforts to formalize the AUI project with cooperation from all Asian countries. Focusing on the regional framework of the ASEAN+6 and considering which of the EAS or APEC in some cases, AUI should be based on “Open Regionalism” to construct a wide global cooperative relationship.

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