

CHAPTER 1

THE ENVIRONMENTAL ISSUES AND JAPAN'S RESPONSE

A. Significance of Issues

Modern industrialization and trade expansion, are the driving forces of economic development, bring high profit to producers and convenience to consumers. Rapid social development and civilization create great opportunities for advancement and progress. Unfortunately, the achievement of economic progress by trade expansion, social development, and human activities has long been associated with environmental degradation and exploitation of natural resources. These activities are major causes of negative environmental changes; as a result, global environmental problems have emerged as serious threats to mankind and ecosystem. In addition to over exploitation and severe destruction, the world has faced serious impacts of environmental problem; such as, pollution, global warming, ozone depletion, drought, flood, decrease of biodiversity, deforestation, hazardous waste, desertification etc. Environmental issues have become growing international concerns and needed to be addressed. Increasingly, it is essential for the international community to pay more attention and cooperate in order to solve global environmental problems.

The United Nations Conference on Environment and Development (UNCED) was organized at Rio de Janeiro, Brazil in June 1992, informally called the Earth Summit, with participation of government delegation from 172 countries, 108 heads of state, press and media personnel, non-governmental organizations (NGOs), business groups, indigenous people to discuss about solutions of global problems.¹

The Rio Conference was a big meeting and a great important pace to promote and develop sustainable resource development as well as brought about major

¹ United Nations, "UN Conference on Environment and Development," <http://www.un.org/geninfo/bp/enviro.html>.

changes of attitude towards environmental issues around the world. The trends of global environmental issues have continually intensified and strengthened. Furthermore, rising awareness of environmental issues appeared in the late twentieth century² and since then, has attracted attention of media, scientists, environmentalists, public, major powers and governments in many countries. Consequently, now environmental issues become a major concern and top the rank of national and international agendas. However, the recent situations of global environment pose high tensions and great challenges over the global situation. The problems of environmental degradation not only have great effects directly to a particular person or country, but these problems also pose major challenges and cause dangerous impacts to everyone throughout the world inevitably.

Japan has long been the second largest economic power with a high priority on policy focusing on economic development as a top consideration of its national interests. Since the popular emergence of international environmental issues in the world affairs, Japan has also attempted to change her gesture with a greater interest in environmental issues. Recently, Japan has had more attention in response to environmental issues and increasingly played more active role on environmental movements by showing her initiative, cooperative role and providing environmental assistance to developing countries because Japan herself eagerly desires to acquire a reputation and international acceptance in a positive way. Moreover, Japan has a strong intention to stand at the fore front adopting a stable position on the international stage of the world affairs on equal terms with the Western countries³ so the international environmental leadership is a role that Japan wishes to play. Consequently, today Japan is actively participating as a significant actor and initiator in international environmental cooperation while environmental concerns have become one of the top priorities of Japan's national and foreign policies. Japan's growing involvement in issues of environment through international cooperation appears explicitly. Japan is willing to provide environmental aids to many countries

² Owen Greene, "Environmental Issues," in *The Globalization of World Politics*, eds. John Baylis and Steve Smith (New York: Oxford University Press, 2001), p.387.

³ Anny Wong, *The Roots of Japan's International Environmental Policies* (New York: Garland Publishing, 2001), p. 8.

by means of financial support, technical cooperation, technological assistance, research and development. In order to study the Japan's role as a leadership in the area of the environmental issues on the international stage, a case study of waste management was chosen. The responses of Japan to waste management issue are provided in Table 1 to show a clear picture. (See Table 1.1)

The accumulation of wastes which is undesirable and problematic, has continued to increase because of high consumption and economic development. In respect of waste management and recycling system, Japan with her long good experience has played a remarkable role encouraging the local governments and communities to operate and establish a recycling society and municipal waste management. The government of Japan, in addition, has supported and provided good assistances on solid waste management to developing countries through Japan's ODA, capacity building, training courses and technology transfer. Recently Prime Minister Junichiro Koizumi proposed the idea of the 3R Initiative which was agreed and adopted at the G8 Summit held in Sea Island, Georgia USA in June 2004. The concept of the 3R Initiative aims to promote reduce, reuse and recycle globally, including changing consumption and production patterns.⁴ This Initiative aims to establish a sound material-cycle society associated with environmental preservation and economic development through measures of reduction, reuse and recycle of wastes, resources, raw materials and products.⁵

⁴ United Nations Environment Programme, "Reduce, reuse and recycle concept (the "3Rs") and life-cycle economy," <http://www.unep.org/GC/GC23/documents/GC23-INF11.pdf>.

⁵ Ministry of Environment of Japan, "The 3R Initiative," <http://www.env.go.jp/earth/3r/outline/html>.

Table 1.1
Japan's Response towards Waste Management after the Cold War⁶

Year	Waste Management
1991	Ministries and the government of Japan declared October of each year as the month for the promotion of 3Rs.
1992	A National Conference for the Promotion of the Reduction in the Amount of Garbage was established in September 1992 to promote the reduction of waste.
1993	<p>In 1993, Japan signed and ratified the Basel Convention on the Control of Transboundary Movement of Hazardous Wastes and their Disposal.</p> <p>Japan had supported Brazil through Country-focused Group Training Course on Environmental Protection in Brazil (Waste Treatment) of JICA from 1993 to 1997.</p> <p>JICA had also provided technical cooperation project on 'Evaluation and Analysis of Hazardous Chemical Substances and Biological Treatment of Hazardous Waste' in Malaysia during the year 1993 to 1997.</p>
1994	In December 1994, the Basic Environment Plan was initiated by the Japanese government as long-term policy promoting an environmental sound material cycle and supporting international environmental efforts.
1995	<p>The government of Japan provided grant aid of JICA to Pakistan on Project for Improvement of Garbage Collection and Disposal in Rawalpindi City in 1995.</p> <p>Japan has provided a five-year plan regarding assistance of waste disposal to the National Center for Environment in the Republic of Chile starting in June 1995 through JICA.</p>
2000	The government of Japan created Fundamental Law for Establishing a

⁶ Original sources are: Greenhouse Gas Inventory Office of Japan; Japan International Cooperation Agency; Japan Society of Waste Management Experts; Ministry of Environment, Japan; Ministry of Foreign Affairs, Japan; United Nations.

Year	Waste Management
	<p>Sound Material-Cycle Society in 2000 to promote comprehensive and systematic policies for setting up a sound material-cycle society.</p> <p>During the 2nd Japan-Pacific Leaders Meeting (PALM 2000) in Miyazaki in 2000, Japan showed her intention to support the Pacific island countries (PICs) to improve waste management.</p>
2001	<p>Japan's Home Appliance Recycling Law has been enforced in April 2001, as a leading country to set up a recycling system.</p> <p>In 2001, JICA conducted development studies on municipal solid waste in Azerbaijan, Niger, Panama, Sri Lanka, Syria and Vietnam. Moreover, development studies on industrial waste were carried out by JICA in the Philippines, Romania and Thailand.</p>
2002	<p>The government of Japan helped a municipal community at Sao Paulo, Brazil to build a recycling centre in 2002.</p> <p>Japan carried out 'the Project for Supply of Equipment for Waste Management in Hanoi City' in Viet Nam based on ODA contribution of FY2002.</p> <p>Furthermore, Japan had performed a study targeting the improvement of waste problems as a pilot project in Sri Lanka from May 2002 to November 2003.</p>
2003	<p>The Fundamental Plan for Establishing a Sound Material-Cycle Society was formulated by the Japanese Cabinet in 2003.</p> <p>Japan revised the Waste Management and Public Cleansing Law which took effect in December 2003.</p> <p>The Japanese government initiated the Study on Solid Waste Management (SWM) in the Municipality of Phnom Penh, Cambodia through JICA starting in February 2003 to March 2005.</p> <p>The government of Japan has also carried out the Study on Solid Waste Management in Dhaka City, Bangladesh through technology transfer from November 2003 to March 2005.</p> <p>Japan carried out solid waste management through JICA project on the 'Study on the Safe Closure and Rehabilitation of Landfill Sites' in Malaysia from 2003-2004.</p>

Year	Waste Management
	Japan declared to help the Pacific island countries (PICs) to improve solid waste management based on the Okinawa Initiative at the 3 rd PALM in Okinawa in May 2003.
2004	<p>Prime Minister Junichiro Koizumi proposed the 3R initiative and the creation of a sound material-cycle society during G8 Summit at Sea Island in June 2004 and it was endorsed by the G8 leaders during the meeting.</p> <p>Japan set up the Study on Solid Waste Management Improvement Project in Phnom Penh through JICA on 22 November 2004.</p> <p>The Japanese government organized a workshop on the prevention of illegal import and export of wasted as well as proposed the establishment of the Asian Network for Prevention of Illegal Transboundary Movement of Hazardous Waste, which was agreed the representatives from 9 Asian Parties to the Basel Convention in a Workshop held in Tokyo in December 2004.</p>
2005	Japan hosted to organize the 1st Ministerial Meeting on 3R Initiative in Kyoto, Japan on April 28-30, 2005 and the 3R Initiative was formally launched during the meeting. The government of Japan committed to promote the creation of a sound material-cycle society through the promotion of 3Rs and to support waste treatment in developing countries.

The issue of environment is a critical topic and becomes a great concern in the international community because of its high relevance to all mankind and the global ecological system. The environmental problems are not the minor issue with which can be dealt by national responsibility but they have become an international threat. This vitally threat requires an urgent international reaction because the impact of environment degradation have become problematic, causing serious harm to all. From Table 1.1, it is seen that the role of Japanese involvement in environmental activities and cooperation is noticeable. According to the waste management case study, it shows that Japan has a strong intention to collaborate with international cooperation in dealing with the problem. Japan, moreover, will continue playing a major role

participating in the international environmental community. Regarding Japanese aspiration for greater international stature, Japan has a great confidence to assert her position in international arena to become an international environmental leader. How the Japanese government has taken a leading role to handle environmental problems in international relations in order to gain international acceptance as an international environmental leader during the time of a downward trend of environmental exploitation, population growth, high consumption, non-stop economic expansion and growing competition in international markets and economic globalization, is interesting to study.

B. Objectives

- To study the distinguished role of Japan towards environmental issues on the international stage in particular the leadership of environmental promotion
- To analyze Japan's potential and efforts in stimulating international environmental awareness and concerns in order to gain a position as an international environmental leadership

C. Hypothesis

It is assumed that Japan is able to be an international environmental leadership as the government of Japan has shown her initiative, cooperative role, as well as provided environmental assistances including technology transfer to developing countries. The reason why Japan would like to be an international environmental leadership is a strong desire for international credit and prestige including an ambition of attaining a prominent position in the international community and obtaining international acceptance.

D. Research Questions

1. Why does Japan want to assert her role as a leadership towards international environmental issues?
2. What has the Japanese government done to tackle the environmental problems on the issue of waste management accordance with the 3R Initiative?
3. What are the challenges to Japan to achieve a new role of an international environmental leadership?
4. What are the attitude and gesture of Japanese people towards the role of the Japanese government relating to environmental issues?

E. Conceptual Framework

The conceptual framework in this research is realism which will be applied as a guideline to answer the research questions including studying and explaining the role of Japan towards international environmental issues.

Realism

It is widely known that realism is a dominant political theory in international relations that has had a long history since the fifth century from the era of Thucydides.⁷ Ideology of realism mainly focuses on state motivation in international politics associated with a pessimistic view of human nature, a lust for power and the pursuit of interest. Human nature is at the core of egotism, which is a central feature of realism, and has not changed. The passions of egoistic and self-interest in international politics are mainly emphasized.⁸ According to realism, a central preoccupation of political activity is the goal of power, the means of power and the utilization of power. International relations are primarily relations among states and a

⁷ Jack Donnelly, *Realism and International Relations* (United Kingdom: Cambridge University Press, 2000), p. 1.

⁸ *Ibid.*, p. 9.

struggle among the great powers for domination.⁹ Realists believed in motivations and desires behind actors' behavior.¹⁰ The basic idea regarding national interest is the top priority of concerns for state survival emphasizing that all states have strong perceptions of national interests and political preferences rather than mutual benefit in order to gain great advantages, obtain greater power, expand its influence and ultimately become a powerful state in the international arena.

Japanese policy responses to international environmental issues are motivated by national interest. In case of Japan, national interest can be defined in terms of honor of leadership, good reputation and greatest glory. Today Japan has a strong desire to play a more active role towards global environmental issues in order to obtain international acceptance, honor, glory and greater power in the international community. These are important motivational factors behind Japan's determination to exercise a new alternative role as an international environmental leadership. In accordance with realism, international cooperation on global environmental issues is recognized as an important channel for Japan to maximize the pursuits of national interest and preference. Having a good reputation and playing a leadership role on environmental issues can enhance an image of the Japanese government as well as provide Japan a considerable positive influence and international acceptance in the international community. Therefore, motivation and determination of Japan to assert her role as a global environmental leadership are consistent with the idea of realism.

F. Scope

This research mainly focuses on Japan's role and her perspective on environmental issues since the post Cold War era, specifically her significant role through the case study of community waste management. This research studies Japan's environmental policy associated with a potential role of Japan in aspects of

⁹ Robert Jackson and Georg Sørensen, *International Economy: Introduction to International Relations* (New York: Oxford University Press, 2003), p. 68.

¹⁰ Matthew Paterson, *Global Warming and Global Politics* (New York: Routledge, 1996), p.120.

global environmental concerns for greater cooperation at international level in order to become a leadership in global environmental protection.

The issue of community waste management is the main focus of this research. The problem of community waste is not a new issue which is related to lifestyle and public health. It is a critical problem that many countries, both developed and developing countries, has long suffered but the problem is not given sufficient attention. The volume of waste is continually increasing however some countries are still unaware of the problem. In recent years, the issue of waste is increasingly raised a major environmental challenge issue in environmental protection internationally. Japan is one of the leading countries showing her considerable movement in this issue domestically and internationally.

G. Research Methodology

The methods applied in the course of this research are documentary research and in-depth interviews. To conduct the documentary research, content analysis and interpretation with statistical interpretation will be used. In-depth interview about the role of the government of Japan in the focused areas will be answered by Japanese citizens as well as people who working for JICA Thailand Office in order to understand the attitude of people towards the role of Japanese government in regard to issues of the environment. Other primary and secondary sources will be utilized as presented below.

1. Primary sources:

- Speeches and direct quotes of states' leaders and concerned people provided by newspapers and websites
- Statistical data related to the case study waste management from websites
- In-depth interview to be answered by Japanese citizens including officers at JICA Thailand Office and Thai professors at Thammasart University regarding Japan's role towards environmental issues

2. Secondary sources:

- Updated articles and news about issues involved from journals, books, newspapers and websites
- Relevant research papers and studies about Japan's role and policies towards international environmental issues, particularly on waste management
- Collective data of from concerned organizations, books, articles and websites

H. Literature Review

The literature and research which is related to Japan's environmental issues have being focused from different points of concern. The role of Japanese government with respect to the environment has been strongly censured since the post-World War II. The majority of work in the 1970s criticized severe environmental problems at domestic level of Japan, due to the industrialization and rapid rebuilding of the economy, with a low profile response of the Japanese government. Most of authors mentioned that after Japan's defeat in the Second World War, Japan had heavily attempted to restore herself from a catastrophic result of the war and primarily had a high priority on policy promoting economic growth and development with a lust for emerging as a leading country; meantime, Japan did not pay attention to environmental problems which were the consequences of such developments. At the beginning, many authors, such as Jun Ui¹¹, mainly focused on the role of Japan towards domestic environmental problems throughout the country such as Minamata, itai-itai, pollution problem and environmental degradation. When the environment has been regarded as a significant issue in the international community, responsibility of the government of Japan, as a developed country with high amount of consumption of

¹¹ Jun Ui, *Industrial Pollution in Japan* (Tokyo: United Nations University Press 1992).

natural resources, for dealing with environmental problems has been usually raised to discuss.

This research studies Japanese policy and the role of Japanese government towards the issue of environment at international level, especially in the area of waste management since the post-Cold War. Articles and works regarding Japan and environment are reviewed in four points as below-mentioned.

1. Factors contributing the policy foundation

The international environmental policy of Japan has been widely focused on one hand. With regard to the environmental policy of Japan at international level, Hanns W. Maull wrote '*Japan's Global Environmental Policy*'¹² studying the factors which have an impact on implementation of environmental policies of Japan. Maull noted that Japan had a bad reputation and international image problem in the environmental field. At the same time, Japan has effectively reduced and controlled the problem of air pollution and Japanese industry has been increasingly interested in environmental business. Japan's domestic environmental policy achievements and her international reputation contrast. Maull explained six negative peculiarities of Japan's environmental policy process;

1. Public awareness and interest in environmental issues in Japan are lower than other developed countries and international environmental issues received very little public attention.
2. Environmental organizations at grass-roots level are weak and have an influence at the local level only.
3. Japan does not have independent public policy research.
4. There are conflicts between ministries and government agencies in Japanese bureaucracy.
5. Japanese environmental policies are influenced by the strong pressures.

¹² Hanns W. Maull, "Japan's Global Environmental Policies," in *International Politics of the Environment: Actors, Interests and Institutions*, ed. Andrew Hurrell and Benedict Kingsbury (Oxford: Clarendon Press, 1992).

6. Geographic position, shape and climate conditions of Japan have been sheltered from trans-border environmental problems.

Maull also mentioned about three factors which are effective on Japanese environmental policies as following;

1. Social cohesion, pragmatism and adaptability of Japan help the country move rapidly and thoroughly when problems have been recognized and responses agreed.
2. The superior adaptability, flexibility and technological advances of Japanese industry enable Japan to develop alternatives to environmental economic activities.
3. Internationalization of the Japanese economy and its enterprises has influenced Japan's international environmental policies.

According to Maull, Japanese environmental policies have created a direct impact on the global environment such as global warming, acid rain and depletion of the stratospheric ozone layer. Maull illustrated that Japanese policies towards international environment have developed along with domestic environmental policies due to political pressures. Besides, transnational environmental groups, business attitudes and other governments of industrialized countries are the major factors stimulating Japan to respond to environmental issues. Maull believed that global environmental policies of Japan have been changing. It is expected that financial and technological resources are the useful instruments for Japan to tackle environmental degradation.

2. Priority of policy

Regarding the subject of *'Policy Laggard or Policy Leader?: Global Environmental Policy-Making Under the Liberal Democratic Party'*¹³, Miranda A. Schreurs reviewed the policy-making towards environmental fields on the international scale by the government of Japan under the liberal democratic party

¹³ Miranda A. Schreurs, "Policy Laggard or Policy Leader?: Global Environmental Policy-Making Under the Liberal Democratic Party," *The Journal of Pacific Asia* 2 (1995): 3-33.

focusing on the issues of stratospheric ozone depletion and global climate change on Japanese policy agenda. Schreurs observed that environmental policy at the national level of Japan is very efficient but it is seemed that the government of Japan was given a low priority to the environmental issues at regional and international level. However, the international environmental issues have later been more interested by the Japanese government under the Liberal Democratic Party since 1988. Particularly under the lead of Prime Minister Noboru Takeshita, Schreurs noted that at that time international environmental policy became a big issue on the Japan's policy agenda. The emergence of global climate change and other international environmental problems to the international policy agenda has brought about major changes to Japan's environmental policy-making.

Schreurs questioned that while the government of Japan had long shown resistance to respond to stratospheric ozone depletion, why was the government suddenly interested in responding the global climate change? According to Policy Laggard or Policy Leader?: Global Environmental Policy-Making Under the Liberal Democratic Party, Schreurs showed a comparative analysis to explain the response of the Japanese government and policy development towards the issue of stratospheric ozone depletion and global climate change. Schreurs explained that the dominant model of policy making in Japan with its powerful bureaucracy, and pluralist elements, the informal political networks or '*zoku*' and international pressures were the influential factors bringing the issue of international environment onto the Japanese policy agenda. The powerful interests of domestic actors are able to shape Japan's environmental policies.

According to this article, she concluded that Japan has been a reactive state in the area of international environmental policy-making. The reactive state and the bureaucracy-led models of decision-making appear to best explain the stance of the government of Japan as a policy laggard on an important international environmental concern. However, she also noted that today Japanese bureaucracies, political parties and businesses have reorganized to consider global environmental issues in their operations. New environmental groups and networks in Japan have been established. These changes will change the nature of environmental policy-making in Japan in the near future.

3. Japan's responses to domestic and international environmental issues

The policy response by the government of Japan toward international environmental problems around 1970s to 1990s was reviewed in *'Policy Legacies: Japan's Responses to Domestic and International Environmental Problems'*¹⁴ by Isao Miyaoka. Miyaoka remarked that international environmental policy of Japan in the late 1980s and early 1990s have the same three characteristics as domestic environmental policy in 1960s and 1970s. Three characteristic of Japanese domestic and international environmental policies are reactive disposition, technological emphasis with a lower priority on natural conservation.

Miyaoka raised the issue of ozone depletion to explain the passive response and reactive character of Japan's policy on international environmental issue around 1990. He addressed that technological development and financial support have long been the major contributors to Japan's solution of global environmental problems. Global economic activity and consumption of Japan's natural resources are the main reasons that Japan was criticized for being unconcerned about nature conservation. The cases of the world's wildlife, such as whaling and tropical forest, are mentioned to illustrate the character of Japanese international environmental policy on natural conservation. In conclusion, Miyaoka compared these three characteristics of environmental policy of Japan to the United States in conclusion. However, he accepted that domestic and global environmental policies of Japan have been changed gradually to be more proactive and comprehensive since the 1990s.

Anny Wong has written *'The Roots of Japan's International Environmental Policies'*¹⁵. Wong studied Japan's policies towards international environmental issues focusing on case studies of whaling, deforestation in the tropics and transboundary acid deposition in East Asia. However, the work mainly focused on the global environment in Japanese politics and major domestic policy actors in each case study and how interaction between domestic and international politics affects foreign policy

¹⁴ Isao Miyaoka, "Policy Legacies: Japan's Responses to Domestic and International Environmental Problems," *USJP Occasional Paper* (U.S.A.: Program on U.S.-Japan Relations, Harvard University, 2000).

¹⁵ Anny Wong.

making in Japan, especially international environmental policies, including the question, are what the driving factors behind the global environment policies and responses of the Japanese government?.

Wong has applied many theories as the conceptual frameworks for analyzing the roots of Japanese foreign policy. First, complex interdependence is used to study connections between bureaucratic politics and trans-governmental relations. Second, regime theory is taken to explain how and why international institutions of governance and cooperation are organized and how they affect sub-systematic policy making, especially to the environment. Third, two-level games theory of Putnam is applied to understand the inter-level dynamics which influenced foreign policy making. Lastly, the bureaucratic politics model reviews the domestic policy process in Japan.

Wong thoroughly demonstrated who the influential actors in the Japanese government bureaucracy in each case study are and how they exercise their powers to consider and to convince other governmental actors towards Japanese's decision on policy process and responses. Different groups in Japan have different interests in international environmental issues. In this regard, he explained that the bureaucratic politic model remains a very strong influence on the decision making process which has an effect on Japanese foreign policy because today the Japanese government has an intention to respond to the issues of environment; as a result environmental policies become a new competitive area for many ministries and agencies to have a new resource for expanding power and influence. In addition, he believed that there are motivations behind policies and actions of the government of Japan towards the global environment such as Japanese interest in access to resources and energy, Japanese consideration of economic costs and benefits as well as interests of the Japanese bureaucratic.

4. Leadership on environmental issues

An important role of Japan toward global environment was studied by Yasuko Kameyama in *'Can Japan be an Environmental Leader?'*¹⁶. Kameyama reviewed Japan's role in international activity toward a sustainable development since the 1992 Earth Summit until the 2002 Johannesburg Summit. He analyzed that the performance of Japan during the Earth Summit was a reactive response to external demands showing her own initiative. However, environmental issues have become the significant issue of concern for Japanese policy-makers at domestic, regional and international levels. With regard to the issue of climate change, Kameyama reference noted that Japan acted as a mediator between the European Union and the United States. Besides, Japan's participation at the Johannesburg Summit showed a more active and initiative role. In conclusion, he thought that although the role of Japan was enhanced, Japan has not consistently been a major player because of a traditional cultural orientation which does not want to take the lead.

The leadership role of Japan towards environment was also studied by Miranda A. Schreurs in *'Assessing Japan's Role as a Global Environmental Leader'*¹⁷. Schreurs examined that the attitude of the government of Japan towards environmental change since the late 1980s. The role of Japan towards international environment was analyzed by focusing on the role of Japanese industries and trading companies as well as the government of Japan and Official Development Assistance. According to Schreurs reference, the Japanese government and Japan's industries desired to improve their negative environmental image at the international level. In addition, the Japanese NGOs became stronger and had a more important role in environmental movement. Cooperation and efforts of the government of Japan on global environmental agreements, such as the Kyoto Protocol, were mentioned to explain the role of Japan. Schreurs demonstrated that the performance of Japan has shown much improvement of environmental efforts for sustainable development; however the government of Japan and Japanese companies were still the targeted

¹⁶ Yasuko Kameyama, "Can Japan be an Environmental Leader?," *Politics and the Life Sciences* (September 2002): 66-71.

¹⁷ Miranda A. Schreurs, "Assessing Japan's Role as a Global Environmental Leader," *Policy and Society* 1 (2004): 88-110.

criticism due to specific policies such as the whaling issue. An ecological footprint and Environmental Sustainability Index (ESI) of Japan were noted. Schreurs concluded that the environmental engagement of Japan has been enhanced and environmental policies have been strongly developed. Countries in the Asian region as well as Western countries can learn about energy conservation and resource recycling from Japan.

The roles of Japan and her changing gesture with increasing environmental concerns in the international community have been documented. *'An Integral Part of the World: Japan's Ties with International Community'*¹⁸ was presented by Kawahara Yūzō showed the role of Japan with the efforts of environmental contributions through the Japan ODA, the Kyoto Protocol and other environmental protection and management projects in developing countries in order to have close relation and connection with countries around the world. However, some controversial issues, particularly whaling and deforestation, the role and policy of Japanese government in international environmental affairs has been still under criticism.

The examples of regional efforts of Japan towards environmental issues were focused in the topic of *'Japan and South-East Asia's Environment'*¹⁹ written by Owen Cameron and the issue of *'Environment and Cooperation'*²⁰ between Japan and Northeast Asia studied by Karla S. Smith. Besides, the leader role of Japan at regional level was highlighted in *'The Rise of an Environmental Superpower? Evaluating Japanese Environmental Aid to Southeast Asia'*²¹ by Peter Dauvergne and the article of *'Japan's Regional Environmental Leadership'*²² by Jeff Graham.

¹⁸ Kawahara Yūzō, "An Integral Part of the World: Japan's Ties with the International Community," *Japan Echo* 32 (2005).

¹⁹ Owen Cameron, "Japan and South-East Asia's Environment," in *Environmental Change in South-East Asia: People, politics and Sustainable Development*, eds. Michael J.G. Parnwell and Raymond L. Bryant (London: Routledge, 1996).

²⁰ Karla S. Smith, "Japan and Cooperation," in *Japan and Russia in Northeast Asia: Partners in the 21st Century*, eds. Vladimir I. Ivanov and Karla S. Smith (the United States of America: Greenwood Publishing, 1999).

²¹ Peter Dauvergne, "The Rise of an Environmental Superpower? Evaluating Japanese Environmental Aid to Southeast Asia," in *Japan and East Asian Regionalism*, ed. Javed S. Maswood (London: Routledge, 2002).

²² Jeff Graham, "Japan's Regional Environmental Leadership," *Asian Study Review* (2004): 283-302.

Regarding the role of Japan at national level, Miranda A. Schreurs presented the environmental response of Japan in *'Domestic Institutions and International Environmental Agendas in Japan and Germany'*²³ and Pradyumna Prasad Karan examined Japan and environmental preservation in *'Japan in the 21st Century: Environment, Economy and Society'*²⁴.

Meanwhile, the topic of Japanese domestic experience to deal with waste treatment is very important in order to explain Japanese policy implementation and the role of Japan with regard to this issue.

In case of the domestic experience of Japan in waste management, the issue of *'Recent Trend in Recycling Activities and Waste Management'*²⁵ was reviewed by Masaru Tanaka. Tanaka demonstrated the basic principles of Japan's waste disposal and briefly noted the original legislation of waste management under the Dirt Removal Law in 1900. Tanaka explained that the Public Cleansing Law in 1954 and the Waste Disposal and Public Cleansing Law in 1970 are the major framework of existing waste management legislation of Japan. The development of Japan's waste-related legislation was shown. Tanaka mentioned that the main purpose of waste disposal in the early day of Japan was for the public hygiene. The present waste management of Japan importantly focuses on global environmental preservation. Disposal processes of municipal solid waste in 1995 and industrial waste in 1996 were reviewed. Recyclable waste through voluntary recycling activities by the local community and private sector is the significant efforts for Japan's waste treatment. Moreover, the revision of the Waste Disposal and Public Cleansing Law in 1970 and the enactment of the Promotion of Use of Recyclable Waste Law in 1991 have brought about a substantial increase of recycling rates. Due to high consumption of the world natural resources, Tanaka suggested that Japan must play an active role in the preservation of resources and the global environment. Close cooperation among

²³ Miranda A. Schreurs, "Domestic Institutions and International Environmental Agendas in Japan and Germany," in *The Internationalization of Environmental Protection*, eds. Miranda A. Schreurs and Elizabeth Economy (United Kingdom: Cambridge University Press, 1997).

²⁴ Pradyumna Prasad Karan, *Japan in the 21st Century: Environment, Economy and Society* (Kentucky: University Press of Kentucky: 2005).

²⁵ Masaru Tanaka, "Recent Trend in Recycling Activities and Waste Management in Japan," *Journal of Material Cycles Waste Management* (1999): 10-16.

the administrative authorities, citizens and producers are able to establish a more efficient recycling system.

In connection of reviewed literature regarding Japan and environmental issues as aforementioned, the early 1990s is the furthest study of Japan's environmental policy and response. No individual or group studies the specific role of the Japanese government. Especially since the 1990s, the role of the government of Japan and her environmental national and international policy has developed positively. However, the focus of Japan's government at the international level has not been mentioned in detail. With regard to Japan and environment, the latest issue of leadership at global level is the focus of this research. For the moment, it is largely agreed that Japan's role and awareness towards environmental issues has been changed owing to the emergence of global environmental issues extensively in international agendas and dramatic environmental problems throughout the world. The environment is an issue of great concern. The majority of works addressed matter of popular or debatable issues of environment in the world today such as climate change, deforestation as well as ozone depletion. Accordingly, this research will extend the area of issues studying the role of the Japanese government, such as initiative , cooperative role as well as Japanese environmental assistance in respect to an issue of waste management as well as environmental policies through the concept of 3R Initiative, which a large number of developed and developing countries have agreed to cooperate on waste management including analyzing the potentiality of Japanese government and national interests supporting environmental policy responses to achieve a position of an international environmental leadership.