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Japanese and Korean Corporate Sustainability Management
-A Comparative Study based on Questionnaire Survey Results

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1. Introduction

1) Objectives

In the world of global environmental problems growing and economy globalizing, companies are requested to take more positive measures on environmental conservation activities from global points of views. As global standards on corporate management such as ISO14000 series of environmental management and GRI (Global Reporting Initiative) sustainability reporting guidelines develop, companies need not only to adopt them but also to incorporate them into every business activity. Companies in different countries can appreciate trade and foreign direct investment through mutual understanding of good practices, which are valuable learning resources in each country, but in order to truly learn in trans-national scale, it is necessary to understand corporate circumstances such as institutional backgrounds of the country and trends of corporate management reform, in addition to corporate action itself.

This paper aims to identify differences and similarities between Japanese and Korean corporate managements in terms of environmental conservation practices and their institutional frameworks. Similar efforts have been made in the countries regarding the introduction of ISO14001 etc. However, there seems to be much difference between their managements, which can be symbolized by different keywords: while Japan often uses “sustainability management”, keyword of Korea is “environmental business” or “environmental technology.” This difference may partly come from the perception gap toward environmental problems: Japan is eager to attain the goal of greenhouse gas reduction whereas Korea puts emphasis on improving air quality in urban areas to the OECD level. The other possible cause is different industrial structures: Korean industry is much more export-oriented than Japanese one. This paper is expected to contribute to mutual learning for company practitioners, policy makers and policy researchers who are concerned about the practices on corporate sustainability management or environmental business.

2) Research methods

Literature study was conducted for analysing the institutional backgrounds of

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companies in both countries, and then comparative study was conducted based on the questionnaire survey results in terms of corporate consciousness and their actual activities. For Japanese data, it was quoted from "Environmentally Sound Corporate Activity Survey", which is conducted by the Ministry of the Environment of Japan (MOEJ) every year. This survey targets at Japanese companies listed in stock exchange markets and the ones with more than 500 employees, and asks about corporate stance to the environment such as environmental management policy, environmental management status such as ISO14001 certificates, and relationship with contractors and communities. The survey results are publicized by MOEJ every year. In the meanwhile, since there is no data on Korea in this regard, a questionnaire survey was conducted by the authors. In doing so, the questions were designed to contain the same content as the Japanese ones in an effort to make comparison possible. The detailed survey results of both countries are attached to this paper for reference.

The survey by MOEJ was conducted on 6,360 companies and sufficient data was gathered on various industrial sectors. However, in case of Korean survey, except manufacturing industry, data was not collected sufficiently despite the fact that it was conducted on all the listed companies in Seoul Stock Exchange. For this reason, this paper focuses on the comparison between Japanese and Korean manufacturing companies as much as possible. Regarding the terms used, "companies (manufacture)" indicates that the comparison is based on manufacturing company data. When manufacturing company data is not available in the report of MOEJ survey, comparison was made using data on all the listed companies and expressed as "companies (all industries)."

3) Japanese and Korean companies in the world

Before making comparison between the two countries, it is worth summarizing how their environmental conservation activities have been perceived in the world. With regard to macro data of each country, various indicators have been developed, which are listed in Earthwatch Indicators of UNEP. Among these indicators, "2002 Environmental Sustainability Index" presented by World Economic Forum in particular is closely related to corporate voluntary activities as it features a sub-evaluation item called "Private Sector Responsiveness." According to the national sustainability ranking conducted from various perspectives including air quality and ecosystem, among the total of 142 countries listed on the ranking, three North European countries ---Finland, Norway and Sweden--- monopolize the podium while Japan and Korea ranks 78th and 135th respectively. As far as social institutions are concerned, both Japan and Korea have capability and implemented various measures. However, they both are under quite strong environmental pressures from air pollution, water contamination, waste disposal and so forth. This is contributing to the low ranks in terms of national sustainability.

Table 1: Items included in "Private Sector Responsiveness" indicator

Items	Japan	Korea	Ave.
①Number of ISO14001 certified companies per million $ GDP	23.16	11.86	5.36
②Percent of eligible companies in Dow Jones Sustainability Group Index	17.90	0.00	24.7
③Average Innovest EcoValue rating of firms	6.16	--	4.45
④Number of WBCSD members per GDP	6.47	3.04	2.98
⑤World Economic Forum Survey Questions on Private Sector Environmental Innovation	1.44	0.18	-0.03

Regarding "Private Sector Responsiveness," both Japan and Korea appreciate much higher ranks: they moved up to 11th and 31st respectively. Five Northern European countries ---Finland, Switzerland, Croatia, Sweden and Norway---account for the top five, Britain, Germany and US ranks 9th, 12th and 24th respectively. Table 1 shows the five items which constitute "Private Sector Responsiveness" and scores of the two countries. Some of the five items are advantageous to Western nations, but the indicators are still useful for grasping the status of Japan and Korea in the world. For instance, with regard to "Number of ISO14001 certified companies per million $ GDP" and "World Economic Forum Survey Questions on Private Sector Environmental Innovation," both Japanese and Korean corporations are performing considerably well, which shows that steady voluntary efforts have been made by a wide range corporations in both countries.

2. Environmental Policies of National Government

1) History of environmental administration

In Japan, industrial pollution began to emerge after rapid economic growth started in 1955,. In response to this issue, environmental regulation was initiated and developed through initiatives of local governments. After Basic Law for Environmental Pollution Control was enacted in 1967, Environment Agency was established and further enhancement of legal system was taken by the "Public Pollution Diet" in 1970. Afterward, as the environmental problems caused by non-point sources such as household effluent and automobile exhaust gas became more severe, various countermeasures like improvement of sewerage system and emission control on automobiles were taken. Since the late 1980's, measures against global environmental issues such as ozone layer depletion, acid rain and global warming have been taken with the development of international cooperative frameworks. As a result of Japanese administrative reform in January 2001, Environment Agency, which was a part of

Prime Minister's Office, attained promotion to become Ministry of the Environment with reinforced budget and personnel. Since the collapse of economic bubble in 1990, economic structural reforms have also been taken and explored.

Table 2: Major environmental events in Japan and Korea

	World	Japan	Korea
Around 1955		Start of high economic growth	
Around 1965			Start of high economic growth
1963			Pollution Prevention Act
1964		Joined OECD	
1967		Basic Law for Environmental Pollution Control	
1970		Environment Agency	
1972	Statement for Human Environmental Quality		
1977			Environmental Preservation Act
1980			Environment Administration
1990			・Basic Environmental Policy Act ・Ministry of Environment
1992	Earth Summit		
1993		The Basic Environment Law	
1996	ISO14001 certification system		Joined OECD
1997			IMF-controlled economy
2001		Ministry of the Environment	
2002	WSSD		

Korean high economic growth began in the mid 1960's. In 1980's, Environment Administration was set up in the national government along with six Regional Environmental Monitoring Offices, and public corporations which are responsible for waste treatment etc were also set up. In 1990, Environment Administration and the Regional Environmental Monitoring Offices were strengthened to become Ministry of Environment and Regional Environmental Management Offices respectively. In 1994 as part of governmental organization reforms, additional reinforcement was extended to Ministry of Environment through enhancing its power, function and human resource. By joining OECD in 1996, Korea made its debut as a developed country; however, as a result of currency crisis in 1997, they were compelled to accept support of IMF. At

present, Korean economic structural reforms continue to be developed with a central focus on chaebol reform under the leadership of national government

2)Outline of environmental administration

Presently, Ministry of the Environment of Japan has approximately 1,000 people of workforce and 262 billion yen of budget (US$2.2 billion, FY2003). Their major tasks include comprehensive arrangement of environmental policies, global environment conservation, environmental management (air, water etc.), natural environment conservation, promotion of proper treatment and recycling of waste materials toward sound material-cycle society and affairs related to environmental health such as chemicals and relief of victims from health hazard. The ministry's affairs can be classified into the ones for which the ministry is fully responsible (e.g. government-wide environmental policy planning) and the ones which the ministry shares responsibility with other ministries (e.g. countermeasures against global warming) and so forth.

Policy formulations on environmental management and environmental business are conducted by the Ministry of the Environment (MOE) and the Ministry of Economy, Trade and Industry (METI). The major tasks of MOE are the promotion of environmental management system for further enhancing voluntary activities of corporations, developing environmental management tools such as the guidelines for environmental accounting, environmental reporting and environmental performance indicators. In addition, regarding environmental business and environmental technology, they propose visions and implement policies to further foster research and technology development. On the other hand, METI plays central role in establishing industrial and energy policies, and formulates policies for promoting recycle-oriented business, developing guidelines for environmental management accounting and for environmental reporting with a high regard for stakeholders, and exploring prospective direction of environmental management and environmental business which will realize "coexistence of environment and economy." Regarding the areas such as dissemination of Kyoto Protocol , MOE and METI are working collaboratively.

The Ministry of Environment of Korea has approximately 1,340 people of workforce and 1.38 trillion won of budget (US$1.3 billion, FY2002) plus special account. The main components of the ministry are: planning and management, environmental policy, nature conservation, air quality management, water quality management, water supply and sewage and waste management and recycling. Unlike Japanese MOE, global environment is not included. Instead, Korean MOE is in charge of water supply and sewage, which comes under Ministry of Health, Labour and Welfare in Japanese case. Additionally, Ministry of Commerce, Industry and Energy of Korea deals with tasks related to global warming, energy saving, new energy development, liberalization of energy market and formulating eco-friendly industrial structure, while other

environmental tasks such as promotion of environmental business and environmental technology are covered mainly by Ministry of Environment.

Moreover, public corporations established under the authority of the Basic Environmental Policy Act are playing central roles in implementing environmental policies in Korea. For example, Korea Resource Recovery & Reutilization Corporation is responsible for waste treatment and recycling, Environmental Management Corporation deals with environmental facility maintenance including air/water monitoring and with verification of environmental technology, and Korea Environmental Preservation Association is in charge of cultivating human resources and public relations.

Table 3: Organizational Structures of the two Ministries

MOE-Japan	MOE-Korea
・Environmental Policy Bureau ・Global Environment Bureau ・Environmental Management Bureau ・Water Environment Dept. ・Nature Conservation Bureau ・Waste Management and Recycling Dept. ・Environmental Health Dept. ・Minister's Secretariat	・General Service Division ・Planning and Management Office ・Environmental Policy Bureau ・Nature Conservation Bureau ・Air Quality Management Bureau ・Water Quality Management Bureau ・Water Supply and Sewage Bureau ・Waste Management and Recycling Bureau

The more diversified environmental issue and its countermeasures become, the more significant coordination across the ministries and other sectors are. It takes the involvement of whole nation in tackling with global environmental issues, particularly when it comes to global warming. In Japanese case, one of the organizations is Global Warming Prevention Headquarters, which operates under the direct control of prime minister along with Council on Economic and Fiscal Policy, Central Disaster Prevention Council, Council for Science and Technology Policy, IT Strategy Headquarters and so forth. In addition, there is an advisory body of the environment minister, called Central Environment Council, which is designed to encourage exchanging and coordinating views and opinions with the participation from academics, industry and other organizations in Japan. Moreover, advisory body of METI called Advisory Committee for Natural Resources and Energy is coping with energy issues, which are closely related to

global warming.

In Korean case, owing to its presidential government, advisory committees are usually set up for respective national issues (e.g. science technology, computerization) under the direct control of the president. Regarding global environmental problems, Presidential Council for Sustainable Development (PCSD) was set up as to respond to the recommendation of Earth Summit 1992 and to serve for National Council for Sustainable Development (NCSD) in an effort to further develop Rio agreement. Among NCSD organizations established in over 70 countries, Korean effort is especially outstanding for having a direct presidential advisory committee. Meanwhile, Japanese NCSD was established under the initiative of private sector, and it is called "Japan Council for Sustainable Development (JCSD)."

The roles of local government are considerably different between Japan and Korea. In Japan, national government enacts the regulations regarding pollution control; however, it is local governments that actually enforce the laws and establish and implement ordinances according to the situation of the respective region. Furthermore, as the decentralization of authority proceeds, local governments put greater efforts into regional development, many of which include environmental themes. In case of Korea, some governmental reforms have been observed: for example, the head of the local government used to be appointed by the national government, but instead, public election system has been introduced at present. However, environmental administration of local government in Korea centers on water and sewerage, greening of urban area and waste treatment. With regard to environmental monitoring and functions as information center, public corporations of national government are taking charge of them. One of the contributing factors for the different administration structures of the two countries may come from the difference of national land area: Korean land area is approximately 98,000km^2 , which is far smaller than Japanese one of about 378,000km^2 .

3) Basic structure of environmental policies

Fundamentals of Japanese environmental policies lie in the Basic Environment Law formulated in 1993, and the Basic Environment Plan developed according to the basic law. The Basic Environment Law defines basic policies, concerning global environmental conservation for example, and embraces new policy measures in addition to conventional regulations. For achieving sustainable society, the Basic Environment Plan features four major goals in terms of "recycling," "coexistence," "participation," and "international cooperation" along with concrete action plans for each goal. Additionally, the Basic Law for Establishing the Recycling-based Society was set up in 2000 with an aim to cope with escalation of waste treatment problem. The responsibility of the state government, local governments, citizens and corporations are defined in the Basic Plan

for Establishing the Recycling-based Society.

Table 4: Fundamentals of environmental policies

Japan	Korea
・The Basic Environment Law & the Basic Environment Plan ・The Basic Law for Establishing the Recycling-based Society& the Basic Plan for Establishing the Recycling-based Society	・Basic Environmental Policy Act ・Green Vision 21

Korean environmental policies are based on Basic Environmental Policy Act enacted in 1990. The position of this law is between national constitution, which clearly states environment rights, and individual laws like Air Quality Preservation Act, which features basic concepts such as Polluter Pays Principles and emphasizes the significance of introducing environmental standards and action plans. They also have a long-term project called Green Vision 21 to be implemented from 1995 through 2005, which covers a wide range of environmental issues for achieving sustainable development: enforcing regulations, introducing economic measures for improving environment quality, chemical substance management, promoting environmental industry or technology, leading roles in global environmental measures, and clarifying budget and financial resources for accomplishing the vision. This 10-year project is divided into two 5-year medium-terms with different financial sources: one has numerical targets of lowering concentration of air pollution and improving recycling rate with specified plan and budget (public funds and private funds respectively). The other sets similar goals as mentioned but with different financial resource: collected surcharges.

According to economic policy guidance 2003 published by Economic Ministry of Finance of Korean government, it predicts conventional regulatory measures of environmental policies are likely to shift to economic measures, voluntary control and regulation of total emission. It further estimates environmental technology will be highly evaluated and intensively promoted as high value-added technology like information technology and biotechnology. Also Korean government intends to formulate comprehensive plan for environmental technology development in the near future with all related ministries collaborating each other. Korean government was quite successful in establishing information strategy plans in early stage, which has made South Korea a leading country in the field of broadbandization of the Internet and popularization of third generation mobile phone in a short period. The country of Korea may well be called a “digital laboratory” now. The state government has been further encouraging the

leading-edge activities of information industry, “traction vehicle” of Korean economy. Environmental technology is expected to become another promising industry in years to come. Japan, on the other hand, lagged slightly behind Korea in terms of launching information strategy plan, it is deploying various projects regarding biomass technology and developing fuel cell on national level.

3. Effort of Industrial Sector in Japan and Korea

Japan Business Federation (Nippon Keidanren) is a representative organization of Japanese economic quarter which has membership of over 1,500 comprised of leading Japanese corporations, industrial associations on national levels and local economic associations. The federation has established “Charter of Corporate Behavior” and “Global Environment Charter,” and has urged its members to adhere these charters. Meanwhile the federation has instituted “Appeal on Environment” in 1996 in an attempt to implement concrete actions to tackle global environmental problems, and formulated voluntary action plans in which greenhouse gas reduction targets of each industrial sector and its method are stipulated. Since this action plan holds a great significance in achieving greenhouse gas reduction targets of Japan as a whole, ensuring the feasibility of implementing voluntary action has become a controversial issue. Japan Business Federation is a comprehensive economic organization born in May 2002 as a result of amalgamation of Keidanren (Japan Federation of Economic Organizations) and Nikkeiren (Japan Federation of Employers' Associations). Upon amalgamation, they develop a new Keidanren vision called “Japan 2025: Envisioning a Vibrant, Attractive Nation in the Twenty-First Century.” In this vision, the federation advocates the concept, “a state founded on the principles of environmental protection” as a strategy for realizing collaboration between citizens, corporations and local/national governments. The concept proposes Japan contribute to resolving environmental issues by way of providing technology and know-how on energy saving/ resource saving that are cultivated against environmental handicaps of having few natural resources.

Japan Chamber of Commerce and Industry has membership of approximately 530 chamber of commerce throughout the nation and it represents the opinion of over 160 corporations of various industries. They are characterized by being local, comprehensive, public (non-profit and non-political) and international. Their principal mission is making policy recommendations to the state government, ministries and political parties regarding wide range of issues such as economic measures, development of small and medium companies, public welfare and environmental issue.

Japan Association of Corporate Executives (Keizai Doyukai) has a distinctive feature in

its membership comprised of over 1,400 top executives from 900 corporations all sharing the common awareness as key player of the company and each participating as an individual to discuss various issues of domestic and abroad. They have set up various types of committees to propose and implement concrete measures for forming policies. In December 2000, "21st Century Declaration" was released, in which roles and responsibilities of corporations were articulated. It points out corporations are responsible for creation and expansion of not only economic value but also values of society and people. Furthermore, they published the 15th corporate white paper on "Market Evolution and CSR Management: Toward Building Integrity and Creating Stakeholder Value" in March 2003 with an aim to urge corporate managers to conduct self-evaluation regarding CSR (Corporate Social Responsibility). Criteria along with evaluation sheet are proposed in the publication to facilitate the self-evaluation.

Table 5: Major Economic Organizations

Japan	Korea
・Japan Business Federation ・Japan Chamber of Commerce and Industry ・Japan Association of Corporate Executives	・Korean Chamber of Commerce and Industry (KCCI) ・The Federation of Korean Industries (FKI)

The most dominant economic organization of Korea is Korean Chamber of Commerce and Industry (KCCI). With the membership of 63 local chambers of commerce and about 2 million individual members, KCCI has made significant contribution to economic growth of Korea. Their major activities cover conducting researches, organizing seminars, business consulting and making proposals to the state government by summarizing opinions from various industrial sectors. To serve these purposes, they have formulated various types of committees including Environment and Safety Committee. Concerning the issue of global warming, Korea belongs to Non Annex-I country of U.N. Framework Convention on Climate Change and has ratified Kyoto Protocol. Korea is not yet imposed of concrete target for reducing carbon-dioxide emissions at present. Much attention has been drawn how this will be changed in the next period staring from 2013. Under these circumstances, KCCI calls on the state government to increase economic incentives based on the voluntary agreement with the government and actively advance infrastructure development regarding emission trading, expressing "Although Korea is a member nation of the OECD, economically, Korea has yet to advance from its developing country status, therefore in order to increase public awareness, continued high economic growth is required." Also, KCCI perceives environmental management as one of the key factors for creating new corporate competitiveness and introduces advanced case examples in their publication on environmental management.

With membership of over 400 corporations and organizations, the Federation of Korean Industries (FKI) is a leading organization of Korea regarding the issue of liberalization of market economy. Their missions include rationalization of economic structure, making proposals on regulatory reforms, continuing cooperative relationship with advanced nations regarding corporate management, balancing between large corporations and small and medium companies, and providing support to socio-cultural activities. Korean Business Council for Sustainable Development (KBCSD), one of the regional networks of World Business Council for Sustainable Development (WBCSD, headquarter in Switzerland), has exchanged a memorandum with WBCSD in December 2001 for cooperative relationship. Under the steering committee, KBCSD has developed some sub-committees, which conduct comprehensive research on environmental issues such as environmental management in developed nations, countermeasures against global environmental problems like CDM, harmonization of industrial policies and environmental policies and so forth. In addition, FKI is involved in supporting fair and transparent management by establishing Support Center for Corporate Ethics.

4. Corporate Attitude toward the Environment

In the pervious sections, policies and frameworks that surround corporations have been discussed. From this section, corporate attitude toward the environment including their awareness and concrete actions will be analyzed based on the results of questionnaire survey directed to corporations in Japan and Korea.

Corporate perception toward the environment has a significant influence in forming basic relationship between corporate and the environment. When asked a question about this point with five options: a chance of environmental business, social commitment, restriction, key factor and strategy, Japanese corporations responded 1) key factor, 2) social commitment and 3) strategy in descending order, while Korean corporations answered 1) strategy, 2) restriction and 3) key factor. The result indicates fewer Korean companies regard environment as “social commitment” compared to Japanese while placing great emphasis on corporate ethics. In the meanwhile, more Korean corporations consider environment as “restriction,” meaning keeping environmental regulations is enough (Question-1). Moreover, most Korean companies replied “strategy,” which well explains Korea being an active nation in implementing policies regarding environmental technology/industry.

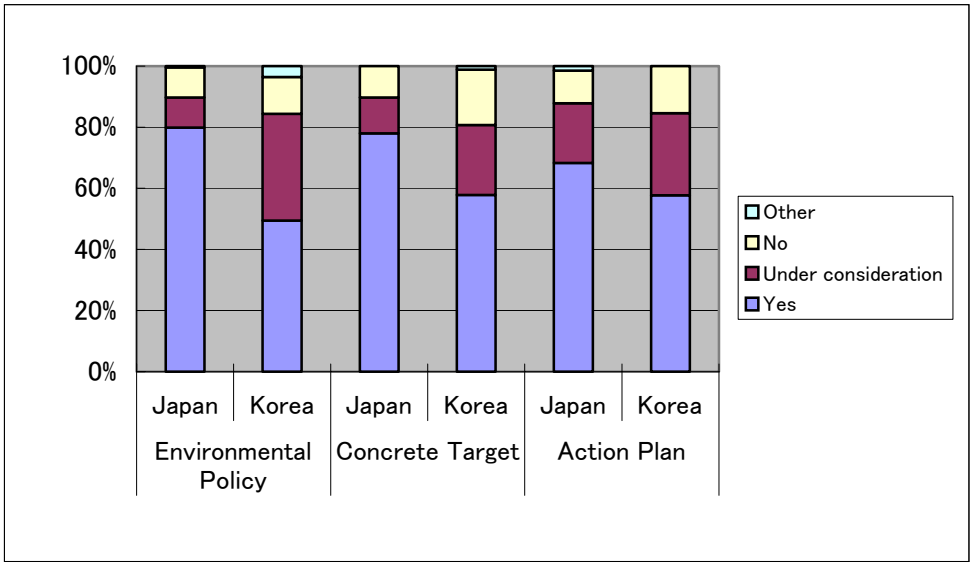

Figure 1: Formulation of environmental policy/target/action plan

Figure 1 shows present status of corporations concerning essential factors for conducting environmental management: environmental policy, environmental target and concrete action plan. Concerning respective items, Japanese corporations are more advanced than Korean; however, if taking the number of "in the planning stage" into account, no particular difference is observed between the two countries. Another tendency to be noted is Japanese corporations formulate 1) environmental policy, 2) environmental target and 3) concrete action plan in order, while some Korean corporations do not follow this order and develop environmental target and action plan before setting environmental policy. Meanwhile, with respect to Japanese case, the survey result reveals distinctive feature of manufacturing industry which may suggest it is the leading industry of Japanese economy in terms of environmental management. According to the result, 79.9% of manufactures have formulated environmental policy (cf.: 71.7% for all industries), 78.0% have set environmental target (cf.: 68.7% for all industries) and 68.3% have developed concrete action plan (cf.: 61.6% for all industries).

Environmental education for employees is another important factor in promoting company-wide environmental activities. The survey result displays almost 80% of corporations of both countries are implementing some sort of environmental education (Question-5). In this context, both countries have introduced a system for fostering environmental engineers within a company, providing more opportunities for environmental education outside the company.

When it comes to corporate efforts concerning environmental business, "environmental management" may be a keyword in Japanese case. Japan has experience of overcoming environmental pollution caused by the heavy industry in the past, which may have

urged more companies to deal with environmental business. According to the survey outcome of manufacturing industry, 45.2% of Japanese corporations are already engaged in environmental business while only 14.3% in case of Korean corporations. Yet if the numbers for "in the planning stage" and "interested" are to be included in the count, both countries equally mark almost 80% (Question-23).

With respect to interest in particular area of environmental business, Japanese companies show their deep concern to various areas: "equipments that reduce the emission of pollutants," "environmentally-sound products" and "services that contribute to environmental conservation." Meanwhile in Korean case, their interest is centered on "environmentally-sound products" (Question-24).

When asked about hindrances to environmental business, "lack of consumers' interest" was the most major response among both countries, followed by "market size is not certain" and "not profitable" in case of Japan while "insufficient support from government" and "lack of information" in Korean case. This result indicates the difference between the two countries regarding effort in conducting market research and establishing relationship between industry and national government.

The 21st century is often described as "the century of the environment": there is an increasing expectation for environmental business from the state government in formulating industrial policies. However, the roles of national government may be different to a considerable extent between the two countries. When holding an exhibition of environmental business, for instance, national government usually plays a central role in Korea, while industrial sector and local government act as organizers in many cases of Japan. As deregulation of market proceeds, more expectations are to be directed to individual company from market regarding their attitude toward environment. Under this circumstance, corporate executives are expected to reform their way of thinking.

5. Environmental Management

In this section, environmental management system, which serves the basis for environmental management, will be discussed along with environmental label, environmental communication and environmental accounting, all of which are principal tools for implementing environmental management with an aim to compare present status of environmental management in Japan and Korea.

1) Environmental management system (EMS)
The number of ISO14001 environmental management system certification obtained is

rapidly increasing in both countries: Korea obtained 1,065 while Japan marks 10,620 as of 2002. The Japanese number is remarkable in particular when even seen on a global level. The same applies to the case of ISO9001 quality management system, both countries making consistent increase in the number obtained: 33,964 for Japan and 14,520 for Korea. As these numbers indicate, far more companies of both countries have obtained ISO9001 certification than ISO14001, which suggests prospective possibilities of ISO14001 environmental management system to be further disseminated in both nations. To make closer comparison of the recent data of 2002, Japan has obtained nearly 10 times as many ISO 14001 certifications and almost three times as many ISO9001 certification as Korea.

Table 6: ISO certification obtained

	Japan	Korea
ISO14001	10,620	1,065
ISO9001	33,964	14,520

Source: ISO Survey (2002)

Infrastructure for obtaining ISO14001 has been developed to the same extent in Japan and Korea. Both countries have accreditation board for certifying registration bodies: Japan Accreditation Board and Korea Accreditation Board, as well as training institutions for auditors. Some 37 registered bodies of Japan and 19 of Korea have been accredited by those boards.

In the meanwhile, notable difference is observed in terms of corporate efforts for obtaining ISO14001. According to the survey result, 73.5% of Japanese manufacturing companies either have already obtained the certification at all sites or are in preparation, while only 47% of Korean manufacturing companies are making this effort (Question-6). Also most of Japanese and Korean corporations who obtained ISO14001 answered that the certification has brought benefit to the management in terms of raising awareness toward environment, lowering environmental loads and reducing cost: only 1% responded “not much benefit.”

Effort has been made for building other types of EMS besides ISO14001. In Japan “Environmental Evaluation Program (Eco-Action 21),” EMS targeted for small and medium sized companies, has been promoted by the Ministry of the Environment. In addition, some local governments are engaged in developing simplified certification system which meets local characteristics. They intend to further improve their original system by influencing each other.

In the meantime, the Ministry of Environment of Korea has been promoting Environment-friendly Company Certification System. This certification is given to

corporation implementing preventative environmental measures. As of the end of 2001, some 126 companies received the certification with privilege of simpler procedure of environmental regulations. There are discussions over the relationship between ISO14001 and Environment-friendly Company Certification System; whether it is appropriate a company automatically receive Environment-friendly Company Certification when it obtains ISO14001 certification. Those companies who were given Environment-friendly Certification have jointly established network for exchanging information on best practices and providing support for small and medium sized companies. In relation to environmental management system, some Korean companies insist the significance of EHS (Environment, Health and Safety) Integrated Management. Many others have reported on obtaining other certifications such as OHSAS18001 (Occupational Health and Safety Assessment Series), KOSHA2000 (Korea Occupational Safety and Health Agency) and KGS18001 (Korea Gas Safety Corporation) in the questionnaire survey.

2) Environmental labels

In ISO14000 series, environmental label and environmental declaration are established as standards for evaluating environmental impact of goods and services. Environmental label are classified into three categories: Type-I (ISO14024), Type-II (ISO14021) and Type-III (TR14025). Type-I is the label certified by third party, Type-II is self-declaration based on the requirements for environmental claims, and Type-III is the label showing quantitative information on product's environmental impact based on LCA criteria (environmental information disclosure: to be certified as an international standard).

Type-I Eco-labels are approved by a third-party certification organization. The organization sets approval criteria for each product category and approves application from manufacturers. Japan Environment Association (JEA) and Korea Environmental Labelling Association (KELA) are responsible in respective countries, and Type-I programs run by each organization are called "Eco Mark Program" of Japan and "Environmental Labelling Program" of Korea. There are three indicator numbers by which development of eco-label program may be measured: the number of categories with complete evaluation method – certified product brands - approved manufacturers. As of December 2001, Japan has marked 68 - 4,849 - 1,714, while Korea has reached 79 – 330 – 185 for respective numbers. These numbers can be favorably compared with those of Blue Angel Program of Germany (88 - 3,669 – 779) or Nordic Swan Program of Sweden (53 – (no data) – 536). The source of previous data is Global Ecolabelling Network (GEN), an international association of third-party, environmental performance labelling organizations for Type-I. Administration Division of GEN is located in the office of JEA.

Table 7: Third-party organization of eco-labelling

	Japan	Korea
Type-I	Japan Environment Association (JEA) (Related to Ministry of the Environment, Japan)	Korea Environmental Labelling Association (KELA) (Affiliated with Ministry of Environment, Korea)
Product category	68	79
Product brand	4,849	330
Company	1,714	185
Type-III	Japan Environmental Management Association for Industry (JEMAI) (Related to Ministry of Economy, Trade and Industry, Japan)	KELA (Administration) KMC (Korea Management Corporation) (Certification) KEPA (Korea Environmental Preservation Association) (Cultivating referees) (All related to Ministry of Environment, Korea)
Certified product	57	7

Type-III eco-labels offer only quantitative information on environmental impacts and do not make any judgment by themselves. It is purchasers that make decision whether the product is eco-friendly or not judging from the information on the label. Type-III labels deal with environmental information based on Life Cycle Assessment (LCA) of product, which requires considerable time in developing infrastructure like building database system. For this reason, this type of eco-label has not yet disseminated widely enough through the world. Considering both Japan and Korea have already introduced Type-III label under this situation, they may well be called advanced nations in this regard. The Type-III system remains as a technical report (TR14025); however, it was decided to be an international standard in November 2002 --- More countries are expected to be involved in introducing this type of eco-label. Japan and Korea have different framework for operating Type-III eco-label. In case of Japan, single organization, Japan Environmental Management Association for Industry (JEMAI), related organization of Ministry of Economy, Trade and Industry, is in charge of full procedures. JEMAI has organized an internal committee with the participation of external experts to establish criteria. Meanwhile in Korean, KELA, EMC and KEPA, all of which are related to Ministry of Environment, are responsible for respective missions and working collaboratively: KELA is administering LCI (Life Cycle Inventory), EMC is a certification organization, and KEPA is in charge of cultivating human resources. Type-III system is called “Eco-Leaf” of Japan and “Environmental Declarations of Products (EDP)” of Korea respectively. As of March 2003, 57 products are registered in

Japan while 7 products in Korea. After JEMAI originally brought up the idea of formulating an international network of Type-III, GEDnet (Global Type Ⅲ Environmental Products Declarations Network) was established with an aim to exchange information on Type-III. Besides Japan and Korea, related organizations in other countries have also joined the network: from Canada, Germany, Norway, Denmark, Italy and Sweden.

As stated above, environmental labels range from regulatory one to self-declaration of corporations; therefore it is a sensitive issue which ministry should be in charge of respective environmental labels. In Korea, there is a national law called "Act Relating to Environmental Technology Support and Development," which aims at comprehensive development of environmental technology and technology that is low in environmental load. Considering this act comes under Ministry of Environment, in Korean case MOE has played a central role in formulating long-term development policy for environmental technology, deciding/implementing research projects, promoting advanced environmental technology and fostering the awareness of consumers by way of introducing environmental labels. In this way, Japan and Korea have a common role in leading the world in terms of environmental labels, but have quite different framework of operation.

3) Environmental communication & Environmental accounting

Though neither environmental communication (TR14063) nor environmental accounting has become an international standard, both are indispensable tools for developing environmental management system. There are increasing needs from corporation for environmental communication with many other stakeholders besides investors and consumers. To this end, growing number of Japanese corporations have employed environmental reporting as a way of communication. With regard to environmental accounting, there are two types: environmental management accounting for internal use of corporations and external environmental accounting for disclosing corporate information. In recent days, more and more Japanese corporations have disclosed information on external environmental accounting by means of publishing environmental reports.

Corporations are expected to disclose information on data and efforts regarding the environment. According to the survey results, 45.5% of Japanese manufacturers and 23.2% of Korean manufacturers have replied "disclose information to the public" while 18.2% and 46.3% of respective countries answered "disclose information to some parties." These numbers indicates the tendency of Korean company to disclose corporate information to particular parties.

Table 8: Objectives, content and means for information disclosure

(Question 13 – 14)

	Japan	Korea
Degree of disclosure		
- disclosed to the public	45.5%	23.2%
- disclosed to some parties	18.2%	46.3%
- not disclosed yet	31.7%	26.8%
Objectives	No.1: Social responsibility (28.6%) No.2: Public relations (26.1%) No.3: Communication (24.5%)	No.1: Communication (33.6%) No.2: Public relations (21.2%) No.3: Environmental education for employees (20.5%)
Content	No.1: Environmental management policy (17.3%) No.2: Environmental activities (12.6%) No.3: Environmental targets (12.1%)	No.1: Amount of waste (15.9%) No.2: Present status (13.8%) No.3: Amount of environmental burden (13.0%)
Means	No.1: Website (28.0%) No.2: Environmental report (18.0%) No.3: factory tour (15.2%)	No.1: factory tour (29.2%) No.2: Meeting with residents (19.4%) No.3: Website (15.3%)

Note: Percentage (%) indicates the ratio of each response out of the total of the multiple answers provided.

With regard to objective, Japanese corporations responded 1) Social responsibility, 2) Public relations and 3) Communication in descending order, each marking similar percentage. It also revealed three major items of environmental information disclosure were environmental management policy, environmental activities and environmental targets, all of which are often disclosed by means of website and environmental report. Korean corporations, on the other hand, place more emphasis on communication concerning their objectives, and disclose environmental information such as amount of waste, environmental activities and environmental burden by way of factory tour, meeting with residents and website.

These observations suggest slightly different situation of Japan and Korea regarding environmental information disclosure. Japanese corporation seem to appeal to

unspecified stakeholders about their eco-conscious attitude while Korean corporations tend to perceive local residents as their main stakeholder and concentrate their efforts on explaining their antipollution measures.

Regarding environmental reporting, 35.5% of Japanese manufacturers and 11.0% of Korean manufacturing companies have already published, and additional 17.6% and 11.0% of respective countries are planning to release by the end of next fiscal year. When asked about other means besides environmental report, 31.2% of Korean companies replied “annual report” (21.5% in the planning stage), and 25.5% answered “website” (25.5% in the planning stage). These numbers indicate majority of Korean corporations are disclosing environmental information either on annual report or website.

Environmental reporting has become a popular practice of Japanese corporations and it is quite promising that the same will apply to Korean case. Environmental reporting guideline has been disseminated as an effective policy for encouraging corporations to publish environmental report. In Japan, the first environmental reporting guideline was issued by the National Association Promotion of Environmental Conservation under the general editorship of Environment Agency in 1997. Thereafter, Ministry of the Environment and the Ministry of Economy, Trade and Industry have formulated guidelines respectively, and have made necessary revisions by taking opinions of practitioners into considerations. As award programs provide incentives and more companies become involved in environmental reporting, competitive consciousness has emerged among corporations not to miss the trend. In this way, Japan has become an advanced country in terms of environmental reporting in both quality and quantity.

In Korea, after an environmental reporting guideline was drafted by Ministry of Environment in 2000, test experiment was implemented at 13 companies of six different industries. It was only March of 2002 when the guideline was officially formulated. The survey revealed high awareness of Korean companies about guidelines: 50.5% of respondents knew about the national government’s guideline and 16.5% recognized the GRI guideline (Question 18). As incentive system develops, more Korean corporations will be urged to publish environmental reports in the future.

In Japan, corporate effort toward environmental report had already begun before the first guideline was released in 1997. Advanced companies played a leading role in creating the basis for environmental reporting after repeating the process of trial and error. Whereas in Korea, since national environmental reporting guideline was formulated based on GRI guideline, it still seems to obscure to what extent Korean corporation will be able comply with the MOE guideline despite one-year period of experiment. For instance, MOE guideline states environmental performance data

should be provided not in percentage but in absolute figures of the past couple of years. However, according to the data included in corporate environmental reports of 2001, only a few of them are following the direction of the guidelines. In the meanwhile, corporate efforts for environmental technology like LCA are extensively reported in environmental report while MOE guidelines do not perceive it as a necessary item to be reported. Some Japanese corporations have employed a comparative table in environmental reports presenting the items listed in the guidelines and their actual efforts in an attempt to show how much effort they are making in order to follow the guidelines. By following good examples like this, the gap between the guidelines and Korean corporations is expected to be bridged gradually. Regarding environmental accounting, GRI guidelines does not state clearly whether it should be covered in the report though they suggest corporations develop and report on a comprehensive performance like eco-efficiency besides economy/environmental/social performance in environmental report. On the contrary, environmental reporting guidelines of Japan and Korea list environmental accounting as a necessary item in environmental report. This may be a common feature of environmental reporting guidelines of both countries.

Table 9: History of environmental guidelines in Japan and Korea

Environmental reporting	Japan	June, 1997: Environmental Reporting Guidelines (Under the editorship of Environmental Agency) March, 2001: Environmental Reporting Guidelines (2000 version, *MOE) June, 2002: Environmental Reporting Guidelines 2001 – With focus on stakeholders -, **METI) 2003: In the process of making revisions (MOE)
	Korea	May, 2002: Environmental Reporting Guidelines (Ministry of Environment)
Environmental accounting	Japan	March, 2000: Guidelines for Introducing an Environmental Accounting System (2000 version, MOE) March, 2002: Environmental Accounting Guidelines (2002 version, MOE) June, 2002: Environmental Management Accounting Workbook (METI)
	Korea	March, 2001: Report on Environmental Accounting System and Environmental Indicators (Ministry of Environment & World Bank) 2003: In the process of publishing (Ministry of Environment)

*MOE: Ministry of the Environment (Japan)
**METI: Ministry of Economy, Trade and Industry (Japan)

With regard to environmental accounting system, it has been already introduced at 28.5% of Japanese manufacturing companies (additional 29.2% are considering the possibility) and 5.1% of Korean manufacturing companies (additional 16.7% are considering the possibility). As these numbers indicate, environmental accounting system seems to be perceived as the next issue to be tackled following environmental reporting. In fact, Japan is a leading nation of the world in formulating environmental accounting guidelines: Ministry of the Environment published it in March 2000, only three years after establishing environmental reporting guidelines. In Korea also, much efforts have been made currently for formulating environmental accounting guidelines after publishing environmental reporting guidelines.

Table 10: Current status of environmental report and environmental accounting

	Environmental reporting		Environmental accounting	
	Published	Next year	Introduced	Considering
Japan(manufacture)	35.5%	17.6%	28.5%	29.2%
Korea(manufacture)	11.0%	11.0%	5.1%	16.7%

In case of Korea, though environmental accounting would be the next issue to be undertaken after environmental reporting, it has already known to a certain number of companies. The survey shows 42.6% of Korean corporations answered “yes” to the question of “Does your company know about Environmental Accounting?” (Question 19). Also in Korea, Ministry of Environment in collaboration with World Bank conducted a research on environmental accounting system and environmental performance indicators, and published a report on research results. This report covers various kinds of initiatives of the world: Environmental Accounting Project of US, ECOMAC Project of Europe, Environmental Accounting Guidelines of Japan, EMA Initiative of UN and so forth. Moreover, it also takes close look at individual cases including POSCO Research Institute, Samsung Electronics and LG Chemical, and evaluates guidelines of each corporation for environmental cost measurement and reporting.

6. Managing Environmental Performance

ISO14031 stipulates the guidelines for Environmental Performance Evaluation, but it does not refer to concrete indicators. Under these circumstances, Ministry of the Environment of Japan formulated Environmental Performance Indicators for Businesses in February 2001 in an effort to promote environmental performance management of corporations and to make it possible to evaluate and compare corporate environmental performance data. The guidelines were revised in April 2003, and environmental reporting guidelines are in the process of revision. The environmental performance guidelines recommend mass balance of corporation in a systematic manner,

with inputs and output of business activities as core indicators. It should be noted that both total emission of air pollutant and water pollutant are excluded from "core indicators" since neither of them are common indicators among all industrial sectors. The guidelines further mention that boundary of business activities, which indicates the area to be evaluated, should be managed with the same boundary of its consolidated accounting. In case of Korea, national guidelines have not been developed yet. Since growing concern over material flow cost accounting of the whole nation has been observed at G8 Environment Ministries Meeting, there will be a growing need for understanding material balance on individual company as well.

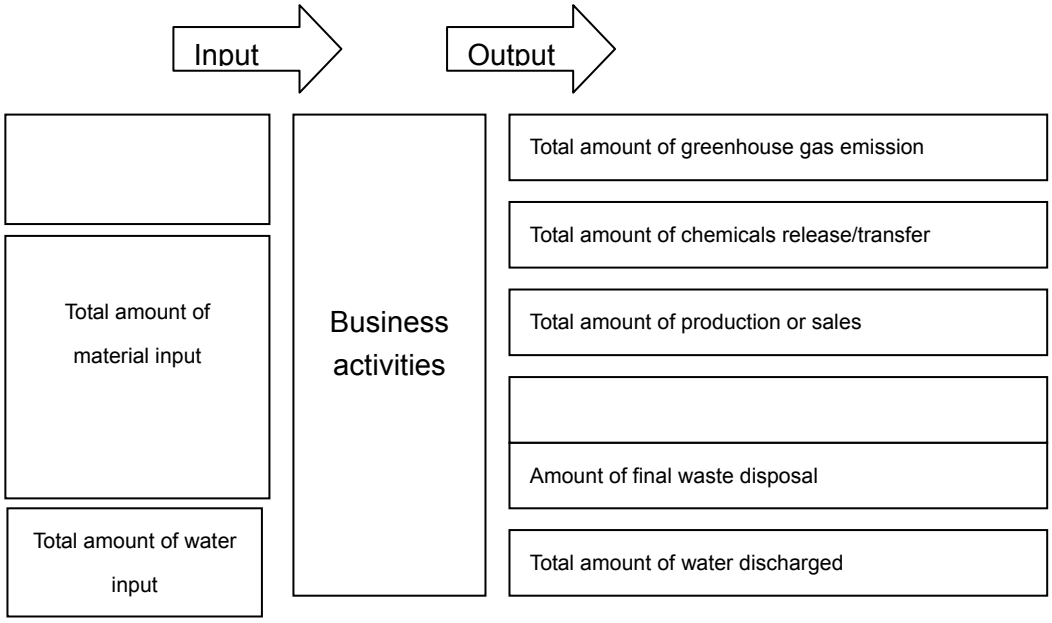

Figure-2: Basic concept of Environmental Performance Indicators for Businesses published by MOE-Japan

It may be said corporate management of air and water pollution have been established in both nations. Next issues to be tackled are global warming and chemical substances. Concerning global warming, both Japan and Korea ratify Kyoto Protocol. However, numerical target of greenhouse gas reduction has not been imposed on Korea while Japan has a numerical goal of 6% reduction (compared to 1990) to be accomplished. Though in different situations, state government of both countries have engaged in greenhouse gas emission reduction in a cross-sectoral manner. In Japan Global Warming Prevention Headquarters has been formed under the direct control of prime minister with an aim to promote comprehensive measures. In the meanwhile, the effort of industrial sector has been devoted to the Keidanren Voluntary Action Plan on the Environment at the moment even though they perceive more room for the action to be improved. In case of Korea, several committees have organized by related ministries or related organizations under the leadership of prime minister instead of the president. With regard to corporate action, it is mainly based on voluntary agreement between the

state government and individual company. Poor in energy resources, Japan and Korea share the same history of devoting their effort for improving energy efficiency to secure energy even before global warming became a serious problem. In both countries, energy efficiency business conducted by ESCO (Energy Service Company) has grown to take a place in industry. In an attempt to promote the development of energy-saving industry and dissemination of renewable energy, which will hold a great significance in the future society, greenhouse gas emission management must be established at individual company.

While there is an increasing need for more advanced corporate environmental performance, companies are pressed for responses. In this regard, the survey revealed only 63.0% of Japanese manufactures and 67.5% of Korean manufactures have data on all the major environmental loads, and another 30.1% of respective counties are aware of only part of environmental loads (Question-21). As described in these numbers, Japan and Korea are at the similar level in understanding the data on environmental loads; however, they have different tendency with regard to the content of data. Japanese corporations are well aware of amount of waste generated, amount of energy used and amount of fuel used in descending order while Korean companies understand amount of wastes generated, amount of water used and amount of air pollutants discharged in descending order. As far as amount of greenhouse gas emission concerned, Japanese corporations are aware of it as much as air pollutant discharge while Korean companies know about it only one fifth as much as air pollutant discharge.

Furthermore when asked about concrete measures for reducing environmental loads, more Japanese companies answered “recycling paper,” “energy-saving like power-saving,” “saving paper” and “collecting used chlorofluorocarbon” compared to Korean companies. In the meanwhile, more Korean companies responded “use fuel that have less environmental load,” “reduce air pollutants emission,” “reduce water pollutants discharges” and “participate in community activities” compared to Japanese companies (Question-26). The survey results also indicate 52.9% of Japanese manufactures and 21.4% of Korean manufactures are engaged in some sort of countermeasures against global warming based on their own environmental policies (Question-27). These numbers may be indicating the tendency that Japanese companies are under the necessity of responding to global warming, and Korean companies to industrial pollution. Korea also is expected to be more involved in the issue of global warming in the near future considering Ministry of Commerce, Industry and Energy has been actively promoting policies regarding CDM and emissions trading and majority of Korean companies surveyed showed their deep concern about global warming.

7. Relationship among Corporations

Corporate environmental management develops in the course of relationship with various types of stakeholders including stockholders, consumers, employees and business partners. This section observes relationships with group companies that have the same consolidated accounting, one with supply-chain companies and financial institutions.

1) Relationship with group companies

As International Accounting Standards (IAS) of global standard becomes more popular around the world and globalization of economic activity progresses, corporate financial accounting report has shifted from single company accounting to consolidated accounting. At the same time, recent corporate environmental report has begun to cover activities of their subsidiaries as well. Main companies of the some business group provide support to their affiliated companies regarding environment-conscious action in business activities. In doing so, they intend to increase their environmental competitiveness. For example, some Japanese corporations support their affiliated companies in obtaining ISO14001 certification with an aim to reduce environmental load generated by the business group as a whole. On the other hand, Korea has tackled on chaebol reforms with intent to encourage independence of related companies from their parent company, which makes it difficult to gather information on business relationship between them. Even so, some corporations certified as 'environmentally-friendly company' have formulated a network in an effort to foster environmental management at small and medium sized companies by way of showing good practices in concrete terms based on their experiences. As indicated by Figure-3, to the question of "Does your company provide guidance to your affiliates (more than 50% of investments) so that they may meet environmental commitment of your company?", 41.1% of Japanese manufactures replied "Yes, to most affiliates" and 18.7% answered "Yes, to major affiliates," which explains total of 60.1% are providing some sort of guidance to their major affiliates. In case of Korea, 13.9% of manufactures answered "Yes, to most affiliates" and 7.6% replied "Yes, to major affiliates," which makes total of only 21.5%. However, it should be noted that as much as 38.9% of Korean manufactures answered "Has no affiliates" while no more than 5.0% of Japanese manufactures did so (Figure-3, Question-10). These numbers clearly differentiate organizational structure of business in Japan and Korea: "keiretsu" of Japan and chaebol of Korea.

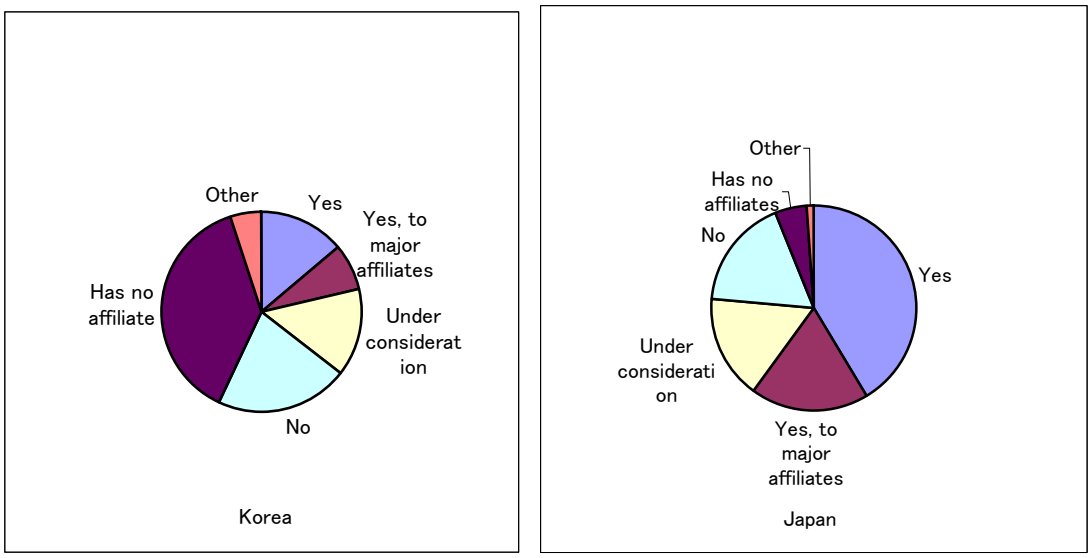

Figure-3: Guidance to affiliated companies on environmental consciousness (Manufacturers)

2) Relationship with supply-chain companies

There is an increasing need for environmental consciousness of corporations in supply-chain relationship with an aim to obtain higher evaluation of LCA for the products and improve the safety of products by using harmless substance contained in the components. In this regard, trend in Europe concerning waste management like electronic waste disposal is said to have a significant influence on companies of each country.

As Figure-4 shows, 57.6% of Japanese corporations and 64.2% of Korean corporations select contractors who are doing business in environmentally-sound way. Including “in the planning stage,” nearly 80% of Japanese and Korean corporations perceive the need for environment-conscious action of corporations (Question-11). Also in purchasing raw materials, 54.2% of Japanese manufacturer and 44.6% of Korean manufacturer conduct are practicing green procurement. Combined with “in the planning stage,” 85.4% of Japanese manufactures and 65.1% of Korean manufacturers are aware of the need for green procurement, displaying a difference between the two countries (Question-12).

There are two types of green products and services in the market: one is for personal use (general consumers), and the other is for business use. Considering both points of view, Japanese government formulated the Law on Promoting Green Purchasing in 2001 in an effort to promote procurement of environmentally-sound goods and services by the state and local governments. In the meanwhile, Korean government has disclosed investment amount for environmental efforts in their midterm plan, Green Vision 21, and promoted development of public infrastructure from the perspective of business. At

the same time, from consumers' point of view, they have encouraged procurement of recycled products by public organizations and are planning to launch "eco-supply chain management" business in the near future.

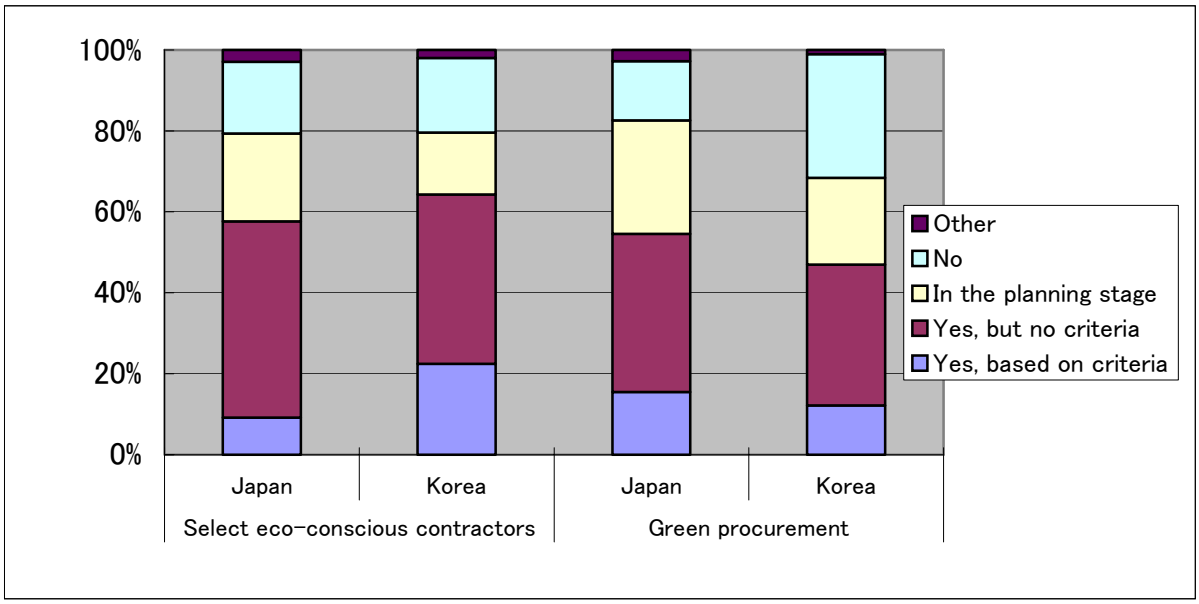

Figure-4: Environmental consciousness when selecting contractors and green procurement

In relationship among corporations, multinational companies have a great influence on a global scale. For this reason, environmental conscious action of multinational corporations has been urged by international bodies as seen in UN Global Compact and OECD Guidelines for Multinational Enterprises. As a result of survey conducted in Korea, some points became clear: majority of Korean companies surveyed have a business relationship with multinational enterprises either directly or indirectly (Question-30). It also revealed Korean companies have a room for receiving further guidance from multinational enterprises

3) Relationship with financial institutions

Financial institutions can bring a significant impact on corporations in terms of their financial management. Trend of Socially Responsible Investment (SRI) developed in Western countries seems to be spreading over Asia. Dow Jones Sustainability Group Index (DJSI) mentioned in Table 1, intends to select good-standing corporations. Greening of financing is one of the issues covered in Agenda 21. UNEP has developed UNEP Financial Initiatives (UNEP-FI) with an aim to promote environmental consciousness of financial institutions. In Japan, Ministry of the Environment has published "Report on Environmental Conscious Actions of Financial Institution," in March 2002, which summarizes present situation of both domestic and abroad, and

predicts prospective direction of environmental conscious actions of financial institutions in Japan. According to ASrIA (Association for Sustainable & Responsible Investment in Asia), there are 10 eco-funds/SRI funds in Japan while there is only one in Korea. Also, no response was heard from 37 Korean financial institutions that the authors surveyed. Reform of financial industry has been proceeding, in Japan as a countermeasure against the non-performing loans to achieve economic recovery, and in Korea, with an aim to encourage independency of financial institution for building a sound fund market. Korean financial industry is desired to take more positive environmental conscious actions.

8. Relationship with NGO/NPO and Community

When tackling environmental issues, bottom-up approach by individual corporation and citizen is essential in addition to the measures by global institution and state government. Especially for environmental management to become more disseminated, corporations that are engaged in advanced environmental management should be widely supported by the society. To this end, environmental awareness should be increased among the community and consumers. In this section, overview of recent trend of NGO/NPO activities and Local Agenda 21 will be presented along with its impact on environmental conscious activities of corporations in Japan and Korea.

The history of NGO/NPO activities in Japan is rather short, but their activity has become quite vigorous these days. Some corporations have launched collaborative efforts with NGO/NPO. Japanese NGO/NPO had marked their turning point in 1995 when Great Hashin-Awaji Earthquake occurred: they played a significant role providing voluntary activities, which has raised expectation from society. In order to promote their sound development, Law to Promote Specified Nonprofit Activities (NPO Law) was formulated in 1998, which granted corporate status to many NPOs. They have conducted wide range of activities in various regions of Japan in the field of social welfare, environment, community renovation, social education, international exchanges and many others. Many of them undertake a role as a general producer of the region. With regard to fostering environmental NGO/NPO, Japan Environment Corporation, an affiliate organization of MOE, established Japan Fund for Global Environment on the occasion of Earth Summit held in Rio de Janeiro in 1992 in an effort to provide and promote environmental conservation activities.

NGOs in Korea have developed in somewhat a different way. Citizens' movement for environment started in the late 1970's across the country calling for the compensation for the serious damage caused by industrial pollution. Then they have gone through reorganization in various ways along with democracy movement and labor movement.

After the Earth Summit in 1992, increasing number of environmental NGOs including nationwide NGOs has been established. One of them has membership of 70,000 and 42 branch offices across the country. As they began to have a strong political influence, environmental NGOs have successfully developed the relationship with overall citizens' movement.

Both Japanese and Korean NGO/NPOs are engaged in the activities intending to increase green consumer. Such activities include promoting procurement of safe food and environmentally sound products and organizing study meetings. It should be also noted that as the Internet becomes more popular, recycle market has expanded among citizens.

Local Agenda 21 is an action plan of local action plan designed to achieve national Agenda 21 and requires multisectoral process of government, company, and citizen. In Japan, according to MOE survey as of March 2003, Local Agenda 21 has been formulated in all the 47 prefectural governments, 12 major cities and 318 municipal governments. In the meanwhile, in case of Korea, KCLA reports in their 2002 brochure, approximately 222 districts, 90% of total 248 local government districts of Korea, are either in action or in the planning stage. Both countries are actively involved in Local Agenda 21, but with different types of key player. In case of Japan, local government plays a central role with participation of citizens and corporations, while in Korea, NGOs are leading this effort with local government and Local Agenda 21 has enhanced mutual trust between NGO and local governments.

Regarding the question, "Is your company involved in community activities related to environment?," 68.1% of Japanese and 63.4% Korean manufactures answered "Yes," marking 76.1% and 79.3% of respective countries if taking the number of "in the planning stage" into account (Question-33). With respect to the kinds of social actions for community, no particular difference is observed between the two countries: major answers were "cleaning the environment", "participating in community events" and "providing factory tours."

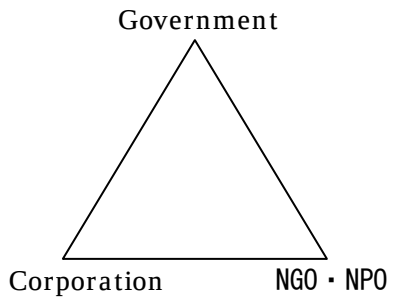

Figure-5: Basic Model of Partnership

When it comes to partnership between government, corporation and NGO/NPO, two countries have a different structure. In case of Japan, relationship between government and corporation was formed before NGO/NPO developed their relationship with corporation by obtaining support from government. On the other hand, the strong political connection between government and NGO/NPO was a feature of Korean case, and corporation used to come under the control of the government. Recently Korean corporation began to show more concern with building relationship with NGO/NPO. The partnership between government, corporation and NGO/NPO has drawn increasing attention since Johannesburg Summit 2002. Formulating and developing balanced partnership is one of the key factors for realizing sustainable society. To this end, Japanese government began to provide support to community business as part of environmental policy. At the same time, some advanced corporations have offered support to NGO/NPO. Meanwhile forming strong relationship between corporation and NGO/NPO has become a major task to be tackled in Korea.

9. Cooperation between Japanese and Korean Corporations

In the previous sections, based on the survey result, awareness and present situation of corporate sustainability management in Japan and Korea have been analyzed and also the comparisons of institutional frameworks were presented. Behind corporate sustainability management and environmental business are various types of regulations, incentives and disincentives, all of which are influencing each other and contribute to form frameworks of corporate activities. When conducting an analysis that involves cultural element, comparative analysis is one of the most effective approaches. Through this research, corporate frameworks in Japan and Korea have been revealed to some extent.

Economic relation between Japan and Korea has been rapidly strengthened in recent years in an effort to conclude Free Trade Agreement (FTA). Business cooperation between the two countries is expected to further enhance in the future. Lately FTA seems to have disseminated through the world substituting for WTO. These circumstances challenge more necessity for companies to be environmentally conscious; otherwise it may result in inviting another environmental crisis. To this end, corporations which are operating sustainability management should be rewarded with appropriate evaluation from the market, bringing more competitiveness to such environmentally conscious companies. In addition, more effort should be devoted to production activities by reducing emission of environmental loads and goods and services which are more safe and more environmentally-sound through its life cycle. In the meanwhile, product/service market and capital market need to provide fair

evaluation to corporations which are engaged in environmental conservation activities. Until today, much attention has been paid to the market of individual country; however for the future, more effort should be devoted for realizing formulation of transnational environmentally conscious market. Global effort like mutual certification of environmental label has become an urgent issue among related countries. Also, as the concepts of LCA and EPR have been more actively practiced in Japan and Korea, collaborative effort regarding recycling, for example, will become a significant issue to be jointly tackled in the future.

In order to obtain positive effects from the market integration of Japan and Korea, it is vital to mutually understand various aspects of corporate management. In doing so, the concept of sustainability management should be developed and incorporated into each corporate management: companies in both countries need to further strengthen their efforts for realizing sustainability management that is based on the concept of Triple Bottom Line of environment, society and economy. It is strongly expected that the exchange develop economies of both countries and enhance sustainability as well.

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