Chapter 2

Social Capacity Development for Environmental Management

2.1 Social Capacity for Environmental Management and Social Environmental Management System

This chapter aims to develop a framework for environmental cooperation by analyzing society's development based on the concept of Social Capacity for Environmental Management (SCEM) and Social Environmental Management System (SEMS). These concepts are developed in order to first assess the development of a country's capacity as a system for environmental management - past, present and future forecast -, and to draw a picture of an appropriate cooperation approach according to the development stage.

The next chapter takes an Environmental Center approach by the Japan International Cooperation Agency (JICA) in three Asian countries as case studies. Environmental Center projects have a pretty long history since the first case in Thailand (1990-1997). This approach usually consists of grants for buildings and facilities and technical support by Japanese experts both in a counterpart country and Japan. To date, this type of project has been implemented in Thailand, China, Indonesia, Mexico, Chile and Egypt.[1]

2.1.1 Social Capacity for Environmental Management (SCEM)

The concept of SCEM was developed from the lessons of a capacity development approach. There have been long discussions on capacity development of developing countries since the 1950s. Table 1 shows major historical developments of the cooperation approach. Institutional building in the 1950s and 1960s focused mainly on the capacity of individual entities. Since the late 1980s, the concept of capacity development has become popular among donor agencies and they are more aware of the importance of capacity development both in public and private sectors.

Capacity development also entered into environmental cooperation. The Organization for Economic Cooperation and Development (OECD) had been a keen promoter of capacity development in environment (CDE) through the 1990s as shown in Table 2. It was remarkable that they tried to develop a common concept for environmental cooperation among donor agencies but the approach has

Table 1 Historical Review of Capacity Development Approach

	Approaches	Characteristics
1950s－1960s	Institutional building	・Improving the capacity of individual organizations in the public sector
1960s－1970s	Institutional strengthening	・Improving the enforcement capacity of existing organizations
1970s	Development management	・Development plan which focuses on improvement in Basic Human Needs ・Improving the distribution capacity in the public sector ・Improving the capacity of local groups and local public sectors
1980s	Institutional development	・Strengthening relations between governmental and private sectors ・Shift to the program approach
1990s	Capacity development	・Development of long-term endogenous structure ・Linkage between political environment and organization
1995－1998	Capacity assessment and development	・Comprehensive framework to measure the institutional capacity of existing organizations ・Clear definition of system, organization, and individual capacity in the UNDP Guideline ・Project management based on results and performance

Source: Matsuoka and Honda [2002]
Original source: OECD-DAC [1999]

Table 2 History of the Concept of Capacity Development in Environment

Year	Event	Progress
1989	The Working Party on Development Assistance and Environment	Start of the argument on aid and environment
1992	The United Nations Conference on Environment and Development (UNCED) Taskforce on Capacity Development in Environment	Institutional building mentioned in Agenda 21 Established to develop a program approach of technical cooperation and analytical tools of CDE
1993	International CDE Workshop in Costa Rica	Discussed definition of "Capacity in Environment" and its basic approach
1995	*Donor Assistance to Capacity Development in Environment*	Capacity in Environment was defined as "the ability of individuals, groups, organizations and institutions in a given setting to address environmental issues as part of a range of efforts to achieve sustainable development" →・Identification of capacity and capability ・Improvement of institutional structure ・Emphasis on "process"
1999	*Donor Support for Institutional Capacity Development in Environment: Lessons Learned*	The lessons from CDE cooperation summarized ・The ambiguous definition of CDE ・The importance of CDE in rural areas ・Development of the indicator for CDE

Source: Matsuoka and Honda [2002]

not reached a concrete and practical level.

The OECD-DAC[1999] suggests several shortcomings and future tasks for CDE. One of the biggest lessons is that the concept is not clear enough to attract donor and recipient countries. They do not say clearly how general concepts of "capacity" or "capacity development" become different and unique when they are put into a set together with another concept: "environment." Also, an ambiguous concept of CDE can be as broad as "development" itself. The OECD report also emphasizes the importance of developing evaluation indicators and an evaluation monitoring system. CDE indicators are touched on later in this chapter (2.2).

Our research team has been working to develop a new framework for evaluation and implementation of international environmental cooperation based on historical development of the concepts and newly emerging approaches in the field of international cooperation such as social capital, environmental governance, etc. as shown in Table 3. That is, Social Capacity for Environmental Management (SCEM), which is defined as capacity to manage environmental problems as a whole society of the main three actors; the government, firms, and citizens.

2.1.2 Social Environmental Management System (SEMS)

Practical discussion on SCEM can start with defining Social Environmental Management System (SEMS). SEMS, as shown in Figure 1, consists of the three main actors, the government, firms and citizens. These actors themselves and interrelations among the three form SEMS. Relations between the national level and local level are also of much importance in the framework since actual problems occur at local level and local firms and citizens have most things to do with the solutions while overall environmental policies and laws are established at the national level. SEMS, therefore, basically consists of the three actors, two levels and in-between interactions.

Figure 2 shows causes and effects of environmental quality and socio-economic situations toward SEMS. SEMS in one country is prescribed by the socio-economic conditions and it appears as the level of environmental quality. Here also are the inter-prescribing relations between environmental quality and so-

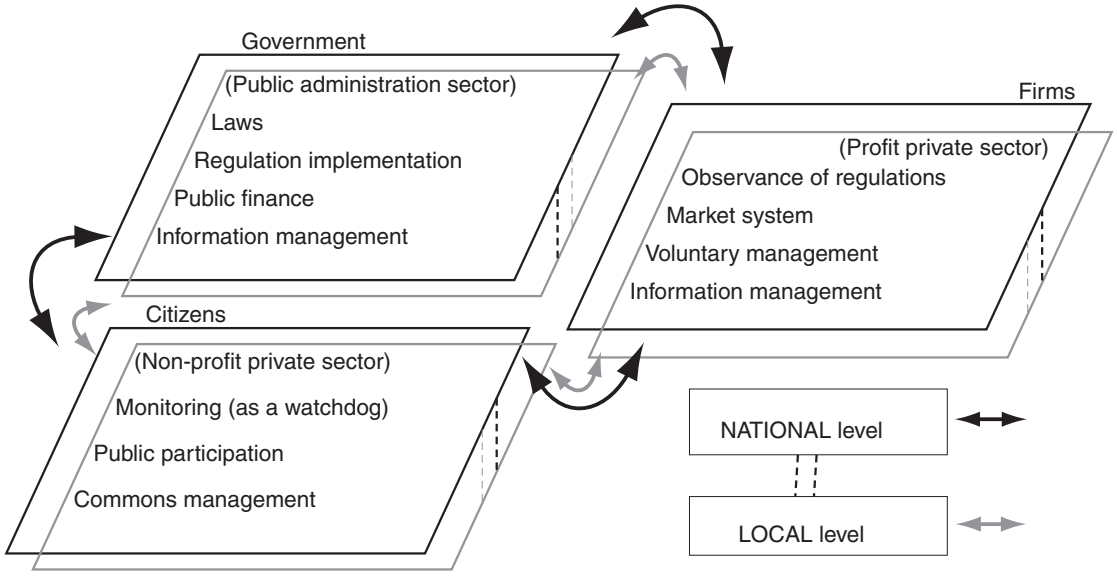
Table 3 The Trend of Cooperation Approach

Social capital Coleman 1988, Putnam 1993. Used in cooperation field since the late 1990s.	
OECD (2001)	Definition: Networks together with shared norms, values and understandings that facilitate co-operation within or among groups
World Bank (2002)	Definition: The institutions, relationships, and norms that shape the quality and quantity of a society's social interactions.
Environmental management system Since 1975. Improved after Rio Summit (UNCED, 1992)	
UNEP & WHO	At the GEMS (Global Environmental Monitoring System) project, urban environmental management system was valued using the following indicators (ex. Air quality). ・Measure air quality ・Assess and make available data ・Estimate emissions ・Enable management
Environmental governance Taskforces in various organizations established after UNCED	
OECD (2002)	Mentioned the importance of the roles in government to achieve the sustainable development governance. Mentioned the importance at the following points. ・Horizontal (inter-ministry) and vertical (national level-rural level) integration ・Improvement of consciousness ・Participant of citizens and firms
World Bank	The Environmental Governance component of the program focuses on building faith in the rule of law by strengthening institutional capacity for ensuring compliance with environmental laws and standards. The strategic objective of the program is to strengthen environmental governance in World Bank client countries by: ・Strengthen good governance practices, including country capacity for effective compliance with and enforcement of environmental laws and regulations ・Strengthen the role of parliamentarians in implementing environmental decisions in their legislatures ・Build global and regional networks for environmental compliance and enforcement and support existing networks ・Enhance understanding of multilateral environmental agreements, interactions with the World Trade Organization (WTO), and international rulemaking ・Promote an informed dialogue among all concerned parties, including civil society, on the participation and empowerment of the poor and women in environmental decision-making processes
ESCAP (2002)	Pointed out the importance of public policy (governance). Components of environmental governance are: ・To establish wide objectives ・To plan concrete targets ・To make policies to achieve the concrete targets ・To chose the concrete policy method ・To built institutional mechanisms to operate the policy ・To incorporate the participation mechanism and power-grabbing of stakeholders ・To make clear the rights and obligations of stakeholders
IGES (2001)	Analysed what kind of environmental issues society deal with, from the point of view of the correlation between instituions (formal and informal) and actors (formal and informal). Through analysis of the environmental governance in Asian countries, the following points were proposed. ・To establish the environmental policy information network in the Asian region ・To reconsider the existing laws, policies, organizations comprehensively to improve the policy frame ・To encourage decentralization about the decision and operation of environmental policy ・To make the frame that citizens (as environmental NGOs) can participate in the process of planning and operating of area projects ・To operate the environmental impact assessment (EIA), and considering the acceptability of strategic environmental assessment (SEA) ・Special considerations for those medium and small firms and factories can comply with the environmental regulations

Source: The author

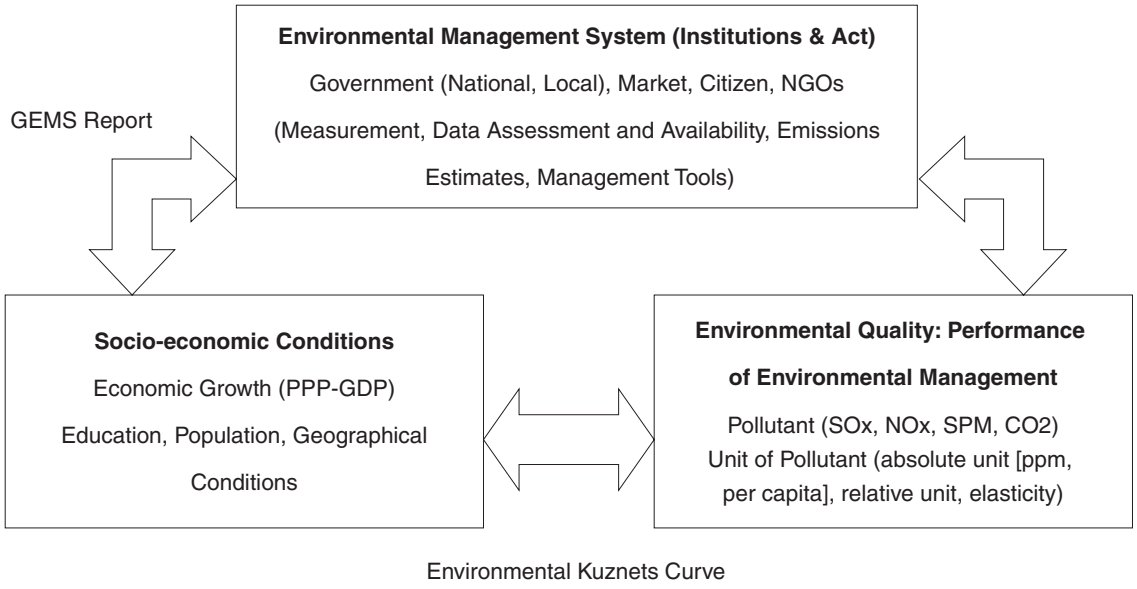
cio-economic conditions. Japan has a good example for this concept, that is, the Kitakyushu case during the 1960's and 1970's in which the city had serious industrial pollution. As Figure 3 shows, in the Kitakyushu model, not only the three actors of the city government, firms and factories, and citizens each made efforts on their own but also strong cooperation worked between the local government and firms , and citizens by coordinating li-

Figure 1 Social Environmental Management System (SEMS)



Source: Matsuoka [2002]

Figure 2 SEMS and its Interrelations with Environmental Quality and Socio-economic Conditions

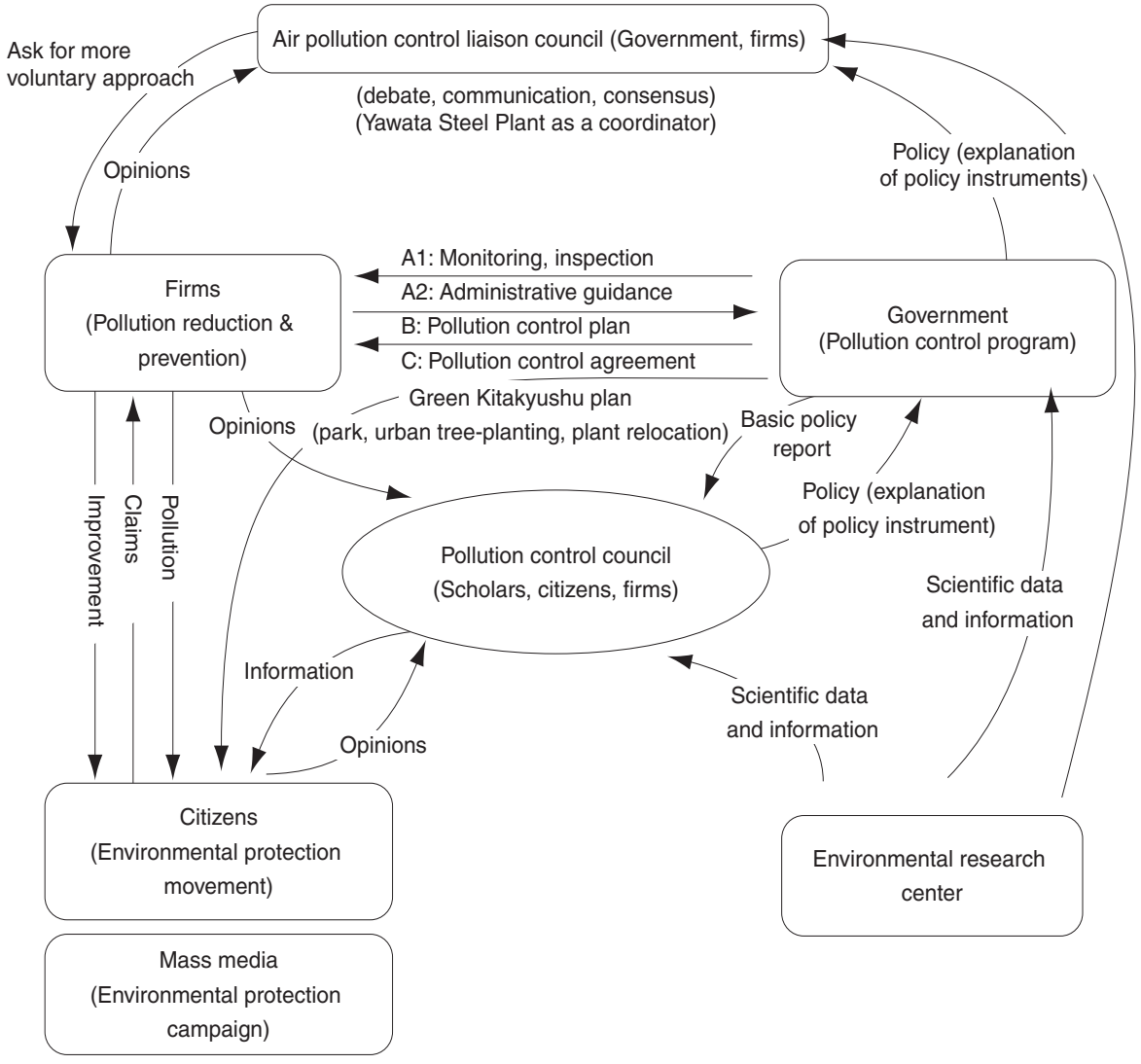


Source: Matsuoka et al. [2000]

aison committees. This indicates the importance of bodies that enhance and coordinate interactions among actors as well as the actors themselves.

SEMS can be explained by comparative institutional analysis and new institutional economics. Figure 4 describes some concepts of comparative institutional analysis and their application to SEMS analysis. Comparative institutional analysis describes the institution as a self-sustaining system of shared beliefs about a salient way in which the game is repeatedly played [Aoki 2001, 10]. From this viewpoint, institutions are durable and robust.

Figure 3 Kitakyushu Model



Source: Katsuhara [2000]

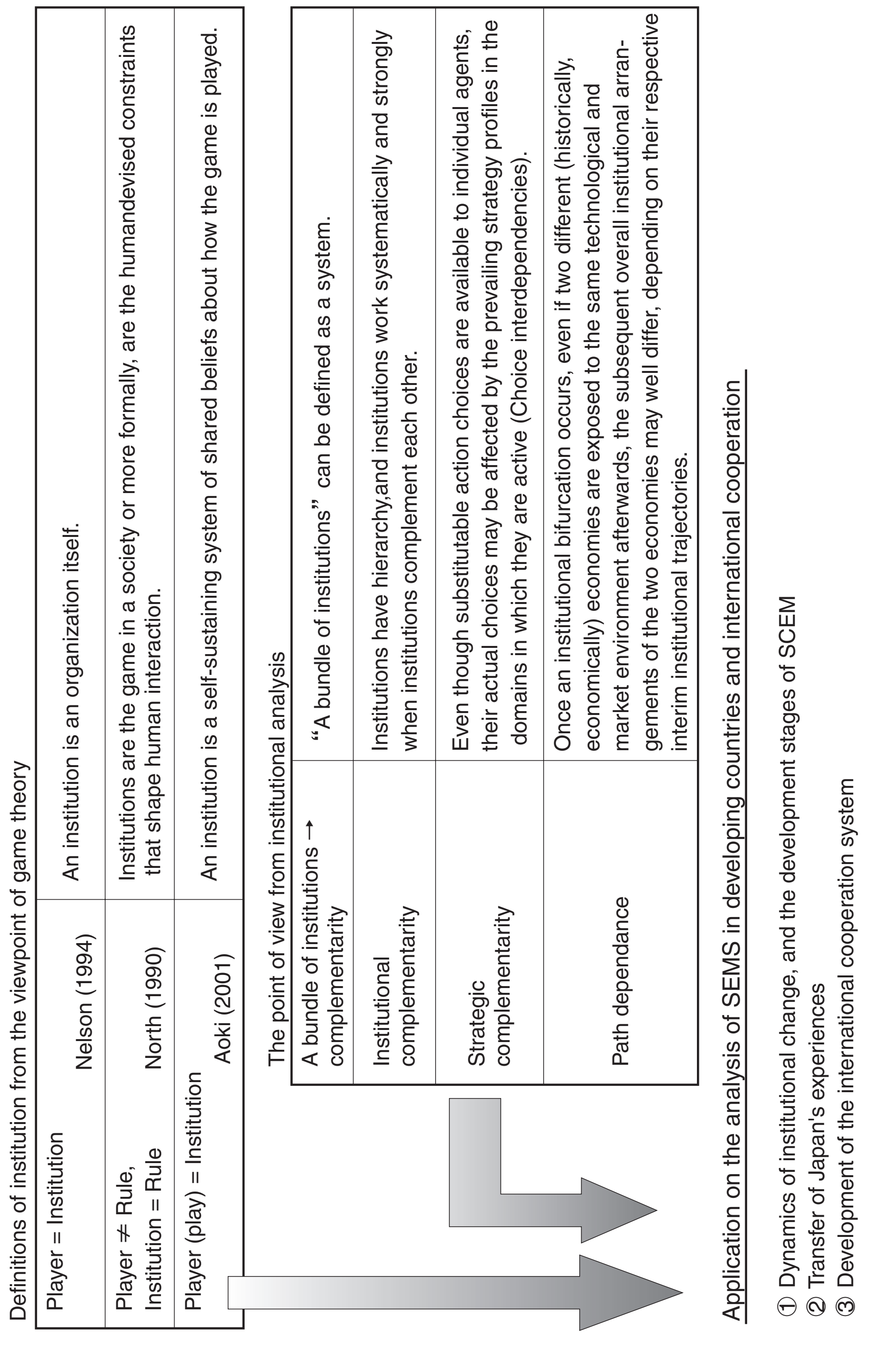
Institutions are more than just individual entities . A bundle of institutions form a social system through their characteristics of hierarchy and complementarity. In this context, individual players tend to choose their strategies based on an existing and related social system (strategic complementarity). Moreover, institutions depend on the origin or historical path of development, and this differentiates one system from another due to the different paths (path dependency). This study analyzes the development of SEMS in Asian countries and discusses the direction of Japan's effective international cooperation.

2.2 Development of SCEM

This section tries to give answers and ideas to the following questions.

- How does SCEM develop?
- How can the development process be analyzed?
- What are the essential benchmarks in the development of SCEM?
- What kind of indicators are needed for the analysis?

Figure 4 Concepts of Comparative Institutional Analysis and their Application to SEMS

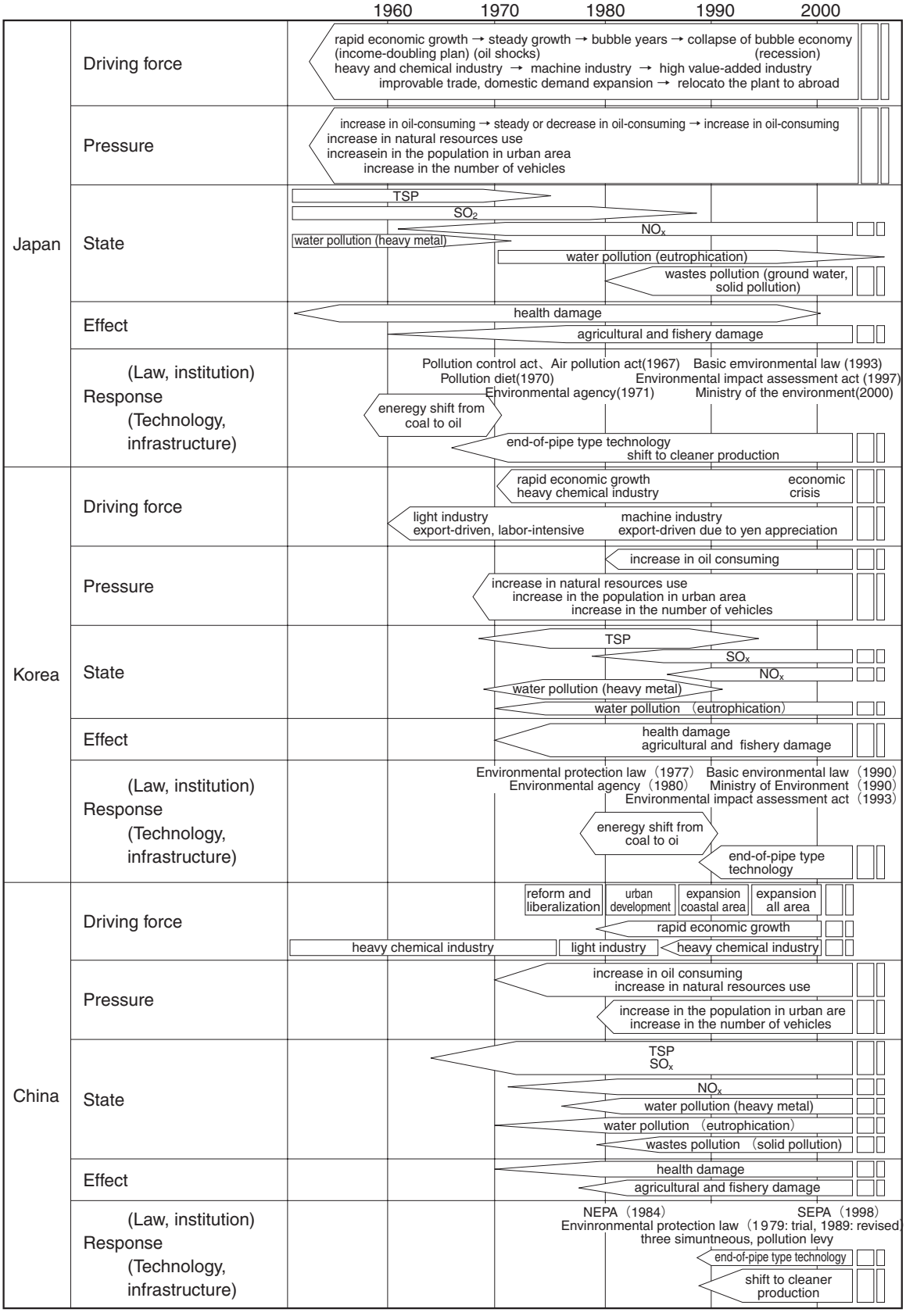

Definitions of institution from the viewpoint of game theory
Player = Institution
Nelson (1994)
An institution is an organization itself.
Player ≠ Rule,
Institution = Rule
North (1990)
Institutions are the game in a society or more formally, are the humandevised constraints that shape human interaction.
Player (play) = Institution
Aoki (2001)
An institution is a self-sustaining system of shared beliefs about how the game is played.
The point of view from institutional analysis
A bundle of institutions → complementarity
"A bundle of institutions" can be defined as a system.
Institutional complementarity
Institutions have hierarchy,and institutions work systematically and strongly when institutions complement each other.
Strategic complementarity
Even though substitutable action choices are available to individual agents, their actual choices may be affected by the prevailing strategy profiles in the domains in which they are active (Choice interdependencies).
Path dependance
Once an institutional bifurcation occurs, even if two different (historically, economically) economies are exposed to the same technological and market environment afterwards, the subsequent overall institutional arrangements of the two economies may well differ, depending on their respective interim institutional trajectories.
Application on the analysis of SEMS in developing countries and international cooperation
① Dynamics of institutional change, and the development stages of SCEM
② Transfer of Japan's experiences
③ Development of the international cooperation system

Source: Matsuoka and Honda [2002], Aoki [2001], Aoki and Okuno [1996]

2.2.1 Benchmarks and Stages of the Development of SCEM

Harashima and Morita [1998] analyze development periods of environmental policy or environmental management in Japan, Korea and China. They assume the three periods, namely, initial period, progressive period, and consolidation period. The main conclusions are that (1) environmental policy is more mature in the order of Japan, Korea, and China, (2) China has not yet reached the final period: the consolidation period, (3) the development periods are more condensed in

Figure 5 Comparative Analysis Using DPSER Framework



Source: Imura and Kobayashi [1999]

Table 4 Development Stages and Benchmarks of Social Environmental Management System (SEMS)

	System-making stage	System-working stage	Self-management stage
Definition	Fundamental bases of SEMS, especially governmental institutions, are developed	Relations between government and firm sectors become stronger through setting the incentives for pollution abatement and industrial pollution improves after reaching its peak.	a comprehensive environmentalpolicy is needed since new types of environmental issues come out, and firms and citizens sectors take leading roles in voluntary approaches for environmental management. Harmonious relationsamong government, firms and citizens accelerate efficient social environmental management.
Related environmental issues	Poverty related issues, industrial pollution related issues	Industrial pollution related issues	Consumption-related issues
Industrial pollution related issues	Degradation	Turning point (peak of environmental Kuznets curve)	Improvement
The role of three actors	・Government (system making) ・Firms (efforts for pollution reduction) ・Citizens (pressure to the government and firms, research cooperation)	・Government (pollution control regulation) ・Firms (pollution reduction) ・Citizens (pressure to the government and firms, research cooperation)	・Government (comprehensive environmental policy) ・Firms (voluntary approach) ・Citizens (voluntary approach)
The relationship among three actors	・Government－Firms ・Government－Citizens	・Government－Firms ・Government－Citizens ・Firms－Citizens (through government)	・Firms－Citizens ・Government－Firms ・Government－Citizens
Benchmarks (essential)	・Environmental law ・Environmental administration ・Environmental information (monitoring data)	・Regulation ・Reach the peak of pollution level and improve	<First phase> (In the case of developing countries) ・Graduation / independence from ODA <Second phase> ・Comprehensive environmental management
Benchmarks (important)	・Negotiation between Government-Firms, Government-Citizens ・Mass media	・Negotiation, adjustment, and cooperation between Firms-Citizens	Voluntary approach of Firms and Citizens (environmental accounting, environmental report, green consumption, advocacy planning, etc.)

Source: The author

the case of latecomers.

OECD's DPSIR (*driving force, pressure, state, impact, response*) model (sometimes *effect* is used instead of impact.) tries to analyze the process of environmental issues from causes of the issues, impact on society, and behaviors to deal with the issues. Figure 5 shows the cases of Japan, Korea and China by Imura and Kobayashi [1999, 106-108], from which the reader can see differences in the process of the three countries, especially Japan and the other two. Japan experienced and overcame the problems one by one in its long history since the toxic water problem in Ashio in the 1880s. In developing countries like China and Korea, on the other hand, environmental problems, or at least their awareness, are rather new to them and they are condensed in a shorter period. The same trend is observed also in Harashima and Morita [1998] regarding environmental policy actions, which we can call a response in the model, in the three countries.

As mentioned in Chapter 1, from the standpoint of environmental issues themselves, a general understanding is that with economic growth, the major issues shift from (1) poverty-related issues such as access to safe water and public health, and (2) industrial pollution such as SOx from power plants and factories, to (3) consumption- related issues such as CO_2 due to consumption expansion (Bai and Imura [2000]). SCEM in this study focuses on so-called brown issues, especially industrial pollution such as SOx in the air, especially SOx. This study assumes three development stages of SEMS: system-making stage, system-working stage, and self-management stage. Table 4 indicates the stages and benchmarks of SEMS.

The system-making stage is that in which the fundamental functions of SEMS are developed. Since this stage especially needs capacity development in the government sector, the benchmarks should be environmental law (basic law and acts for specific pollution controls), environmental administration, and environmental information. In these benchmarks, environmental law is usually established first. The last benchmark is usually the establishment of the environmental quality monitoring network and information disclosure to the public. Moreover, it is important how the data and information is analyzed and helps policy-making. Therefore, this study selects the issue of state of the environment as one of the important indicators. The World Resources Institute (WRI) [2002] also considers this indicator as evolution of environmental information. Weidner and Janicke [2002] survey the starting years of environmental administration, state of the environment, environmental law and so on for 30 countries (Table 5).

In the system-working stage, the system starts actually working to improve the environmental quality. A turning point of the so-called environmental Kuznets curve should be observed in the middle of the stage. In this analysis, the focus is on the reduction in SOx emissions. After the turning point of EKC, the SEMS starts shifting toward the self-management stage.

The self-management stage is the stage in which the system develops sustainably through strong interrelations among the government, firms and citizens, and comprehensive environmental policy is enforced. Firms and citizens take initiatives in environmental management by their voluntary efforts. In terms of international cooperation, a developing country becomes more independent from donor's assistance and utilizes its own financial and human resources in this stage as a sign of its initial period.

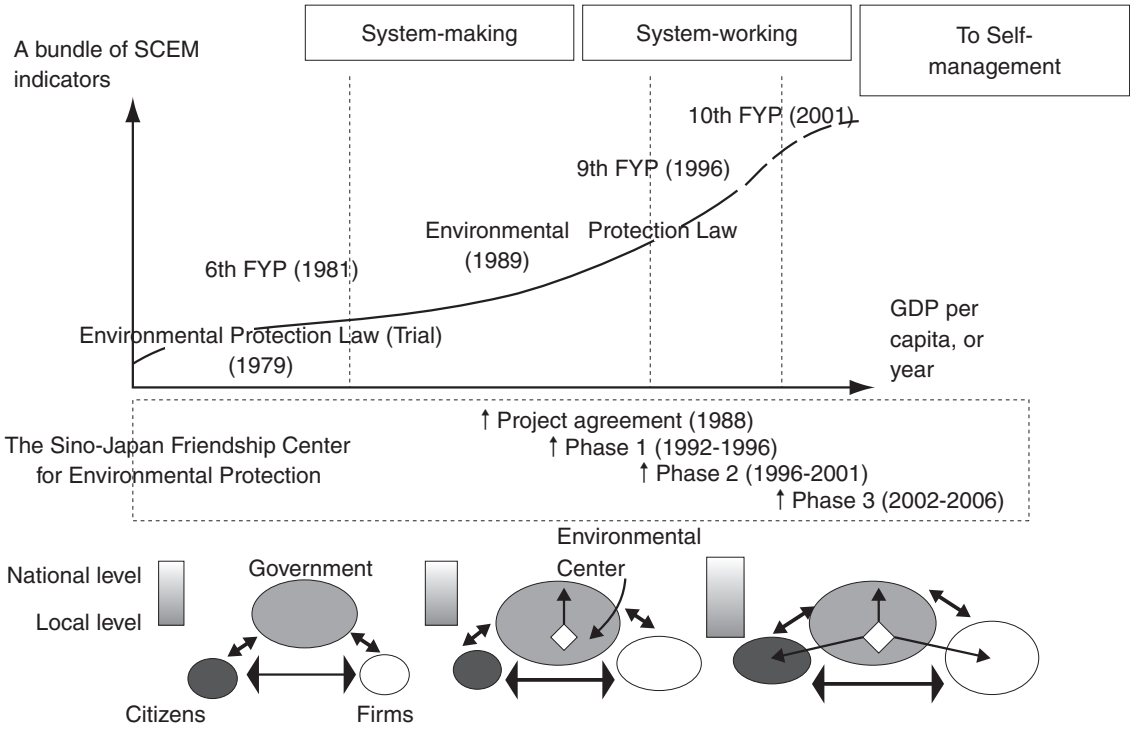
Roles and relations of the three actors also change as a country experiences the development of SEMS. The government sector plays an important role to manage and coordinate issues in the system-making and system-working stages but in the self-management stage, it is responsible for supporting firms and citizens by making a framework for comprehensive environmental management.

Table 5 Institutionalization in Environmental Policy

Countries	Ministry of the Environment	National Environmental Agency	National Environmental Report	Environmental Framework Law	Article in the Constitution	Council of Environmental Experts	National Environmental Plan
Australia	1971/1975	1988	1980/1996	1974			1992
Austria	1972	1985	1978		1984	1971	1995
Brazil	1985/1992	1989		(1981)	1988	1984/1997	2001
Bulgaria	1990	1976	1989	1991	1968/1991	1974/1996	1988/1992
Canada	1971		1986	1988		1971	1990
Chile		1990/1994	1992	1994	1980	(1996)	1998
China		1984	1989	1979/1989		1991	1994
Costa Rica	1986	1995	1986	1995	1994	1995	1990/1996
Czech Republic	1989	1991	1990	1992	1992	1992	1992
Denmark	1971	1971	1983	1973/1991			1994
France	1971/1984	1991	1973	2001		1975	1990
Germany	1986	1974	1976		1994	1971	
UK	1970	1972/1995	1978	1974/1990		1970	1990
Hungary	1987	1974	1975	1976/1995	1972/1990	1996	1992
India	1980/1985	(1974)	1982	1986	1976/1994	1993	1993
Italy	1971/1986	(1994)	1989	1986	(1948)	(1986)	(1997)
Japan	2001	(1971)	1969	1967/1993		1967	1995
Korea	1990/1994	1977	1991	1990	1980/1987	1985	1987/1990
Mexico	1982/1994	1992	1986	1972/1988	1988	1995	1989
Morocco	(1995)					(1995)	
Netherlands	1971/1982	1984	1973	1979/1993	1983	1974	1989
New Zealand	1972/1986		1997	1986/1991		1970-88	1994
Nigeria		1988	1992	1988	(1979/1989)	1990	1988/1990
Poland	1972	1980/1991	1972	1980/2001	1976/1989/1997	1993	1992
Sweden	1986	1967	1977	1969/1998	1974	1968	1993/1998
Switzerland	(1999)	1971	1990	(1983)	1971/1999		(1997)
Taiwan		1978	1988/1993		1992	(1987)	1979/1994
USA		1970	1970	1969		1971	
USSR/Russia	1988		1988	1991	1977/1993		1993
Vietnam	1992	1993	(1995)	1994			1991

Note: Years in parentheses indicate institutions coming close to the conventional definition.
Source: Weidner and Janicke [2002]

Figure 6 The Development Process of SCEM in China



Source: Matsuoka [2002]

Figure 6 shows the evaluation image of SCEM with the stages and benchmarks mentioned above (China's case). This figure also indicates the history of the Sino-Japan Friendship Center for Environmental Protection which has been supported by the Japan International Cooperation Agency (JICA) since 1992 to the present.

2.2.2 SCEM Indicators

Developing indicators of SCEM starts with reviewing the existing environmental and social indicators and challenges the integration of these two. The most basic and objective indicators about environmental issues are the environmental quality data of the pollutants. We can see the trend of environmental quality in one city or country from the observation of time-series data. There are many information sources like the OECD's *Environmental Indicators* and *World Resources* by WRI. The OECD's Environmental Indicators also tries to provide a set of socio-economic indicators together with environmental indicators.

The most popular socio-economic index is the Human Development Index (HDI) by UNDP. The Human Development Report which presents HDIs for some 150 countries has been published every year since 1990. As shown in Table 6, HDI is calculated from average life expectancy, education level, and income level and scored by the balance of the highest and lowest countries [UNDP 1990]. HDI has received a lot of pros and cons and the Report often provides a supplemental index such as Gender Index and different poverty indices for developed and developing countries. HDI, however, does not function as a standard for one country being or not being an ODA recipient nor give us concrete ideas on how donor agencies should assist a particular country.

The United Nations Commission for Sustainable Development (UNCSD), OECD,

Table 6 Social Index

Target	Index	Dimension	Indicator
Human development 1990-	Human development index (HDI)	A long healthy life	Life expectancy at birth
		Knowledge	Adult literacy rate
			Gross enrollment ratio (GER)
		A decent standard of living	GDP per capita (PPP US$)
Poverty 1997-	Human poverty index for developing countries (HPI-1)	A long healthy life	Probability at birth of not surviving to age 40
		Knowledge	Adult literacy rate
		A decent standard of living	Percentage of population not using improved water sources
			Percentage of children under five who are under weight
	Human poverty index for OECD countries (HPI-2)	A long healthy life	Probability at birth of not surviving to age 60
		Knowledge	Percentage of adults lacking functional literacy skills
		A decent standard of living	Percentage of people living below the poverty line
		Social exclusion	Long-term unemployment rate
Gender 1995-	Gender-related development index (GDI)	A long healthy life	Female life expectancy at birth
			Male life expectancy at birth
		Knowledge	Female adult literacy rate
			Female GER
			Male life expectancy at birth
			Male GER
		A decent standard of living	Female estimated earned income
			Male estimated earned income
	Gender empowerment measure (GEM)	Political participation and decision-making	Female and male shares of parliamentary seats
		Economic participation and decision-making	Female and male shares of positions as legislators, senior officials and managers
			Female and male shares of professional and technical positions
		Power over economic resources	Female and male estimated earned income

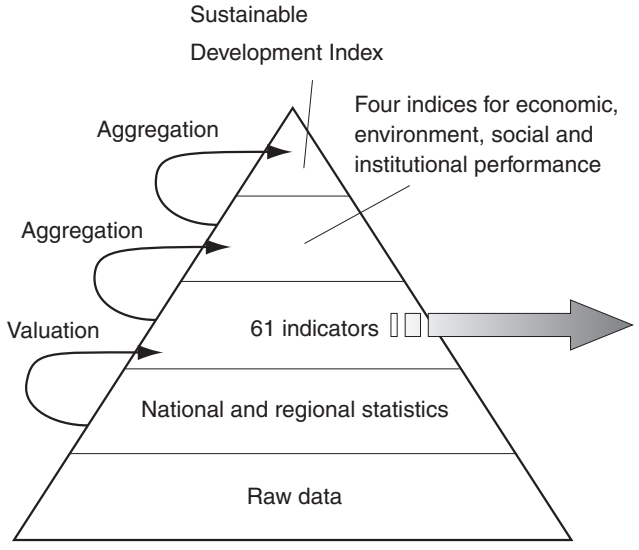
Source: UNDP [2002]

and Global Leaders of Tomorrow Environment Taskforce of World Economic Forum are trying to evolve environmental indicators together with socio-economic indicators in order to obtain an index of sustainable development; Sustainability Indicators, Environmental Indicators, Environmental Sustainability Index (ESI) respectively [UN 2001, OECD 2001, World Economic Forum 2002].

One more example is *Dashboard* by the International Institute for Sustainable Development (IISD). As shown in Figure 7, *Dashboard* consists of four categories of society, environment, economy and institutions and category index is calculated from 8 to 20 individual indicators in each [IISD 2002]. According to the Policy Performance Index (PPI) by the European Environmental Agency which is developed in a similar concept, weighting the category indices should be different from one country to another depending on the priority setting by environmental experts and citizens. The OECD selects several principal criteria from 50 environmental indicators to make it easy to handle them in the evaluation and is trying to integrate environmental and socio-economic indicators by DPSER (DPSIR) model [OECD 2001].

Some attempts are being made in developing indicators for Capacity Development in Environment (CDE). At the International Workshop on Danish Assistance to Capacity

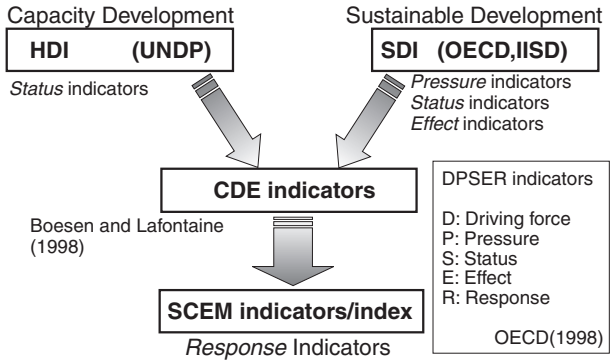
Figure 7 Aggregation between Environmental Indicators and Social Indicators (IISD-Dashhboad)



Social(30)	Environmental (20)	Economic (34)	Institutional (8)
Poverty	CO2	GNP	SD strategy
Equity	Other GHG	GDFI	SD membership
Unemployment	CFCs	CAB	Internet
F/M wages	Urban air	Extemal debt	Telephones
Child weight	Crop land	ODA	R & Dexpenditure
Child mortality	Fertilizer	Materials	Disasters, human cost
Life expectancy	Pesticides	Energy use	Disasters, economic damage
Sanitation	Forest area	Renewable energy	SD indicator coverage
Safe water	Wood harvesting	Energy efficiency	
Health care	Deserts & arid land	Municipal waste	
Child immunization	Squatters	Hazardous waste	
Contraception	Phosphorus	Nuclear waste	
Primary school	Coastal population	Recycling	
Secondary school	Aqua culture	Car use	
Miteracy	Wateruse		
Crowding	BOD		
Crime	Faecal coliform		
Population growth	Key eco system		
Urbenization	Mammals & birds		
	Protected area		

Source: IISD website

Figure 8 Development of Indicators / Index for SCEM



Development in Environment (Snekkersten in May 1998), Boesen and Lafontaine [1998] proposed a matrix of five management functions and three levels of actors[2] in CDE and 80 indicators categorized in results and management process.

Figure 8 summarizes the development of conventional indicators to SCEM indicators. The human development index and sustainable development index are developed in the context of capacity development and sustainable development, respectively, and the CDE indicators can be positioned as an attempt to integrate these two. The SCEM indicators are proposed in clearly expected functions of the actors, all of which are involved in both economy and environment and also in both positive and negative sides of environmental management.

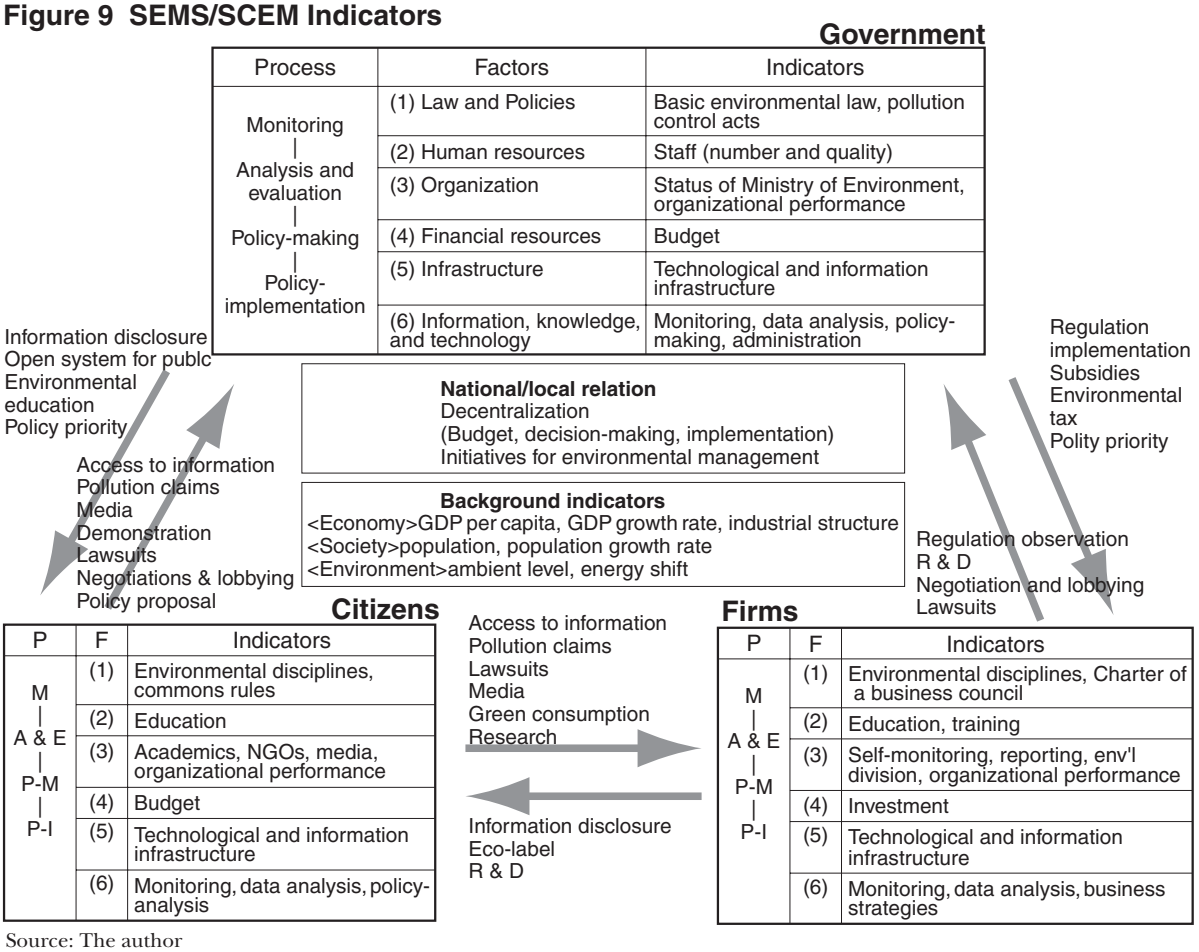
Indicators of Social Capacity for Environmental Management (SCEM) are shown in Figure 9. Indicators are based on four processes (monitoring, analysis and evaluation, policy-making, and policy implementation) and six factors (law and policy, human resources, organizations, financial resources, infrastructure, and information, knowledge and technology) in each actor. Inter-actor relations have indicators of behaviors and effects of the two actors. Relations of national and local levels are evaluated through the decentralization process. Furthermore, SCEM indicators include socio-economic indicators and environmental quality indicators as background information. This report discusses the development of SCEM based on selected important indicators for the stages.

(Shunji MATSUOKA)

Notes:

1. The projects in China and Indonesia are ongoing and

Figure 9 SEMS/SCEM Indicators



Source: The author

some short- and long-term experts are dispatched to other projects except in Thailand's case.

2. Functions: information management and awareness raising, policy making and planning, establishment and maintenance of institutional framework, implementation and enforcement, and mobilization of resources. Actors: national level (donors, government, ministries, agencies, NGOs, private sector, etc.), intermediate level (district and municipality government, river basin authority, NGOs, associations, etc.), and community level (village and ward government, community organization, leaders, groups, households/families, voluntary agencies, businessmen, etc.) (Boesen and Lafontaine [1998]).

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