Seminar on Japan’s Environmental Center Approach to Social Capacity Development for Environmental Management in Developing Countries and Japan’s Environmental Cooperation

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Objectives of the Seminar
- To present the evaluation results on China’s social capacity for environmental management and Japan’s environmental cooperation, the Environmental Center approach
- To discuss future prospects of China-Japan cooperation for further social capacity development in China
- To discuss the possibility of East Asian environmental management regime

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2. Evaluation Tools
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1. Introduction
1-1. Recent Trends of International Cooperation
1-2. Japan Society for International Development (JASID)
1-3. Environmental Center Approach
1-4. Evaluation Objectives
1-5. Social Capacity for Environmental Management and Social Environmental Management System

Critiques for Technical Cooperation
- Capacity development at social level, in addition to individual and institutional level
- Respect for ownership based on participatory decision making process
- Focus on transforming tacit knowledge to externalized activities through knowledge networks / communities. Fukuda-Parr. et al. (2002)
Activity Record 2 Evaluation Report
Material for Feedback Seminars in the Recipient Countries (Seminar in Beijing, China)

**SECI model (Nonaka & Konno 2003)**

- Socialization
- Externalization
- Internalization
- Combination

**Critiques for Technical Cooperation**

- Long-term capacity building with outcome-oriented assessment
- Shift from experts-counterparts relationship to utilizing human resources of developing countries
- Introduction of market theory
- Decision-making and initiative by developing countries
- Management transfer from donor to developing countries
- Reformation of incentive structure of public sector

**JICA’s Technical Cooperation**

- Individual capacity building through enhancing motivation
- Improvement of public functions to meet the needs of the beneficiaries
- Expansion of project impact through strengthening relations between institutions at the policy-making and field level
- Capacity Development of Stakeholders and development of mutual trust between government and the beneficiary

**Japan Society for International Development (JASID)**

- A leading academic society in the field of international development in Japan since 1990
- 1,400 members from universities, government agencies, private companies in and outside of Japan
- Interdisciplinary studies and practices
- Bridging research and policy
What is Environmental Center Approach?

“Environmental Center approach”, defined in Japan’s ODA White Paper 1997, is a generic term for Environmental Center projects and aims to support capacity development in environmental sectors of the governments in developing countries.

1. Introduction

Environmental Centers (1)

<table>
<thead>
<tr>
<th>Project</th>
<th>National Environmental Research and Training Center, Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sino-Japan Friendship Center for Environmental Protection, China</td>
<td></td>
</tr>
<tr>
<td>Project purposes</td>
<td>Monitoring and analysis, research, training</td>
</tr>
<tr>
<td>Env/ issues</td>
<td>Air pollution, hazardous waste</td>
</tr>
<tr>
<td>Input (yen)</td>
<td>Grant aid: 10.5 billion, Equipment: 0.2 billion</td>
</tr>
<tr>
<td>Local agency</td>
<td>NEPA, S&amp;FPA, SERARNAP, SEMARNAT</td>
</tr>
</tbody>
</table>

Environmental Centers (2)

<table>
<thead>
<tr>
<th>Project</th>
<th>National Environmental Research and Training Center, Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Management Center, Indonesia</td>
<td></td>
</tr>
<tr>
<td>Project purposes</td>
<td>Environmental research, monitoring, information system and training</td>
</tr>
<tr>
<td>Env/ issues</td>
<td>Water pollution, air pollution, hazardous waste</td>
</tr>
<tr>
<td>Input (yen)</td>
<td>Grant aid: 3.7 billion, Equipment: 0.4 billion</td>
</tr>
<tr>
<td>Local agency</td>
<td>BAPEDAL/MOE, DEQ, MOSE</td>
</tr>
</tbody>
</table>

Environmental Centers (3)

<table>
<thead>
<tr>
<th>Project</th>
<th>National Center for Environment, Chile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Monitoring Training, Egypt</td>
<td></td>
</tr>
<tr>
<td>Project purposes</td>
<td>Environmental research, monitoring, information system and training</td>
</tr>
<tr>
<td>Env/ issues</td>
<td>Water pollution, air pollution, solid waste, hazardous waste</td>
</tr>
<tr>
<td>Input (yen)</td>
<td>Grant aid: 1.3 billion, Equipment: 0.5 billion, Equipment: 0.2 billion</td>
</tr>
<tr>
<td>Local agency</td>
<td>CONAMA (National Environmental Committee), Chile University</td>
</tr>
</tbody>
</table>

1-4. Evaluation Objectives

JASID undertook this evaluation research under the contract with JICA in order to

- answer the simple question “Have Environmental Center projects contributed to developing countries in solving environmental problems in these 15 years?”
- suggest further public & private partnerships between China and Japan to support social capacity development for environmental management (SCEM)
1-5. Social Capacity for Environmental Management and Social Environmental Management System

What is SCEM & SEMS?

Social Capacity for Environmental Management (SCEM)
Overall capacity to deal with environmental problems through social actors’ individual and interactive efforts.
= Capacity that enables Social Environmental Management System (SEMS) to function.

Social Environmental Management System (SEMS)
Social system which consists of the three major actors, the government, firms and citizens and their interactions to manage environmental problems.

1. Introduction

Social Environmental Management System (SEMS)

Government
Laws & acts
Regulation implementation
Public finance
Information management
Observance of regulations
Market systems
Voluntary management
Information management

Firms

Citizens

National
Local

Laws & acts
Regulation implementation
Public finance
Information management
Observance of regulations
Market systems
Voluntary management
Information management

Redefining Environmental Center Approach
Assistance from Japan

Environmental Center project
Program evaluation of Environmental Center projects
is Evaluation of Environmental Center approach.

Evaluation Viewpoints

- SCEM Analysis
  How has China’s SCEM developed?
- Entry/exit Points of Environmental Cooperation
  Was the Sino-Japan Friendship Center project implemented at an appropriate period?
- Project Design at Program Level
  Was the project designed well enough to contribute to development of China’s SCEM?
2-1 SCEM Concept

SCEM: Actor Approach

Social Capacity for Environmental Management (SCEM) = F (f_A, f_B, f_C, g_{AB}, g_{BC}, g_{AC}, g_{ABC})

SCEM: Factor Approach

Background
- GDP, Industrial structure, Population
- Restriction
- Finance, Infrastructure, Information network

Socio-economic conditions
- Knowledge & Technology
- Policy & Measures
- Human resources & Organization

Relationships Among Factors

2-2 SCEM Benchmarks & Indicators

SCEM Benchmarks & Indicators
- Based on development theory
- Core of policy indicators

Policy (Performance) Benchmarks & Indicators
**Activity Record 2 Evaluation Report**

Material for Feedback Seminars in the Recipient Countries (Seminar in Beijing, China)

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**SCEM Indicators**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Government</th>
<th>Policy</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Policy-Implementing</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SCEM Structure in Policy Process**

**Hypothesis**

- Socio-economic conditions: GDP, education, life expectancy (HDI)
- Environmental conditions: Health damage, industrialization
- External pressure: Environmental performance

**SCM Behavior Resource**

- Govt: Knowledge/Technology
- Firms: Information disclosure
- Citizens: Access to information

**2-3 SCEM and Institutional Change**

**Institutions** - Definition of Keywords -

- **Institutions**: the rules of the game in a society; the humanly devised constraints that shape human interaction.
- **Organizations**: the players of the game; provide a structure to human interaction.
- **Formal Institutions**: rules that human beings devise political rules, economic rules, and contracts.
- **Informal Institutions**: come from socially transmitted information and are part of the heritage that we call culture codes of conduct, norms of behavior, and conventions. Will not change immediately in reaction to changes in the formal rules.

(North 1990)
SCEM and Institutional change

SCEM & Institutions (Ube City, Japan)

2. Evaluation tools

2-4 SEMS Development Stages

Entry/exit Points of Environmental Cooperation

System-making Stage

Stage in which basic capacity of SCEM, especially governmental institutions are developed.

<table>
<thead>
<tr>
<th>Major environmental issues</th>
<th>Poverty-related issues, industrial pollution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial pollution</td>
<td>Degraded</td>
</tr>
<tr>
<td>Three actors</td>
<td>Predominantly government</td>
</tr>
<tr>
<td>Relations among the three</td>
<td>Government -&gt; Firms</td>
</tr>
<tr>
<td></td>
<td>Government -&gt; Citizens</td>
</tr>
<tr>
<td>Benchmarks (essential)</td>
<td>Environmental law</td>
</tr>
<tr>
<td></td>
<td>Environmental agency</td>
</tr>
<tr>
<td></td>
<td>Environmental information</td>
</tr>
</tbody>
</table>

System-working Stage

Stage in which relations between the government and firm sectors become stronger by setting the incentives for pollution abatement. Industrial pollution improves after reaching its peak in the middle of the period.

<table>
<thead>
<tr>
<th>Major env’t issues</th>
<th>Industrial pollution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial pollution</td>
<td>Turning point</td>
</tr>
<tr>
<td>Three actors</td>
<td>Government and firms</td>
</tr>
<tr>
<td>Relations among the three</td>
<td>Government - Firms</td>
</tr>
<tr>
<td>Relations among the three</td>
<td>Government - Citizens</td>
</tr>
<tr>
<td>Benchmarks (essential)</td>
<td>Regulation</td>
</tr>
<tr>
<td></td>
<td>A turning point of EKC</td>
</tr>
</tbody>
</table>
**Self-management Stage**

Stage in which comprehensive environmental policies are set up through harmonious relations among the three actors for effective social environmental management.

<table>
<thead>
<tr>
<th>Major env't issues</th>
<th>Consumption-related issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial pollution</td>
<td>Improved</td>
</tr>
<tr>
<td>Three actors</td>
<td>Government, firms, and citizens</td>
</tr>
<tr>
<td>Relations among the three</td>
<td>Government - Firms - Citizens (interactive)</td>
</tr>
<tr>
<td>Benchmarks (essential)</td>
<td>Graduation from ODA Comprehensive environmental management</td>
</tr>
</tbody>
</table>

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**SCEM Evaluation Box**

<table>
<thead>
<tr>
<th>Government</th>
<th>Firms</th>
<th>Citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental info</td>
<td>Improve the environment</td>
<td>Comprehensive environmental management</td>
</tr>
<tr>
<td>Environmental administration</td>
<td>Estimate emissions</td>
<td>Air quality management capability</td>
</tr>
<tr>
<td>Environmental awareness, Environmental NGOs</td>
<td>Environmental education</td>
<td>Environmental management</td>
</tr>
</tbody>
</table>

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**Entry/exit Points of Environmental Center Projects**

To give impacts on SCEM most effectively and efficiently, Environmental Center project should start in the final phase of the system-making stage and be finished in the middle of the system-working stage.

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**Project Design: Scope of Function and Input**

Environmental Centers need to be given a broad scope of function and placed in an appropriate position in environmental administration to contribute to the development of SCEM.

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**3. Evaluation Results**

- 3-1 Development of China’s SEMS
- 3-2 Environmental Center Approach in China – Entry/exit points -
- 3-3 Impacts on SCEM Development
3-1 Development of China's SEMS

Relatively smooth shift from system-making into system-working stage

- Start of the system-making stage
- Final phase of the system-making stage
- Start of the system-working stage

3-2 Environmental Center Approach in China

- Entry/exit points -
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SEM S and Project Inputs

Policy Application (China)

Entry/exit Points

3-3 Impacts on SCEM Development

Impact Layers of Environmental Center Approach to SCEM

Impacts on the Government

- The Sino-Japan Center contributes sufficiently to the capacity development for environmental management of the government through monitoring, research, and training.
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Impacts on Firms and Citizens

| Training | Training for NGOs. |
| ISO authorization | Approved by the government in 2002 as an ISO 14000 certified authority organization. |
| Information dissemination | Annual environmental performance reports for 600 cities, daily air pollution level reports in 46 main cities |

Since information disclosure and reports are restricted by the government’s control, it is difficult to say that all information reaches the citizens.
The Sino-Japan Center has some impact on the citizens through joint projects with universities/research organizations and preparing environmental education materials. However, it needs to expand training beyond targeting NGOs.

Impacts on the Local Level

| Training | Training for the local environmental administration bureau directors/staff |
| Survey | Data exchange with local monitoring stations |
| | Environmental network, connecting 100 cities |

The Sino-Japan Center has become the representative organization for the training of environmental administrative officers and the government technology agency, including local representatives.
Upgrading of local monitoring data in the central core is becoming easier, which will help strengthen the relationship between the central and local levels.
Central-local relationships need to expand beyond training and monitoring data exchange.

Evaluation Summary

Overall, the Sino-Japan Center was successful in enhancing capacity building in environmental management in China, especially in the government sector.
Development of SCEM at the local level, especially in the inland provinces and the western region is the challenge the center faces.
It is urgent to consider the center’s new roles in China’s self-management stage (after Phase III).

Evaluation Summary (2)

The Sino-Japan Friendship Center for Environmental Protection works as a “window” actor in Japan-China environmental cooperation including business and research.
The center promoted externalization of each country’s tacit knowledge by exchanging explicit knowledge.
- More than 50 short-term experts dispatched from Japan
- Training in Japan, seminars, research in China
- Partnerships among research institutions, universities, and private institutions from both countries

Future Roles of the Sino-Japan Center

- Medium between central/local governments and various organizations through joint research/programs.
- Promoter of horizontal cooperation between China and Japan.
4. Steps Forward

Contribution of China-Japan cooperation to...
- Further enhancement of three actors’ capacity and their relationships in China for self-management of environmental problems.
- SCEM development in the inland provinces and western region.
- Building East Asian environmental management regime.

China’s Further SCEM Development

1. Policy-making
   - Enhancement of each actor’s capacity development
2. Dynamism of social capacity development and institutional change in China
   - Consideration of influence of external & internal pressure to SCEM development
3. Appropriate measurement of SCEM
   - Development of SCEM benchmarks and indicators

SCEM Development in the Inland Provinces and Western Region

1. Government-oriented cooperation to cross-sectoral cooperation
2. Focus on research / academic sector.
   (Strengthening local universities through human resource development and joint research with universities in the metropolitan areas)

East Asian Environmental Management Regime

1. Importance of dialogues for seeking common ground / common interests
2. China-Japan-Korea relationship for strong leadership
3. Horizontal cooperation (equal partnership) to build mechanism for sustaining regional common goods.

Institutionalized Dialogues “ba” and SCEM

Development of interactions among government, firms and citizens
- Institutionalized dialogues

Development of relations between national and local levels
- Development of local network

Reference

- 財団法人国際開発センター・アイ・シー・ネット株式会社, 2003、プロジェクト研究「日本型国際協力の有効性と課題」、国際協力事業団。