

IDE Spot Survey

***Social Capacity Development
for Environmental Management in Asia
Japan's Environmental Cooperation
after Johannesburg Summit 2002***

March, 2003

Edited by Shunji MATSUOKA and Akifumi KUCHIKI

INSTITUTE OF DEVELOPING ECONOMIES

IDE-JETRO

Contents

Executive Summary

Chapter 1

Shunji MATSUOKA

Introduction: Environmental Issues and Japan's ODA in Asia 1

- 1.1 Japan's ODA in Transition..... 1
- 1.2 Economic Growth and Environmental Issues..... 3
- 1.3 Social Environmental Management Systems in Asian Countries..... 4

Chapter 2

Shunji MATSUOKA

Social Capacity Development for Environmental Management..... 7

- 2.1 Social Capacity for Environmental Management and Social Environmental Management System 7
- 2.2 Development of SCEM..... 11

Chapter 3

Naoko HONDA

Evaluating Social Capacity Development for Environmental Management in Developing Countries: Case Studies 23

- 3.1 Development Process of SCEM in Three Asian Countries..... 23
- 3.2 China..... 23
- 3.3 Thailand..... 26
- 3.4 Indonesia 31
- 3.5 Development of SEMS and Appropriate Environmental Cooperation..... 33

Chapter 4

XHOU Xin, REN Yong, GAO Tong

Social Capacity Development for Environmental Management and Japan's Cooperation in China..... 41

- Introduction 41
- 4.1 Evolution of China's Environmental Management..... 41
- 4.2 China's Social Environmental Management System (SEMS) 44
- 4.3 The Sino-Japan Center: A Case of Sino-Japan Bilateral Cooperation..... 52

Chapter 5

Qwanruedee CHOTICHANATHAWEWONG, *Sareeya* CHAIRATTANANONT

Social Capacity Development for Environmental Management and Japan's Cooperation in Thailand..... 57

- 5.1 Social Capacity Development for Environmental Management 57
- 5.2 Japan's Cooperation for Environmental Management in Thailand (in case of supporting of the Environmental Research and Training Center) 61
- 5.3 Role of ERTC in Environmental Management 64
- 5.4 Lessons and Future Direction 69

Chapter 6

Setyo S. MOERSIDIK

Social Capacity Development for Environmental Management and Japan's Cooperation in Tndonesia..... 73

- Introduction 73
- 6.1 Social Environmental Management System: Definition..... 74
- 6.2 The Government's Environmental Management and Japan's Cooperation in SEMS..... 74
- 6.3 Financing Social Environmental Management in Reformation Era 77
- 6.4 Prospects and Partnership to Develop SEMS..... 81

Chapter 7

Shunji MATSUOKA, *Akifumi* KUCHIKI

Couclusions..... 87

- 7.1 Social Environmental Management System as a New Framework 87
- 7.2 Methodological Side of SEMS 87
- 7.3 Evaluating SEMS in China, Thailand and Indonesia..... 88
- 7.4 Lessons form the Report..... 88
- 7.5 Further Issues for Future International Environmental Cooperation 89

Tables & Figures

Chapter 1

Table 1	Development Approaches after 2000	1
Figure 1	Inflows of ODA and FDI to Developing Countries (2001 year price)	3
Figure 2	Economic Growth and Environmental Issues	3

Chapter 2

Table 1	Historical Review of Capacity Development Approach	7
Table 2	History of the Concept of Capacity Development in Environment.....	8
Table 3	The Trend of Cooperation Approach	9
Figure 1	Social Environmental Management System (SEMS)	10
Figure 2	SEMS and its Interrelations with Environmental Quality and Socio-economic Conditions.....	10
Figure 3	Kitakyushu Model	11
Figure 4	Concepts of Comparative Institutional Analysis and their Application to SEMS.....	12
Figure 5	Comparative Analysis Using DPSEIR Framework	13
Table 4	Development Stages and Benchmarks of Social Environment Management System (SEMS)	14
Table 5	Institutionalization in Environmental Policy	16
Figure 6	The Development Process of SCEM in China.....	17
Table 6	Social Index	18
Figure 7	Aggregation between Environmental Indicators and Social Indicators (IISD-Dashboard)	19
Figure 8	Development of Indicators/Index for SCEM	19
Figure 9	SEMS/SCEM Indicators	20

Chapter 3

Table 1	Date Source	23
Table 2	Chronological Summary of Environmental Policy and the Environmental Center in China.....	24
Figure 1	Environmental Policy Development in China.....	25
Figure 2	Environmental Law System in China.....	26
Figure 3	Environmental Administration in China (State Environmental Protection Administration; SEPA)	27
Table 3	The Number of Air Monitoring Stations.....	28
Figure 4	SO ₂ Emissions in China	28
Figure 5	TSP Concentration in China.....	28
Table 4	Chronological Summary of Environmental Policy and the Environmental Center in Thailand	29
Figure 6	Environmental Law System in Thailand.....	30
Figure 7(a)	Environmental Administration in Thailand (Ministry of Science, Technology and Environment; MOSTE)	31
Figure 7(b)	Environmental Administration in Thailand (Ministry of Natrual Resources and Environment; MONRE)	32
Figure 8	SO ₂ Emissions in Thailand	33

Figure 9	PM ₁₀ Concentration in Thailand.....	33
Table 5	Chronological Summary of Environment Policy and the Environment Center in Indonesia	34
Figure 10	Environmental Law System in Indonesia	35
Figure 11(a)	Environmental Administration in Indonesia (BAPEDAL, before 2002).....	36
Figure 11(b)	Environmental Administration in Indonesia (State Ministry of the Environment, before 2002)	37
Figure 12	SO ₂ Emissions in Indonesia	37
Figure 13	TSP Concentration in Indonesia (Jakarta)	38
Figure 14	Environmental Administration in Indonesia (new Ministry of the Environment)	38
Figure 15	System-making Stage in Three Countries.....	39
Figure 16	Development Stages of Social Environmental Management System (SEMS) ...	40
 Chapter 4		
Table 1	TSPR Matrix for Stage 1	42
Table 2	TSPR Matrix for Stage 2	42
Table 3	TSPR Matrix for Stage 3	43
Table 4	TSPR Matrix for Stage 4	44
Table 5	TSPR Matrix for Stage 5	45
Figure 1	National Structures of Environmental (and Natural Resource) Governance ..	46
Figure 2	Hierarchy of Environmental Governance in Pollution Control	48
Table 6	Roles of the Sino-Japan Friendship Center for Environmental Protection in China's Social Environmental Management System	54
 Chapter 5		
Table 1	Budget of the Environmental Research and Training Center	63
Table 2	Number of Personnel of ERTC in 2002.....	65
Figure 1	Number of ERTC Employees Classified by Employment Status between 1st year and 11st year.....	65
Table 3	Number of ERTC Officers, Classified by Type of Employment	65
Figure 2	Number of Trainees and Trainers between 1992 and 2002	66
Figure 3	Number of ERTC Officers Classified by Work Group.....	66
Table 4	Outcome of Interviews of Officials of the Ministry of Science, Technology, and Environment	67
Table 5	Opinion of Participants regarding Training/Seminar Programs	67
 Chapter 6		
Figure 1	Government Structure and Environmental Management	79
Figure 2	Function Relationship between Institutions	79

Contributors

- Shunji MATSUOKA** Professor, Graduate School for International Development and Cooperation, Hiroshima University, Japan (Executive Summary, Chapter 1, Chapter 2, Chapter 7)
- Akifumi KUCHIKI** Senior Research Fellow, Development Studies Department, Institute of Developing Economies, JETRO, Japan (Executive Summary, Chapter 7)
- Naoko HONDA** Doctoral course student, Graduate School for International Development and Cooperation, Hiroshima University, Japan (Chapter 3)
- Xin ZHOU** Research Associate, Policy Research Center for Environment and Economy (PRCEE) of the State Environmental Protection Administration (SEPA), China (Chapter 4)
- Yong REN** Senior Researcher, PRCEE, SEPA, China (Chapter 4)
- Tong GAO** Research Assistant, PRCEE, SEPA, China (Chapter 4)
- Qwanruedee CHOTICHANATHAWEWONG** Director, Energy, Industry and Environment Program, Thailand Environment Institute (TEI), Thailand (Chapter 5)
- Sareeya CHAIRATTANANONT** Research Associate, TEI, Thailand (Chapter 5)
- Setyo S. MOERSIDIK** Director, Centre for Research of Human Resources and the Environment, University of Indonesia (CRHRE), Executive Secretary of Coordinating Body for Collaboration of Environmental Study Centers in Indonesia (BKPSL Indonesia), Indonesia (Chapter 6)