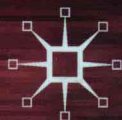


DEVELOPMENT OF ENVIRONMENTAL POLICY IN JAPAN AND ASIAN COUNTRIES

Edited by Tadayoshi Terao and Kenji Otsuka

IDE-JETRO



Development of Environmental Policy in Japan and Asian Countries

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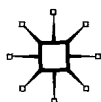
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Preface

This book is one of the outcomes of a five-year research project on environmental policy in Asia conducted at the Institute of Developing Economies, Japan External Trade Organization (Chiba) from the fiscal year of 2000 to 2004. Our research project focuses on the processes of environmental policy formation and implementation and their links to economic development, the objective of which is to reveal factors of dynamism between environmental policy and social change, in domestic, regional and global contexts, which could mutually influence effectiveness in environmental policy.

We have already published two volumes of Japanese books as IDE Research Series No. 527 in 2002 and No. 541 in 2005. Each paper in this book is revised and rewritten by each project member in English, based on his/her own Japanese article published in these books. In addition to these Japanese books, we have published an English report on *Studies on Environmental Pollution Disputes in East Asia: Cases From Mainland China and Taiwan* as Joint Research Program Series No. 128, in 2001, by our institute.

Among many books on environmental policy published in English, this book is unique in focusing on both present issues, which Asian countries are facing, and past experiences of Japan, which is a front runner in economic development in Asia, struggling against heavy environmental pollution under rapid economic growth after the Second World War. We believe this book could help those who are involved or interested in environmental policy reform to find any clue to promote environmentally sustainable development in Asia and other developing countries.

We would like to thank not only all our project members who have devoted themselves to dozens of project meetings for five years and paper writing under hard time constraints, but also numerous persons who have given us kindest support and advice on our research projects. We also are grateful to staff at SUNT Co. Ltd, PALGRAVE MACMILLAN and IDE-JETRO for generous support in editing this book.

TADAYOSHI TERAOKA
KENJI OTSUKA

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Introduction

Tadayoshi Terao and Kenji Otsuka

In order to conquer poverty, raise social welfare and secure political stability, most governments in developing countries have promoted economic development through industrialization. In the process whereby developing countries achieve economic development through industrialization, environmental problems arise in various forms and the government, companies and citizens in each country are compelled to find countermeasures. Responses to environmental problems often involve trade-offs with the policy that promotes economic development. Fundamentally, economic development policies are, in many cases, major factors in the cause of environmental problems.

As economies become increasingly globalized, environmental problems are occurring across borders in conjunction with international trade and direct investment, and problems that cannot be tackled by a single country are increasing. Global environmental problems, such as climate change caused by greenhouse gases and destruction of ozone layers induced by chlorofluorocarbons, require greater participation by developing countries to develop remedies. However, the existence of domestic environmental policies within countries is a precondition for international measures, and international measures will not make progress unless domestic measures are conducted well by individual countries. Moreover, the conditions that must be taken into account when considering environmental policy at the national level are influenced by changes in international society.

In looking at environmental policy, we mainly focus on measures to reduce environmental pollution caused by economic activities. The gravity of environmental problems became widely known to the world through international conferences and environmental organizations in the early 1970s, and laws for pollution control were enacted not only in developed countries but also in most developing countries, with a focus on industrial pollution, including air pollution, water pollution, waste and noise. However, in many cases the government agencies that administer the legal system and the detailed legal provisions for enforcing the regulations did not receive the necessary enhancement. Except for a few successful cases,¹ most countries are still enduring poor

implementation and enforcement of environmental law and policy, and the reasons for this are considered to be imperfect legal systems, lack of personnel, insufficient equipment, low budgets, economic development-oriented political forces and deficiencies in environmental awareness among entrepreneurs and citizens, etc.

In studying the environmental policy problems in Asia, this book focuses on the processes of environmental policy formation and implementation and their links to economic development. The objective is to reveal factors of dynamism between environmental policy and social change, in domestic, regional and global contexts, which could mutually influence effectiveness in environmental policy. Unlike many studies on environmental policy, we do not use any single existing discipline, but rather use a politico-economic approach to environmental policy processes related to economic development. In the context of this book, the politico-economic approach does not merely mean political analysis of economic policy, but means analysis of mutual interactions among a variety of stakeholders in the policy process, based on the structure woven by the incentives of each stakeholder.

In the case studies in this book, we focus on the two points below.

The first point on which we focus in the case studies is the experiences of industrial pollution control in Japan as an Asian country that realized rapid economic growth through the 1960s and into the early 1970s.² Although the Japanese experience with industrial pollution control has been mentioned frequently as an Asian model for environmental policy due to the similarities in rapid economic growth and industrialization in Japan and the current developing countries, we need to rethink the Japanese experience from the viewpoint of political economy to reveal how some measures have been used but others have not and how some measures have succeeded but others have not. In other words, we try to reveal both universal and unique factors in the Japanese experience in order to serve as an operational reference for developing countries in Asia and other areas.

The second focal point in our case studies is the problems of implementation and enforcement in environmental policy, especially in pollution control, in Asian countries. Although most Asian countries have set up environmental administration and environmental legal systems to deal with the deteriorating quality of the environment in each country, most of them have not yet succeeded in controlling environmental pollution and destruction due to poor implementation and enforcement. To study this issue, it is necessary to investigate not only the current system of policy, law and administration but also to investigate the dynamic process of environmental policy formation and implementation, as well as their links to the broader range of social change, such as industrialization, democratization, decentralization and globalization, in each country.

This book consists of two parts. In Part I, we will rethink Japanese experiences in environmental pollution control mainly during the era of rapid economic

growth after the Second World War. In this part, we will reveal factors behind the so-called successful Japanese experience with pollution control to share with other Asian countries, which are still tackling environmental pollution. In Part II, we will analyse the dynamism of the environmental policy process in Asia. In this part, we will examine how each factor, some of which are common in cases in Japan, exerts influence on other factors to lead environmental policies to success or failure in each country.

The outline of each chapter is presented below.

Chapter 1 attempts to examine the so-called 'Japanese experience' of industrial pollution control and attempts to position it in the process of rapid economic development of late-comer industrialization. From such a point of view, the industrial policy that promoted rapid industrialization becomes an important factor in understanding industrial pollution control policy in Japan. Industrial pollution control policy in Japan was formed and promoted as a part of industrial development policy, using the same policy tools as industrial development policy, such as low-interest loan programmes and preferential tax treatments.

Chapter 2 examines the historical dynamic process of the end-of-pipe technology development under the command and control (CAC) approach in Japan, focusing on SO_x and NO_x control. Modern economic theory tells us that economic instruments would be more efficient than CAC in environmental policy because CAC would bring no more incentive than regulation. However, this chapter carefully examines, through case studies of air pollution control in Japan, how the CAC approach has brought about development of pollution control technology.

Chapter 3 focuses on the role of local governmental research institutes in technology development and diffusion for pollution control in Japan. Local governmental research institutes (LGRIs) were established mainly in each prefecture and some large cities, in order to develop the technological state of regional industries by conducting technical guidance, tests on request and research and development (R&D). This chapter describes how important the role of LGRIs has been in Japan, especially for small and medium enterprises, and examines the implications of this for developing countries.

Chapter 4 examines the effectiveness of administrative guidance issued by local governments for air pollution control to industries in Japan. Although administrative guidance in environmental policy is often seen as inefficient both economically and environmentally, it played the central role in industrial pollution control during the era of no national regulation in some cities such as Osaka and Kitakyushu. Through case studies in these two cities, this chapter discusses the factors that have led to the success of administrative guidance, as well as the effectiveness of and implications for technical cooperation with developing countries.

Chapter 5, as the first chapter of Part II of this book, examines the problems in the existing air pollution control in China and discusses the possibility of

installing economic instruments while considering the characteristics of China's transitional economy in the reform era. The case study of air pollution control in China presented here suggests that China would better realize medium to long-term policy effectiveness by adapting some economic incentives together with certain institutional reforms, rather than enhancing command and control policy.

Chapter 6 focuses on a rating programme for industrial pollution control based on information disclosure in Indonesia. PROPER (Programme for Pollution Control, Evaluation and Rating), initiated in Indonesia and supported by the World Bank, has attracted international attention and is now carried out in the Philippines, India and China, too, but its historical background and policy development in Indonesia have not been clarified. This chapter re-examines rating programmes in different stages, including PROPER, and discusses their meaning and limits for environmental management in Indonesia.

Chapter 7 examines the role of public interest litigation in industrial pollution control. In India recently, many environmental lawsuits are heard by the Supreme Court every Friday, now known as 'Green Friday', and most of them are brought as public interest litigation (PIL), which allows the general public to invoke the warrant jurisdiction of the court. Although it can be said that PIL plays a significant role in raising people's awareness of environmental issues, it should be noted that the judgements are not always implemented well. This chapter also gives attention, through case studies, to the role of local communities as informal regulators.

Chapter 8 reviews the transformation of governance systems in environmental policy implementation, focusing in particular on industrial pollution control and examines the effectiveness and tasks of multi-stakeholder governance in China. Since the 1990s, the central government has enhanced regulatory enforcement for industrial pollution, while reforming the governance system of environmental policy implementation with the involvement of the People's Congress, mass media and NGOs. Following a macro review of such transformation, this chapter discusses its effectiveness from the viewpoints of regulatory enforcement, incentives for firms and public participation.

Chapter 9 attempts to present alternative views of environmental policy formation in the process of democratization from an authoritarian regime in Taiwan and also examines the major achievements and problems of environmental policy in Taiwan following completion of the democratization process there. In Taiwan, from the first half of the 1990s, political liberalization and democratization helped development of environmental policy administration and institutions. However, after the late 1990s, side effects of rapid democratization became increasingly prominent in many aspects of society, including local environmental policies, which were diversified significantly after decentralization.

Chapter 10 analyses the characteristics of the environmental cooperation regime of the East Asia region, in comparison with the environmental

cooperation regime of Europe, and also analyses the effectiveness of Japan's policy towards regional environmental cooperation in East Asia, mainly through studying a case in China. This chapter examines not only international and regional regimes in environmental policy, but also domestic institutional factors in policy implementation in China.

These ten chapters suggest a number of points, including those below.

The first point relates to the possibilities and limitations of applying Japanese experiences to pollution control policies as a model for environmental policy during rapid industrialization. It is, indeed, possible that Japan's experiences discussed in Part I could provide an interesting viewpoint on the effectiveness of pollution control based on industrial policy by administrative dictate. However, Japan's experiences can also reveal limitations in administration-dictated industrial policy that hamper institutional reforms for broader stakeholder participation and decentralized decision-making in environmental policy formation, including policies on environmental impact assessment, sustainable urban planning and so on.

The second point, as discussed in Part II, is that the socio-economic conditions behind Japan's 'successful' pollution control policy will not necessarily be identical to those in developing countries in Asia. First, regulatory enforcement is not perfect in many countries, due to lack of governmental resources, political will and social pressure. Second, many countries are already shifting their environmental policy from CAC to a policy mix with market-based instruments (MBIs) and information disclosure. Third, although many countries are basing their environmental policy on market-based instruments (MBIs) and multi-stakeholder governance with information disclosure and public participation, the effectiveness of such new environmental policy instruments is not adequate due to imperfect political and economic reform in each country.

The last point, as discussed in the last chapter of this book, is that the effectiveness of environmental cooperation in East Asia is constrained by such factors as weak ad hoc regimes and scant interactions with comprehensive regimes like APEC. Focusing in particular on Japanese environmental aid to China, which is deeply embedded in environmental cooperation in East Asia, it is suggested that consideration should be given both to domestic factors in China (such as environmental regulations, financial environment, organizational coordination, international rules and roles of NGOs and foreign companies), as well as to strategy for regional cooperation by Japan. Japan's strategy is often to promote the Japan model, which developed under its own particular conditions, with its strict command and control, best available 'expensive' technology and so on, but such a strategy seems to constrain the effectiveness of environmental aid.

In sum, in order to resolve the environmental policy problems in Asia, we should rethink Japanese experiences in environmental pollution control and also carefully analyse socio-economic factors in the environmental policy process in each country. We will be deeply gratified if we can provide some

insights for further discussion on improvement of the current environmental situation in East Asia through this book.

Notes

1. Singapore is often said to be one of the successful countries in implementing effective environmental management through government initiative. See Owada (1993) and Heng (1997).
2. For example, see Kojima *et al.* (1995).

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