

An Analytic Framework for a Comparative Study of Environmental Governance in Asia*

1. Introduction

Environmental governance is about how societies deal with environmental problems. It is concerned with the interactions among formal and informal institutions and the actors within society that influence how environmental problems are identified and framed (or defined). It also relates to how environmental issues reach the political agenda, policies are formulated, and programmes implemented.

Since the 1992 United Nations Conference on Environment and Development (the Rio Conference) environmental governance structures in Asia have changed quite dramatically. At the domestic level, new environmental laws, programmes, and institutions have been established. In addition, environmental actors are changing their strategies as new kinds of environmental issues gain scientific and public attention. Actors that traditionally were not involved in trying to influence the direction of environmental legislation are becoming increasingly involved in the environmental policy formation process in Asia. At the sub-regional and regional levels also, environmental networks and cooperation schemes are beginning to form. Important changes in environmental governance mechanisms are underway in Asia at the national and regional levels. These evolving governance structures have the potential to influence greatly how environmental problems are addressed in the region. It is, therefore, critical to examine the changing nature of environmental governance in Asia and its implications for environmental outcomes.

The Environmental Governance in Asia project will focus attention on how environmental governance occurs within and among the countries of Asia. This project endeavors to systematically explore the domestic and international factors that are central to environmental governance in Asia today. Through a wide range of factors, the international system acts upon environmental governance mechanisms in Asia. Domestic political debates in turn, influence outcomes at the international level. Deforestation is a local, national, and international issue. The pollution of a river that flows into a regional sea has both local and international environmental consequences. Air pollution at the urban level is also linked to acid rain and global climate change. Thus, it is necessary to examine the linkages between domestic environmental

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governance mechanisms and those that exist internationally.

Several broad questions are raised: What are the main characteristics that define environmental governance within the countries of Asia? What are the similarities and differences in the environmental governance mechanisms of countries in Asia? How does the nature of environmental governance within specific countries in Asia influence their ability to participate effectively in regional and global problem-solving activities? What steps need to be taken to improve environmental governance at the local, national, and international levels? Do the emerging environmental governance mechanisms at the regional level within Asia have the potential to address effectively the environmental problems threatening the region? Will environmental governance at the regional level within Asia eventually converge on the European or North American models? Or, is an "Asian form" of environmental governance likely to take root?

This project is concerned with several kinds of environmental governance challenges that face the region. They include issues of water pollution, air pollution and climate change, and deforestation. Several policy relevant goals motivate this work. One is to enhance the environmental governance capacity of states in the region where environmental laws are still limited and environmental administrations may lack sufficient capacity to address domestic environmental concerns. Another is to raise awareness of environmental problems of a regional and global scale. Finally, there is a need to facilitate the development of mechanisms that promote environmental cooperation in the Asian region.

As a first step in analyzing environmental governance mechanisms and processes within the region, a comparative study of environmental policy formation and implementation is proposed. This comparative study of environmental governance will be based on similar research questions and research methodologies that are to be employed by researchers for each country case study: China, India, Japan, and Thailand. Environmental governance as it occurs in three environmental issue areas will be examined in these countries. These issue areas are: 1.) river and marine pollution; 2.) air pollution/climate change, and 3.) deforestation. The rationale for this case selection is explained below.

2. The Country Cases

The importance of China and India to the future of the environment in Asia and at the global level is self-evident. Together China and India account for close to two-fifths of the world's population. Per capita income in China and India is still low and per capita consumption of energy and natural resources remains well below that of the developed countries. Still, as a result of rapid economic development in these countries, consumption of energy and natural resources is increasing rapidly. The demand for modern conveniences, such as refrigerators, electric appliances, automobiles, and air conditioners, has been steadily rising. As a result of burgeoning populations and growing

demand for energy, it has been estimated that by 2010, these two countries alone could account for over half of total world greenhouse gas emissions. Environmental governance challenges abound in these countries. Six of the world's largest cities are in India and China. The continued movement of populations from rural to urban areas, means that urban congestion is likely to grow worse in the future. In urban areas, traffic congestion, air pollution, and water pollution are severe problems. The use of coal in China for heating, cooking, and industrial purposes contributes greatly to air pollution levels, acid rain, and global climate change. In India, demand for wood for fuel has contributed to that country's deforestation and the demand for scooters and automobiles contributes to nitrogen oxide and carbon dioxide emissions. Climate change could increase the incidence of mosquito-borne diseases such as malaria and dengue fever in China and India. In these countries, air and water pollution threaten human health and degrade the quality of life. Also in rural areas, pollution problems are numerous. Agricultural pollution, soil degradation, and toxic wastes are major problems. China and India could face severe water shortages in the future as a result of growing industrial and agricultural demands for water. How these countries address issues of environmental governance are of tremendous importance.

Thailand shares many of the environmental problems that affect China and India. As one of the Asian tigers, Thailand experienced years of rapid economic development. As income levels rose, the demand for consumer goods climbed. Growing demand for energy and natural resources together with lax environmental laws, contributed to severe air, water, and soil pollution. Tropical deforestation is another major issue for the country. A case study of Thailand will contribute to the understanding of the challenges to effective environmental governance in the many rapidly industrializing states of Asia. It will also provide a chance to focus attention on how the Asian financial crisis is impacting environmental governance capacities.

Japan provides an important point of comparison with these other three Asian countries. Japan is the richest country in Asia. In many ways, it is easier to compare Japan with the countries of Europe and North America than with the countries of Asia in terms of environmental governance. This is because Japan tackled many of its own serious environmental problems more than two decades ago. While there are still many environmental governance challenges for Japan domestically, such as dealing with ground water pollution, urban air pollution, and nature conservation, the situation is quite different from what it is in the developing states of Asia. For Japan, the most important environmental governance challenges may well be how to play a leadership role in Asia in promoting regional mechanisms for environmental pollution control. Some steps are being taken in this direction, through the promotion of Asian monitoring networks, the establishment of environmental training centers, and the hosting of numerous regional conferences. The effectiveness of these new measures, however, has yet to be systematically addressed.

In order to assess the strengths and weaknesses of environmental governance mechanisms in these

Asian countries and to make policy suggestions for strengthening environmental governance mechanisms in the region, systematic empirical research will be undertaken. The challenge for such comparative research is great given the differences in availability of data. Moreover, differences in the governmental systems and cultures of these four countries can make it hard to make direct comparisons. The definition of what an environmental non-governmental organization, for example, may not be the same in India as it is in China. Because central-local government relations vary considerably in each of these countries, it can also be hard to compare the factors that make the implementation of environmental policies at the local level more effective in some countries than others. Even the understanding of what is meant by effective environmental governance may vary across countries because of differences in national priorities and cultural traditions. Still, despite these kinds of methodological challenges, empirically based research of environmental governance is critical if sound policy advice is to be made.

3. The Environmental Issues

River and Marine Pollution

Water problems abound in Asia. These include scarcity of water in some regions of India and China¹; drinking water contamination, particularly in China and India but also in Thailand; river, lake, and marine pollution in all four countries; and marine resource depletion. It is beyond the scope of this research project to focus on all of these issues. Instead, it is proposed that the focal point of this research be on issues of river and marine pollution. An important reason for this selection is that not only is the pollution of rivers and streams a domestic problem, but when it contributes to marine pollution, it can also be an international problem. It is important to understand how environmental governance mechanisms are evolving to address both the domestic and the international components of this problem.

Air Pollution: Acid Rain and Climate Change

This project will focus on two major air pollution issues: acid rain and climate change. Of course, as in the case of water pollution, there are many other air pollution challenges in Asia. Urban air pollution is a serious problem throughout the region. Air pollution from industrial activities is a major problem in China, India and Thailand. Increasing use of automobiles in China, India, and

¹ Scarcity of water in China and India is increasingly being recognized as one of the most serious challenges for these countries in the coming decades. In some regions, water tables are dropping as water usage increases, particularly by the industrial sector. Severe water shortages, it has been argued, could threaten the stability of certain areas in India and China. See Elizabeth Economy, "China and East Asia" and Richard Hill, Swarupa Ganguli, and Dede Naylor, "Environmental Flash Points in South Asia" in Robert S. Chen, W. Christopher Lenhardt, and Kara F. Alkire, *Consequences of Environmental Change--Political, Social, and Economic* (University Center, MI: Consortium for International Earth Science Information Network (CIESIN), 1998).

Thailand means that nitrogen oxide and carbon dioxide emissions from automobiles are soaring. Also in Japan, nitrogen oxide emissions from transportation remains an important challenge for policy makers. The focus on acid rain and climate change is justified because these issues are also related to more classic forms of air pollution. Acid rain, for example, is linked not only to industrial activities, but also the household burning of coal. Almost all classic air pollution problems have some relation to the climate change issue. Most importantly, because of the interest in examining environmental governance structures from both a domestic and regional angle, the focus on these two issues permits an examination of how these issues are dealt with at both levels.

Deforestation

Deforestation is a serious problem in Thailand, India, and China. Although deforestation is not a major problem within Japan, because Japan is such a large importer of tropical timbers and is also the host and largest contributor to the International Tropical Timber Organization, it is impossible to study environmental governance mechanisms related to deforestation issues without including Japan. Deforestation is of concern primarily because of its connection to issues of biodiversity and climate change.

4. Policy Process

Agenda setting and implementation are both components of the policy process. How agenda setting and implementation work in a country is heavily dependent upon the structure of the government and the formal and informal institutions that dictate how actors relate to each other. One obvious difference among the countries in this study is that each has a very different political system. Japan is a democratic, unitary state that has a one-party dominant party system. China is a communist, federal state. India is a parliamentary democracy and a federal state with clear party competition. Thailand is a monarchy that was long under military rule. In the 1990s, civilian parties have won small majorities in parliament. Democratic participation is increasing.

Formal governmental structures crudely define which actors are involved in agenda setting and implementation and how they interact with each other. Whether or not non-governmental organizations have input into the agenda setting process, for example, will depend on how these groups are viewed by the government. The role played by local governments in implementation will depend on constitutional powers given to central and local governments.

In addition to these formal governmental structures, there are also many informal institutions that influence actor behavior. In Japan, for example, administrative guidance is an informal institution that is central to agenda setting and implementation. In Thailand, the relationship between the military and civilian groups has influenced greatly the policy process.

In these very diverse political systems, it can be expected that the agenda setting and implementation processes will differ significantly. Different actors in each country will influence which issues get onto the agenda, how issues are interpreted, and which policy options are given most serious consideration. It is therefore important to understand who the actors are that are involved in agenda setting and implementation.

5. Agenda Setting

There are many important aspects of environmental governance. One that will be focused on in this study is that of agenda setting. John Kingdon suggests that agenda setting be thought of as the process by which certain issues gain more than just cursory public or political attention. An issue can be thought of as being on the agenda when it is getting substantial attention by the media, interest groups, industry, and/or public officials.² Important in this process is the ways in which issues are perceived and presented to others by various societal actors (the media, industrial actors, non-governmental organizations, etc.) and the policy alternatives that are presented by those actors.

Some issues that get onto the governmental agenda are never acted upon. Others eventually may make it into the legislative process. Once an issue is on the governmental agenda and legislative action appears likely, many different policy options may be considered. Where policy options come from, and why certain policy options are given more serious attention than others is a matter for empirical investigation.

It is also important to realize that an issue does not need to be on the legislative agenda for there to be important societal changes related to that issue. Once an issue is on the agenda of the media, for example, it may mobilize public opinion and cause people to take recycling more seriously. While recognizing the potential importance of other avenues of influencing societal change, this study focuses attention on agenda setting at the national government level. This does not exclude the role of other actors. It simply limits the study to an examination of how various actors attempt to influence governmental decisions.

6. International and Domestic Linkages

These days, environmental agenda setting often involves both international and domestic actors. International actors attempt with different levels of success to influence the agendas of states. The extent to which, and the ways in which, various international and domestic actors interact may influence how environmental issues are understood, the effectiveness of campaigns, and the kinds of policy options that are introduced. Thus, in addition to examining the roles played by domestic

² John Kingdon, *Agendas, Alternatives, and Public Policy* (Boston: Little, Brown, and Co., 1984), pp. 3-4.

sub-state actors, it is important to understand how these actors are influenced by, and attempt to influence, international players.

7. Implementation

Once an issue is acted upon by a government, policy and programs must be implemented. Implementation refers to how governmental programs are put into place and policy decisions are carried out. Just because an issue gets onto the agenda and a legislative or other governmental decision is reached does not mean that policies will actually be enforced. A major challenge for every government is to find means to effectively implement policy. In some cases, governments may chose “carrots” such as tax incentives or subsidies to encourage compliance. In other cases, they may wield “sticks” and punish those who do not comply. It is important to understand what means governments employ to improve the likelihood of a policy being effectively implemented. Governments must communicate to societal and industrial actors, changes that must be made in their activities. They must also find ways to convince these actors to change their behavior.

This is not always straight forward. Implementation dilemmas may arise because of different interpretations of governmental decisions or different understandings of the seriousness of a problem. Two prefectures in China, for example, may “interpret” a national governmental decision differently. Or, they may place different emphasis on the priority of the problem relative to other problems they must deal with.

8. The Actors and their Interests

There are many potential actors in the agenda setting and implementation processes. The actors that are involved in agenda setting need not be involved in implementation. Scientists, for example, may play a far more important role in agenda setting than they do in implementation. A potential list of important actors in the agenda setting and implementation processes include: bureaucrats, politicians, scientists, the media, industries, local governments, and non-governmental actors. The actual influence of each of these actors should be assessed since not all of them will play a major role in either agenda setting or implementation.

A focus on actors is of interest because different actors tend to have different interests in society. They may also have different understandings of an issue. Thus, whereas for a scientist climate change may be seen as a threat that may cause sea rise, for a bureaucrat in a Transport Ministry climate change is an issue that is tied to transportation problems. Actors often bring competing understandings of a problem into the agenda setting and implementation processes. Thus, it is important to know not only who the important actors are, but what their interests are.

Both actors and their interests may change over time. New information may alter the way

problems are viewed. New scientific information may cause a skeptical government official to change his or her mind. A new technological break through may alter an industry's opposition to policy change. As an issue becomes increasingly important, new actors may be drawn into the agenda setting process. They may bring new interpretations of a problem into the decision making process and form coalitions with other actors tipping the balance in favor of one policy option over another.

9. Paper Outline

In order to understand agenda setting and implementation in relation to marine pollution; air pollution (acid rain and climate change); and deforestation the following research protocol is suggested:

1.) Broad Introductory Overview

This section should provide a contextual overview for the reader. Questions that could be addressed in this introductory section include: What is the history of environmental protection in your country? When were environmental laws and environmental administrations first introduced? What has been the level of governmental, industrial, and societal interest in environmental protection? How have levels of interest increased and decreased over time? What are the primary domestic environmental issues that are of greatest priority in your country? Why are these issues of greatest importance? What are your country's attitude towards regional and global environmental risks (e.g. acid rain, stratospheric ozone depletion, global climate change, endangered species protection, deforestation)?

2.) Contextual Overview

A major challenge for many Asian countries is the question of how to address both economic development and environmental protection together? The challenges facing the developing states of Asia are quite different from those facing the more developed economies in Asia and the West. To place the challenges for effective environmental governance into context, it is helpful to understand the current economic and social situation of your country. What is the level of economic development of your country? What is the population size? What is per capita GNP? How evenly is income distributed within the population? What are consumption levels of major commodities (per capita energy consumption; per capita food consumption; per capita number of automobiles, telephones, refrigerators, etc.)?

3.) Current State of Environmental Governance Mechanisms: A broad overview of actors and processes

What is the basic structure of the political system of your country as it pertains to environmental governance? In other words, what are the main institutions and actors that are involved in environmental policy formation and its implementation? How does the central government

interact with local governments? Where are most environmental policy decisions made? What are the strengths of the system? What are the weaknesses?

4.) Case Studies

The case studies will focus on agenda setting and implementation processes as aspects of environmental governance in relationship to marine pollution; air pollution (acid rain and climate change); and deforestation. The following questions should be considered separately for both the agenda setting and implementation processes:

Description of the Environmental Context for Each Case

- a.) What is the degree of marine pollution near your country? Which rivers are the major sources of pollution? What are the known causes of the pollution? What are the known consequences of this pollution? What policies have been introduced to deal with this pollution?
- b.) What is the current situation of acid rain and climate change related pollution in your country? What are the major sources of emissions? What are the major consequences of those emissions? What policy measures, if any, have been introduced to deal with these issues?
- c.) What is the extent of forest cover? How serious of a problem is deforestation? What are the causes and consequences of this deforestation?

Agenda Setting

- 1.) Who were the primary actors involved in getting each of the three environmental issues onto the agenda? How has the involvement of these actors in the agenda setting process changed over time? What are the interests of actors shaping their perceptions of each of these environmental issues? Which policy options have received dominant attention and why? What are the strengths and weaknesses of the agenda setting process for each environmental issue?

Implementation

- 2.) Who are the primary actors involved in implementing government policies? How has the involvement of these actors in implementation changed over time? What are the interests of actors shaping how they perform in implementation? How effective has been the implementation of policy to address the environmental areas discussed above?

Policy Recommendations

What policy recommendations could be made to improve the agenda setting and implementation processes in your country in relation to each of the three cases? What is the potential for regional problem solving that involves your country? What are the obstacles to effective regional problem solving?