

# **China's Accession to and Implementation of International Environmental Accords 1978–95**

**Michel Oksenberg  
Elizabeth Economy**

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## Executive Summary

China's performance in numerous environmental areas—emission of greenhouse gases, use of ozone-depleting substances, reduction of sulphur dioxide emissions, or exploitation of fishing grounds in the western Pacific—will help determine the success of various global and regional environmental protection efforts. And as the World Bank's recent study *Clear Water, Blue Skies: China's Environment in the New Century* documents, the quality of life within China will be greatly affected by efforts to protect air, water, and soil, all of which are under heavy assault.

Ever since 1973, when Premier Zhou Enlai attended the United Nations-sponsored Stockholm Conference, the Chinese government has paid steadily increasing attention to environmental issues. It has joined many international accords, passed numerous environmental protection laws, and established a national environmental protection bureaucracy. On the surface, at least, there has been considerable movement. But how about beneath the surface?

With regard to its international commitments and agreements, what is the record to date? Why does China join international environmental accords? What happens domestically once it enters into an agreement? And what lessons can both China and the international community derive from the record to date? What factors encourage and inhibit effective implementation and compliance? What measures can be undertaken to improve the record?

This paper addresses these questions through an examination of China's accession to and compliance with five environmental protection treaties: the Convention in Trade in Endangered Species (CITES) in January 1981; the London Convention against Ocean Dumping in October 1985; the World Heritage Convention in December 1985; the International Tropical Timber Agreement (ITTA) in July 1986; and the Montreal Protocol in June 1992.

The paper is part of a multi-nation study under the direction of Professor Edith Brown Weiss of George Washington University Law School and Professor Harold Jacobson of the University of Michigan Political Science Department comparing compliance with these same treaties in the United States, Russia, Brazil, India, Japan, the Cameroons, and portions of

Europe. The MIT Press is publishing the results of these studies under the title *Engaging Countries: Strengthening Compliance with International Environmental Accords*.

Seven major conclusions emerge from the China case studies.

- First, China appears to have met the obligations of each of the agreements.
- Second, China's performance in each of the five areas is clearly better than if China had not entered the accord. The existence of these agreements makes a difference.
- Third, huge problems remain in each of the areas that the five agreements address. In each instance, despite the beneficial effect of the agreement, conditions were worse in the mid-1990s than when China entered the international regime.
- This leads to the fourth and most important conclusion. China's rapid economic growth and economic reforms are overwhelming even the most serious efforts in environmental protection. Meanwhile, the political reforms of the Deng era thus far have not enabled the implementational capabilities of the central government on environmental matters to keep pace with the increasing problems. Because the political reforms have not transformed the fundamentally authoritarian nature of the regime, robust nongovernmental organizations (NGOs) and a free press do not exist to stimulate debate and draw attention to environmental issues. Although environmental regulations exist, they are not embedded in a strong legal system. Enforcement of environmental regulations is problematic and subject to corruption.
- Fifth, it should be noted that the agreements under consideration do not deal with the nation's most pressing environmental issues. The five accords are viewed as peripheral to the more elemental problems threatening the nation: poor air quality, polluted inland and coastal waters, water shortages, soil erosion, loss of arable land, and inadequate toxic waste management.
- Sixth, the considerations that China's leaders and negotiators take into account when deciding to enter an international environmental protocol have evolved considerably. If anything, therefore, our study probably underestimates the difficulties China faces in environmental management. The accumulated experience at the negotiating table has made the Chinese more sophisticated, knowledgeable, and tough-minded participants. They have a clearer sense of what they seek to derive and the impact they wish to have upon the international regime. Moreover, the decisional process in the early 1980s was ad hoc. By the late 1980s the policy process during both the accession and implementation stages had become regularized. Both formal rules and custom had developed that govern China's entry into international agreements.
- Finally, we must note that China's involvement in these agreements is critically important to the worldwide success of each. The sheer size of China and the rapidity of its economic rise, in short, mean that in almost every sphere, China's constructive engagement is essential for a global environmental regime to be effective.

The major policy recommendations for international agencies that follow from these conclusions include:

- The accession stage heavily affects the implementation stage. Pragmatic assessments need to be made about China's implementational capabilities, so that expectations on both sides can remain realistic.
- Simply throwing money at the Chinese implementing agency is not helpful. It is incumbent upon international agencies to understand the Chinese central government's actual

budgetary and manpower commitments to sustain the agreements and to insist that these commitments be honored.

- Many of the agreements require sophisticated equipment, technology, and substantial external financing. It does little good to entice China to enter an agreement and then not provide the expected, necessary support. Engaging China in environmental protection entails a protracted, serious commitment by the international community that cannot be lightly abandoned.
- The core challenge entails institutional development at the provincial and local levels and among ancillary agencies whose cooperation is essential. Although the principal Chinese agency will typically seek to monopolize the resources, international agencies should resist the temptation to lavish all their attention on the lead agency and cultivate the secondary implementing institutions as well.
- In addition, international agencies and foreign governments must pay more attention to the full consequences of the institutional and structural changes they urge upon the Chinese government. Privatization, administrative decentralization, and price reform without concomitant development of a legal system, an independent judiciary, and an effective government revenue system weaken the authority of the central government to enforce environmental regulation. In addition to addressing environmental issues directly, international agencies and foreign governments must recognize that China's entire institutional infrastructure needs development in order to address environmental problems effectively.
- The key problem is effective implementation of existing regulations, not the absence of regulations.
- We strongly recommend that the Chinese government significantly increase the percentage of GNP it devotes to environmental protection in order to address the core problems that risk slowing China's economic growth—loss of arable land, water shortages, inefficient use of energy—and dashing hopes for an improved quality of life.
- We also believe that the Chinese media have a major role to play in improving public understanding of environmental issues.
- Adherence to environmental regulations would be greatly enhanced by the presence of environmental associations. Their absence, indeed, sets China apart from all other major countries in the world, where environmental activists, organized together, have played roles in raising public awareness and monitoring governmental performance.

In the final analysis, the underlying issue for both the international community and China in the implementation of the five agreements concerns finances. How will the costs be allocated? What portion will be borne by international organizations and individual foreign governments? And within China, how will the costs be allocated among the central, provincial, and local governments? We do not find in any of our five cases a readiness within China or at the international level to grapple with this problem in concerted, sustained fashion. Before even more agreements are reached without adequate attention being paid to implementational and financial issues, the Chinese experience suggests that attention be given to these issues both at the international and national levels.



# **China's Accession to and Implementation of International Environmental Accords 1978–95<sup>1</sup>**

*Michel Oksenberg and Elizabeth Economy*

Since the advent of political and economic reform in 1978, the Chinese have become increasingly active in international environmental affairs. They now play prominent roles in several international environmental organizations and have signed over two dozen international environmental agreements in rapid succession. Among these are the five protocols that this paper investigates: the Convention in Trade in Endangered Species (CITES) in January 1981; the London Convention against Ocean Dumping in October 1985; the World Heritage Convention in December 1985; the International Tropical Timber Agreement (ITTA) in July 1986; and the Montreal Protocol in June 1992. Chinese accession to these treaties and the nature of their participation in the treaty negotiations are part of a broader effort by Chinese leaders to expand their ties internationally, to appear to be a cooperative player in the international arena, and to increase their capacity to develop the Chinese economy and protect the environment (see Jacobson and Oksenberg 1990; Economy 1994; Lardy 1994; Kim 1989; and Shirk 1994).

This paper first summarizes our principal findings. Especially noteworthy, China's rapid economic growth (averaging eight to ten percent per year for nearly a decade), the increased role of the marketplace, and the extensive administrative decentralization pose severe

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<sup>1</sup> A methodological note: This essay combines three streams of research. Chinese colleagues provided two draft papers on China's involvement in the five agreements and answered initial questions we posed. Jennifer Turner provided valuable assistance by combing available sources on each of the agreements, identifying and interviewing by telephone the knowledgeable Americans who had been working with the relevant Chinese authorities. Drawing upon these two data sets, we then drafted a preliminary version of the paper that we circulated to each of the Chinese implementing agencies for comment and criticism. The authors then visited Beijing for an intensive round of interviews in October 1994 at each of the relevant agencies. These interviews greatly contributed to the final product, but both our Chinese and American sources requested anonymity.

difficulties for environmental protection measures. Even though Chinese authorities have attempted to meet their international obligations and progress has been made in developing institutions, laws, and personnel, the situation in many arenas continues to erode. The paper then notes some of the common characteristics governing China's accession to and implementation of the five agreements. These patterns and procedures are evident in China's involvement in other international environmental regimes as well. Indeed, these characteristics might be called the Chinese style of international engagement. Next, we detail the accession and implementation of each treaty: the origins of the Chinese interest, the process of engagement, the institutional arrangements, and the implementational record. Our concluding section analyzes the policy implications of our research, both for China and the international community.

## Principal Findings

Seven major conclusions emerge from this study. First, China appears to have met the obligations of each of the agreements. While its implementation of ITTA and CITES is under scrutiny at the international level and has not satisfied some of the more vigilant international enthusiasts of these agreements, the national agencies responsible for enforcing China's obligations have taken their responsibilities seriously. Further, in each case, an implementing agency at the national level has been established that has increasing contact with the international community. In addition, in each case, a community of individuals and agencies has emerged which believes in the spirit and broader purpose of the existing original agreement. However, China does not appear to be developing the capacity to meet the stiffening requirements of the agreements; adherence to the letter of the accord is better than to its spirit. As Harold Jacobson and Edith Brown Weiss stress in the introduction to their forthcoming volume,<sup>2</sup> each of the agreements is dynamic; the accord has either evolved in its objectives over time (such as the ITTA), the performance level of China is required to increase over time (Montreal Protocol), discussions are under way to broaden its scope (London Convention), the scope of Chinese involvement has increased (the World Heritage Convention), or external demands on China have intensified (CITES). China's performance measured against the trends is not promising.

Second, China's performance in each of the five areas is clearly better than if China had not entered the accord. The existence of these agreements makes a difference, but the effect varies. China was in the process of establishing its own ocean-dumping regime prior to accession. Preservation of historically significant cultural sites, while seriously neglected during the Cultural Revolution and its aftermath (1966–76), had acquired the force of law and the responsibility of a state agency in the 1950s. In these two cases, therefore, accession reinforced existing trends. In its original guise, as primarily a commercial agreement, ITTA also converged with the government's interest in improving the yield of its tropical forests and improving the orderly management of tropical timber in the countries from which China purchased such timber. As to CITES, protection of the endangered giant panda had been a concern of the national government. Accession in these two cases, therefore, was relatively

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<sup>2</sup> Edith Brown Weiss and Harold K. Jacobson, editors, *Engaging Countries: Strengthening Compliance with International Environmental Accords* (Cambridge, MA: The MIT Press, forthcoming in 1998).

easy and improved Chinese performance, but because of their changing nature, the two agreements have subsequently imposed unwelcome burdens and have generated bureaucratic struggles and opposition. In all of these areas, however, accession improved the Chinese record, and in the case of the Montreal Accords, signature placed a new, albeit long-term, responsibility on the agenda.

Third, huge problems remain in each of the areas that the five agreements address. In each instance, despite the beneficial effect of the agreement, conditions were worse in the mid-1990s than when China entered the international regime. The numbers of pandas and other endangered species continue to decline. Consumption of ozone-depleting substances (ODS) has climbed rapidly. Natural and cultural sites are under increased pressure. While China adheres to the requirements of the ocean-dumping agreement, the convention is rather narrowly drawn, and pollution of China's coastal waters continues to increase, not from ships flushing wastes indiscriminately (though this does occur) but from discharge of raw sewage and toxic wastes into inland waters that are then carried to sea. The trend in tropical timber is difficult to assess, but at a minimum there is no clear improvement in China limiting its use of lumber to scientifically managed tropical forests.

This leads to the fourth and most important conclusion. China's rapid economic growth and economic reforms are overwhelming even the most serious efforts in environmental protection (Smil 1993). Increased per capita income, the emergence of wealthy Chinese, and ostentatious consumption have created markets for panda-skin rugs, long-cherished native medicines made of tiger bones and rhinoceros horns, and furniture and panels made of exotic tropical timbers. As journalists conveying the contemporary scene have emphasized, the demand for consumer durables has skyrocketed (Kristof and WuDunn 1994). Some manufacturers rush to meet the demand for refrigerators and air conditioners by installing production lines using chlorofluorocarbons (CFCs) as coolants. The alternative technologies are either not yet available or too expensive. Increased tourism and commercialism at the sites, as well as increased air pollution, threaten cultural sites and natural parks. Increased shipping makes policing of discharge from boats more difficult. According to officials in the Beijing office of the World Bank, the Chinese government devotes at a maximum only seven out of one thousand dollars of gross national product—0.7 percent of GNP—to environmental protection measures, while simply to prevent further deterioration would require more than doubling the national effort to 1.5 percent of GNP. As another indication of government priorities, less than ten percent of World Bank loans to China are devoted to exclusively environmental projects: \$200–300 million out of three billion.

Meanwhile, the political reforms of the Deng era thus far have not enabled the implementational capabilities of the central government on environmental matters to keep pace with the increasing problems (Jahiel 1994). To be sure, new agencies have been established, especially the National Environmental Protection Agency (NEPA), and environmental regulations have been promulgated not just to enforce the five agreements but to address a wide range of other problems as well. But the emphasis on rapid economic growth, administrative decentralization, expansion of the marketplace, and the deliberately weakened propaganda apparatus have complicated the tasks confronting the environmental protection agencies. Moreover, as Lampton and Lieberthal among others suggest, Beijing authorities find it more difficult to secure compliance from the provinces on issues where control over budgets and personnel assignments reside largely at lower levels (Lieberthal and Lampton 1992).

Further, with the growth of private enterprise, issuance of orders to supervising ministries no longer suffices. In the past, for example, the State Council would have issued an edict forbidding use of rhino horns for medicinal purposes to two ministries—Public Health and Light Industry. They would have then transmitted the order down the administrative hierarchy to all state-owned pharmaceutical industries. Today, hundreds of independent manufacturers of Chinese native medicine have sprung up throughout the country. No single administrative hierarchy exists that can easily convey an edict from Beijing. Enforcement mechanisms exist, but they are cumbersome. If large profits are at stake, the edicts are ignored. Nor can public opinion be easily mobilized. Advertising has become commercialized. For instance, billboards previously available through administrative commands now cost money. Strapped for funds, the environmental protection agencies cannot afford to convey messages that previously the state propaganda apparatus disseminated for free. Development of norms to support an environmental protection measure, therefore, appears more difficult than in the past.

Because the political reforms have not transformed the fundamentally authoritarian nature of the regime, robust nongovernmental organizations (NGOs) and a free press do not exist to stimulate debate and draw attention to environmental issues. Although environmental regulations exist, they are not embedded in a strong legal system. Power in China ultimately resides in the hands of individuals, not institutions, and the judiciary is not autonomous. Enforcement of environmental regulations is problematic and subject to corruption.

Fifth, it should be noted that the agreements under consideration do not deal with the nation's most pressing environmental issues. The five accords are viewed as peripheral to the more elemental problems threatening the nation: poor air quality, polluted inland and coastal waters, water shortages, soil erosion, loss of arable land, and inadequate toxic waste management. Many Chinese consider ozone depletion, ocean dumping, and extinction of endangered species to be esoteric issues placed on the international environmental agenda by the developed countries. To the extent China's leaders are willing to devote energy, money, and talent to environmental issues, they would prefer to concentrate their resources on reducing effluent discharge of the rapidly expanding rural industrial sector, reducing emissions from coal-fired power plants, or expanding woodlands in temperate zones. Precisely because the five accords are peripheral to the Chinese environmental agenda, it would be incorrect to apply our findings to behavior on other environmental issues. But precisely because they are peripheral and in some sense less complex and less expensive to address than, say, introducing clean coal technologies, reducing automobile emissions, or installing wastewater treatment facilities, enforcement of directives governing marginal environmental issues may be easier in some respects than implementing edicts in the core areas.

Sixth, the considerations that China's leaders and negotiators take into account when deciding to enter an international environmental protocol have evolved considerably. In the 1970s and early 1980s, the sheer desire of Chinese to participate in international activities was overwhelming. After twenty years of isolation from the West and often protracted political persecution, those internationally oriented, cosmopolitan Chinese seized upon opportunities they had long awaited. Enjoying the support of Premier Zhou Enlai and then Deng Xiaoping, they sought to ensure a Chinese representation in the world community. Full of optimism and idealism, they wished to contribute to the solution of humanity's problems. Another crucial incentive was to drive Taiwan from international organizations. The

Chinese also had to balance conflicting desires to win the confidence of the developed world and to retain a leading voice in the developing world.

By the late 1980s and early 1990s, the calculus had changed somewhat. While the earlier motivations had not weakened, economic concerns had come to the fore. In the intervening years, China's membership in the World Bank and such United Nations organizations as UNESCO and UNDP as well as the Asian Development Bank made Chinese more conscious of their eligibility for foreign assistance. And the surge in Chinese exports with the accompanying increased dependence upon access to foreign markets to sustain the high growth rates made the Chinese more sensitive and vulnerable to foreign pressures. Increased awareness of environmental problems and the creation of an environmental bureaucracy have also altered the bureaucratic lay of the land. Functional agencies such as the Ministry of Forestry, the Ministry of Foreign Trade and Economic Cooperation, the Ministry of Culture, and the State Oceanographic Administration coordinated the initial Chinese position in the accession negotiations and then became the implementing agency. By the 1990s, however, the recently created NEPA had the initiative in the environmental area, seeking to use its external connections to strengthen its hand within China. These considerations, plus the accumulated experience at the negotiating table, made the Chinese more sophisticated, knowledgeable, and tough-minded participants. They have a clearer sense of what they seek to derive and the impact they wish to have upon the international regime. Moreover, the decisional process in the early 1980s was ad hoc. While the process remains vulnerable to the personalistic politics that pervade the apex of the Chinese system and individual policy entrepreneurs can still initiate policies, by the late 1980s the policy process during both the accession and implementation stages had become regularized. Both formal rules and custom had developed that govern China's entry into international agreements.

Finally, we must note that China's involvement in these agreements is critically important to the worldwide success of each. China has become one of the largest consumers of ODS and (with Taiwan) the second largest importer of tropical timber, a portion of which is processed for re-export. Its behavior affects several animals on the endangered species list. The cultural treasures of China are among the most prized legacies of all humanity to be bequeathed to future generations. Its coastal waters provide livelihood and fish protein to tens of millions who reside along the coast. As those waters become contaminated and depleted of fish and with the populace demanding an improved diet, Chinese fishermen are going deeper into the Pacific. Fishermen from mainland China are now joining the fleets from North America, Japan, and Korea in pursuit of tuna in the rich waters of several small Pacific island nations. But it now appears possible that a similar fate awaits these fishing beds as befell the North Atlantic and North Pacific. The sheer size of China and the rapidity of its economic rise, in short, mean that in almost every sphere, China's constructive engagement is essential for a global environmental regime to be effective.

## **Patterns of Entry and Implementation**

### **Accession**

Several common patterns characterize Chinese accession to and implementation of the five agreements. The Chinese joined each of the regimes only after careful consideration of the costs, benefits, and responsibilities involved. The initiative for China's involvement came in most cases from the international community. In some cases, a visit to China generated a relationship between foreigners who were interested in the environmental problem and Chinese who were predisposed to work on the issue (perhaps as a result of reading about the issue in foreign publications). In other instances, members of the relevant agency became aware that Chinese participation was essential in addressing the issues and an invitation was extended to either a Chinese agency or an individual to consider joining the international agreement.

The Chinese response and the Chinese policy process in acceding to the international environmental protocol involved protracted deliberations. A new procedural law has codified the internal processes that guide Chinese accession, but these procedures were followed even before the law was promulgated. Once an invitation from abroad had been received or an internal proposal to join an environmental regime had been made, the Ministry of Foreign Affairs granted permission to the relevant ministry to attend an international meeting in order to acquire information about the specific agreement at issue. The ministry then prepared a report for the State Council, which had to approve Chinese participation in the negotiations. A vice premier, who is a member of the State Council, then convened or assigned a minister to convene an interagency meeting to discuss China's involvement in the international agreement. Out of this meeting, an interagency task force was formed and a lead agency was designated to coordinate the drafting of the Chinese negotiating position. Usually, the ministry and its subordinate bureau whose jurisdictions and responsibilities would be most affected by the agreement assumed the primary staffing responsibility. Frequently, the international agreement had significant consequences for several ministries and their bureaus, in which case the question of the lead agency was settled by the State Council premier and vice premiers. The Ministry of Foreign Affairs, however, played a critical role during the negotiations. It had to approve the Chinese negotiating stance, and it scrutinized the agreement to ensure it met four objectives: (1) it did not infringe on Chinese sovereignty; (2) it did not grant international status to Taiwan; (3) it kept Chinese financial obligations low; and (4) it secured maximum transfer of technology.

China usually acceded to the international environmental treaties several years after their inception. The nature of China's participation in the negotiations leading up to ratification of these treaties offers clues to some of the difficulties in implementing the treaties. In addition, those officials who supported China's entry into the various treaties have often identified economic gain, the potential for international enforcement assistance, and the personal interest of high-level elites as reasons for signing. To the outside observer, the bureaucratic issues that swirled around the pre-accession stage may seem arcane and trivial, but in fact these issues were fundamental to the subsequent implementation of the accord. The agency that assumed the lead role in coordinating the Chinese stance during the negotiations usually became the subsequent main implementational body, and this has not been easily changed. This agency has garnered international funds, invitations to attend

international meetings, and some enhanced authority over other central and provincial bodies. But the lead agency also has confronted increased administrative burdens and pressures that usually can not be met with existing financial and human resources.

During the negotiating and implementation stages, the relevant domestic environmental actors in implementational agencies, research institutes, and universities established linkages with international actors. Gradually, a community has assembled in China, especially in Beijing, that has come to believe in the advantages that the agreement offers for China, the environmental purposes at stake, their particular organization, and/or their own personal interests. At the same time, others in China have concluded that the particular agreement offers their cause very little and may even inhibit the attainment of their objectives and responsibilities. Implementation therefore has become a political issue in China's authoritarian, bureaucratically fragmented system.

### **Implementation**

Once the PRC has signed the agreement, the State Council formally assigns responsibility for implementation to a particular ministry or agency and determines the number of officials who can be added to the ministry and assigned responsibility for the agreement. Typically, it takes time to reach the allotted manpower ceiling, and also typically, the officials assigned to implementing the agreement have a number of other responsibilities as well. The central government agency then seeks to create a national system for enforcing the agreement, identifying officials within the ministry's provincial units or in other units if the ministry does not have a subordinate unit in the particular province. (For example, the Ministry of Forestry does not have a Department of Forestry to which it can turn in the Shanghai municipal apparatus, so it must identify other agents in the city to implement CITES.) The implementing bureau also drafts regulations through the interagency group and submits them to high levels—the State Council or Ministry—for promulgation. And it develops a strategy for disseminating information about the obligations that the international agreement entails.

Several factors determine the success of implementation. The informal status of the implementing agency and of its head affects its ability to guide the interagency effort. Support by one or more high-level political leaders—Politburo members, the premier, and/or vice premiers—is very helpful and sometimes even necessary. Lodging the responsibility for the agreement in an agency that has a major stake in its implementation has been important. Agreements that have high international visibility and affect China's stature and access to foreign currency have been more likely to elicit the requisite high-level support. The access, influence, and connections (*guanxi*) of the policy community that gathers around the accord obviously have been crucial, as has the support this community has been able to garner from the international community. Training seminars, transfers of funds through loans and grants, and provision of equipment and technology have enhanced China's implementational capacity in all five agreements. But another important factor determining China's adherence to the agreement has been whether its requirements are congruent and converge with the path China was already pursuing prior to signing the agreement. In both the cases of the ocean-dumping convention and the preservation of cultural sites, significant efforts were already under way in these areas, and domestic constituencies in the provinces and local levels existed to support adherence. But this is less true in the cases of the Montreal Accords or the most recent phase of the tropical timber agreement.

Provincial and local conditions are pivotal in determining implementation. The agreements fall unevenly across China's vast, highly diverse territory. Some cities, provinces, and regions are much more affected than others. Reducing use of ozone-depleting substances is a commitment that falls heavily upon the industrialized, rapidly developing regions of the country. The tropical timber agreement affects the few regions where tropical forests exist and those areas where the wood processing industries import tropical timbers. Ocean dumping obviously affects only the coastal regions; only eight out of China's thirty provincial-level units are affected. But two agreements have national consequence. A large portion of the Chinese population apparently believes in the medicinal value of rhinoceros horns, tiger bones, and bear bile, and many manufacturers of traditional Chinese medicinal herbs include ingredients from these endangered species. Enforcement of CITES is a genuinely national undertaking. Of course, protection of China's own endangered species is a burden of the regions in which they remain. And the preservation of cultural and natural sites is a nationwide undertaking, as every province has its sites that it recommends to the national government for nomination to the international list of protected sites.

However, the implementational capacity of different provinces varies considerably, as does the willingness of their leaders to respond to Beijing's directives and pleadings. The balance among conflicting interests in observing or ignoring the terms of the treaty varies even among those provinces affected by it. Put simply, as Beijing bureaucrats state, the further south and west from the capital, the more difficult it becomes for the central government to secure the desired compliance from the locality. Thus, in the cases of ocean dumping of toxic wastes, removing medicines containing material from endangered species, and encouraging use of substitutes for ozone-depleting substances, Beijing officials believe that Shanghai's performance is better than that of Guangdong.

Both in Beijing and the provinces, several factors inhibit effective implementation of the agreements: bureaucratic infighting, some mismanagement and abuse of international funds, a weak scientific and technical ability on the part of the managing agencies, an insufficient incentive structure for the monitoring and implementing agents, and a general lack of funds for the specific environmental protection effort. In this as in most administrative areas, the national government and its ministries issue edicts to the provinces, which then transmit the directives to lower levels. The national level may even mandate the creation of an agency at lower levels to implement the directive. But the actual funding for the mission and the assignment of personnel are the responsibility of the local levels of government. They typically have received many more directives than they have funds and manpower to carry out. As a result, the local leaders must establish priorities and select which among the often conflicting changes they will enforce. Moreover, the top officials in Beijing usually have given some guidance as to their priorities; for example, that economic growth, maintenance of social order, earning foreign currency, and keeping birth rates low are the main indicators for evaluating the performance of provincial and local officials.

In short, in the five cases under review, the national government agencies responsible for implementing the agreements exercise guidance over the provinces, but the actual administration in terms of finance and personnel is in the hands of provinces. The burden on the authorities in Beijing has been to create an awareness and understanding and hence a commitment among provincial bureaucrats to alleviate the problem at hand. Beijing's hand has been strengthened, however, because the international agreements now involve the credibility, prestige, and financial interests of the national government. From the vantage of

distant Guangdong, however, the interests of the national government are not always of immediate concern.

## **The Convention in Trade in Endangered Species (CITES) (1981)**

### **Accession: Initiative in the Cultural Revolution Aftermath**

For centuries, the Chinese people have eliminated or endangered flora and fauna that had thrived on their land and in their waters. A thousand years ago, much land—especially in the south—was forested; marsh lands were abundant. But the pressure upon the environment increased substantially with the increase in population from the 1500s on. The political turmoil of the past 150 years, with the absence of authority to enforce environmental protection measures, intensified the problem, as did the industrialization of the past decades. For example, the Chinese emperor designated vast tracts of land as imperial reserves and hunting grounds, but with the collapse of imperial rule, these natural parks were denuded, and their game—including many rare species—destroyed.

Chinese scientists, historians, officials, and even peasants aware of their local histories did not require Western environmentalists to remind them of the changes that had been wrought in the natural habitat through the centuries. This longer-term trend had become particularly acute during the Mao Zedong era and especially the Cultural Revolution and its aftermath (1966–76). Looking back on this era, one Chinese scientist recalled, “It was a period of poaching and major illegal exports of wildlife.”

Among its many activities, the 1972 Stockholm environmental meeting called for a convention against trade in endangered species. Chinese Premier Zhou Enlai attended that meeting and delivered a speech to it. Through China’s engagement in this international conference, the Chinese side became convinced that it should participate in the agreement. Zhou, his colleagues, and advisors from both the environmental and cultural domains thought CITES offered a vehicle for assisting China to adopt the strong measures it needed to bring its disastrous situation to an end. International diplomatic obstacles prevented an immediate accession, however. The cooperation of Taiwan, a major importer of elephant tusks for its expensive ivory processing industry, was also vitally important to the success of CITES. In the name of the Republic of China and claiming to represent all of China, Taiwan attended the 1973 Washington meeting at which CITES was signed. In light of the PRC’s policy not to join international organizations in which Taiwan is present as the Republic of China, the PRC absented itself from the Washington meeting and subsequent activities of CITES.

However, the international community (including the nascent CITES secretariat) retained contact with Beijing and encouraged it to adhere to CITES. Finally, in the late 1970s, United Nations Secretary-General Waldheim specifically asked Chinese Foreign Minister Huang Hua to consider joining the convention. Upon the foreign minister’s return to Beijing, he informed the State Council Environmental Protection Leading Group about the United Nations invitation. The matter was discussed and a report for the State Council prepared by a coordinating group of seven agencies: the ministries of Forestry, Foreign Affairs, Foreign Trade, and Agriculture and the Chinese Academy of Sciences, the Export-Import Commis-

sion, and the environmental protection agency under the Capital Construction Commission. Perhaps somewhat relevant, He Liliang, the head of the Foreign Ministry's International Organization Bureau at the time, was the wife of Foreign Minister Huang Hua. A very capable and intelligent woman, she had spent several years in New York, where her husband was China's ambassador to the United Nations. This experience had exposed her to the wide range of concerns then circulating in Manhattan's various international communities. CITES also attracted backers from the top ranks of the leadership. Vice Premier Gu Mu, then head of the Capital Construction Commission, in which the environmental protection agency was then located, became the nominal head of the interagency CITES study group and expressed an interest in its purpose. Song Jian, a rising star in science administration, also became a supporter of the effort.

Drafting of the recommendation report to the State Council was assigned to Qing Jianhua, an official in the Ministry of Forestry. Forestry drew this assignment, which affected the location of the implementational agency, for a simple reason. Since 1958, Forestry had been responsible for wildlife conservation; China's remaining pandas lived in preserves under its jurisdiction. And since protection of pandas clearly would be a principal beneficiary of China's accession, Qing's report foresaw only benefits from participation in CITES. With strong backing from higher officials, the report did not refer to more cautious views of the foreign trade, public health, and defense ministries. Indeed, the latter two were not represented in the working group. The Export-Import Commission argued that responsibility for implementing CITES should be given to the Ministry of Foreign Trade (MOFERT), the agency most capable of meeting the obligation to halt export and import of endangered species. Qing's report stressed the need for the implementing agency to have sufficient authority to supervise its enforcement. The solution was to place the implementation agency—the Endangered Species Import-Export Office (ESIEO)—directly under the State Council while physically locating it in the Ministry of Forestry building. Qing Jianhua became its head.

However, it remained awkward for this new body to regulate trade in endangered species, since according to State Council regulations only MOFERT could issue permits or licenses to engage in foreign trade, a prerogative it guarded jealously. Eventually a solution was found. The State Council issued the directive enumerating the banned species under CITES, and the ESIEO issued certificates (not permits) for the exceptions to the ban (such as to send a panda to a foreign zoo). In the Chinese lexicon of licensing documents, a certificate ranks below a permit, thereby assuaging MOFERT's concerns. This history remains relevant today, as we note below, as the ESIEO asserts that MOFERT, the PLA, and Public Health have no role in implementing the treaty. One ESIEO official stated, "We do not have to include MOFERT, the PLA, or Public Health in our decisions. They have no role in our deciding how to implement the treaty. They cannot influence policy making." But moments later, the same official complained, "We have problems of coordination. For example, after the ban was issued in 1991 against import of rhino horns and tiger bones, we had difficulties [securing compliance]. Even calls on the relevant ministries failed to achieve a consensus." Not until Politburo member Song Jian called an interagency meeting in May, 1993, was the matter settled. These difficulties are probably related to the bureaucratic dynamics of China's accession to CITES: which agencies were and were not included in the initial working group, the authority of the lead agency, the bureaucratic status of the lead agency, and the distribution of benefits from participation.

## **The Legal Infrastructure**

The Chinese have been prolific in adopting legislation which either directly or peripherally supports the mandates of CITES. Since their accession to CITES, the Chinese have passed a number of laws and issued several executive orders, including the Order on Strict Protection of Rare and Precious Species (1983); the Proposal on Establishment of Nature Preserves (1984); Legislation on Management for Nature Reserves and Protecting Forests and Wild Animals (1985); the Law on Wild Animal Protection—Chairman's 9th Order (1988); the Law on Strict Prohibition of Poaching, Illegal Selling, Purchasing, and Smuggling of Wild Animals (1990); and the Legislation of Hunting Agreements and Documents on Hunting Privileges (1990). In the early 1990s the Supreme Court also raised the penalties for poaching or trading endangered species to ensure ten or more years in prison, life imprisonment, or death (Schaller 1993).

## **The Management Structure**

China has established a CITES office which, although located physically within the Ministry of Forestry compound, reports directly to the State Council. Contracting parties abroad and within the PRC are permitted to accept permits only from the CITES office.

The CITES office in Beijing is the principal coordinating point; it has a staff of ten and is petitioning for twenty more. There are also nine branch offices—in Beijing, Shanghai, Tianjin, Chengdu, Fuzhou, Shenyang, Guangdong, Nanning, and Harbin (and a checkpoint in Shenzhen)—which the central office hopes to expand to twenty. The budget for these offices is provided by the provinces and each typically has a staff of three to five people. Although Vice Premier Song Jian is very supportive of China's CITES efforts, the State Council Personnel Management Commission is responsible for its expansion (*ibid.*).

Actual enforcement of CITES in forests under control of the Ministry of Forestry and in provinces where departments of forestry exist is the responsibility of China's 46,000 forest rangers. These rangers constitute a dually led agency which appears on the Ministry of Forestry table of organization as the Bureau of Public Security and in the Ministry of Public Security as Bureau Number Sixteen. The salaries for the rangers are on the budget of the Ministry of Forestry. The rangers have many other enforcement responsibilities beyond CITES, especially prevention of illegal logging. The bulk of the rangers are deployed in the national, provincial, and local forests, which means that the enforcement officers are stretched thin outside of forest lands, where many of the violations occur. Moreover, in some locales, the Ministry of Forestry does not have subordinate units. In those areas, local Public Security Bureaus are responsible for CITES enforcement. Several other ministries also play roles in the management and enforcement process for CITES: the Ministry of Foreign Trade and Economic Cooperation, the Ministry of Agriculture, which is responsible for aquaculture, the Ministry of Public Health, and the Endangered Species Research Agency in the Chinese Academy of Sciences.

## **Interaction with the International Community**

Chinese efforts to implement CITES have involved significant assistance from foreign experts and officials. Typically, the foreign specialists have found the Chinese management structure for CITES frustrating, often ineffective, and permeated by the existence of competing bureaucratic and institutional interests. One Wildlife Conservation Society (WCS)

analyst noted that the “Ministry of Exports” (the Ministry of Foreign Trade and Economic Cooperation) appeared to have more power than the Ministry of Forestry, which as the lead agency should be coordinating and directing policy. Therefore, according to the analyst, it has been difficult for the PRC to control exports of species.

Provincial rivalries are also keen: reportedly, in 1992, China submitted a large Global Environment Facility proposal for CITES enforcement. Incorporated in this proposal was a bid for every province to have its own breeding facilities for tigers in order to generate tiger bones for traditional medicine. Similarly, there is poor coordination between the central authorities and municipalities. During the late 1980s and early 1990s, when the central government was attempting to regulate international panda loans, it tried to coordinate all the loans of pandas but the municipalities frequently bypassed the regulations, often with the complicity of American zoos and the U.S. Fish and Wildlife Service, which was responsible for issuing permits. Occasionally, even when the U.S. zoos opposed the transfer of pandas, they were overruled by local politicians who wanted them for the prestige and prospects of tourism they brought to their cities (Schaller 1993). In December 1993, the U.S. Fish and Wildlife Service began a review of its permit issuance policies and temporarily barred the importation of pandas from China. In 1993 the Fish and Wildlife Service turned down the San Diego Zoo’s request to import two pandas (*New York Times* 1993a). Within the PRC, two separate organizations that rent pandas, the Ministry of Forestry and the Chinese Association of Zoological Gardens (administered by the Ministry of Construction, which also controls pandas in the wild) actively competed for control over the pandas (*New York Times* 1993a). According to one U.S. expert, this competition prevented the PRC from developing a comprehensive conservation plan for breeding pandas; further, he suggested, the lack of cooperation extended to the point that training seminars conducted by one organization might not be attended by the other. One key official in CITES’ China office has stated that the office has sent certificate requirements to the provinces and sometimes failed to receive responses. As noted conservationist George Schaller notes, “Enthusiasm and goodwill count for little when the enemy is a vast bureaucracy of local officials who myopically use obstruction, evasion, outdated concepts, activity without insight, and other tragic traits to avoid central-government guidelines and create ecological mismanagement on a dismaying scale” (*New York Times* 1993, 234).

The center itself also has participated in illegal trade in endangered species. In the mid-1980s, a state-run organization, the China National Natural Produce and Animal By-products Import and Export Corporation, sent its agents into the countryside to further stimulate the killing of wildlife. According to Schaller, who worked for many years during the 1980s with the Chinese at the Wolong Panda Reserve in Sichuan province, “Musk, bear paws, skins, antlers, bones and other animal parts, often from endangered species, were blatantly sold on the open market” (1993, 225). In addition, the PLA has been implicated in protecting the smugglers of tiger bone and rhino horn.

Finally, the management infrastructure does not promote sharing of information and ideas. Even at the most basic level, there is poor coordination of conservation efforts. Reserves and zoos, for instance, do not work together to share specialists, resources, or even good breeding pandas. Also, according to one U.S. environmental specialist, the Chinese government had significant difficulty in setting up a coordinated effort to manage CITES enforcement of biodiversity. Various Chinese bureaucracies were unwilling to share data and information. A key Chinese CITES official also agreed that there are serious inter-ministerial coordination programs. In attempting to curtail the use of tiger bone and rhino

horn in the manufacture and sale of traditional Chinese medicine, this official called for a joint effort among several ministries. However, these ministries, which included the Ministry of Forestry, the Ministry of Customs, the Ministry of Agriculture, the Public Security Bureau, the Ministry of Foreign Affairs, the Ministry of Finance, the State Planning Commission, NEPA, the State Oceanographic Administration, the Ministry of Industry and Commerce, and the Ministry of Foreign Trade and Economic Cooperation, failed to reach consensus until Song Jian held a meeting in May 1993. At this point the decision was made to close down the factories which produced these medicines, at a total estimated cost of \$2 billion.

Compliance with CITES also appears to have been hampered by the interest of ministries in the potential monetary rewards that could be realized both from overt noncompliance and abuse of foreign funds. According to a WCS analyst, WWF (originally World Wildlife Fund and now World Wide Fund for Nature) money ended up as cars for people in the Ministry of Forestry. In addition, according to wildlife specialist Alan Rabinowitz, China has a formal list of the prices that it charges foreigners to study particular species (Begley 1993).

In some cases, international NGOs supply equipment and funds knowing that the Chinese do not use them effectively. In recounting a statement by Prince Philip, president of WWF, Schaller comments, "...the Chinese demanded every single item on that agreement had to be met, in spite of the fact that they knew perfectly well that a lot of the items, like the elaborate equipment for instance, was nonsense. It was mortally embarrassing for them when they couldn't get people to use it" (Schaller 1993, 222-223). This failure to appropriately utilize international funds and equipment was also evidenced in the fact that, according to one U.S. expert, some of the \$4 million that WWF gave to China for the Wolong Reserve went to build a hotel and school for the children of resident Chinese scientists. Occasionally, toughness prevails. For example, the World Bank did not approve a rural credit project (a subloan from the World Bank that goes through the agricultural bank of China) which was meant to increase the number of breeding facilities because the project was not perceived as being motivated entirely by environmental concerns. But usually, the international NGOs are eager to provide assistance out the outset simply to launch their China project.

Extensive efforts have been undertaken between the PRC and external actors in training, transfer of funds, and development of joint projects. CITES is perhaps the treaty which has engendered the most international interest and assistance for the PRC. The World Wide Fund for Nature has been involved in the PRC since 1980 and has been one of the most active participants in CITES. WWF has had projects on panda conservation and the South China tiger among others (World Wide Fund for Nature 1992). Other efforts have involved joint cooperation between the U.S. Department of Interior and the PRC Ministry of Forestry: the two agencies have a joint protocol for wildlife studies, database development, and training. Chinese CITES officials further cite a three-month undercover sting by TRAFFIC, the wildlife trade monitoring program of WWF and the International Union for the Conservation of Nature, as especially helpful to them in rooting out the illegal trade in tiger bone. China also has become active in CITES itself. In spring 1994, it hosted the biennial CITES Animals Committee meeting as a prelude to the annual CITES meeting which was held in fall 1994 in Florida.

The impact of direct international pressure on China's compliance efforts cannot be measured precisely. In fact, the lead PRC CITES official denies that external pressure plays any role in PRC efforts to halt trade in endangered species. However, there is strong evidence

to suggest that when the PRC's economic interests are threatened, the leaders will respond with tougher laws and promises to adhere to the treaty.

Chinese trade in the early 1990s in rhino horn and tiger bone and the products made from them illuminates this point. During summer 1993, the United States threatened the PRC with trade sanctions for continuing to traffic in rhino horn and tiger bone. The PRC managed to avoid the sanctions by taking a number of well-publicized and definitive steps to address the problem. Immediately prior to the formal U.S. warning, on 29 May 1993 the State Council issued the "Circular on Forbidding All Trade in Rhinoceros Horns and Tiger Bones." In June 1993, however, the U.S. Department of Interior issued a warning to the PRC under the Pelly Amendment on tiger bone and rhino horn (TRAFFIC USA 1993). The PRC responded with a State Council Order that rhino horns and tiger bones would no longer be legal in Chinese traditional medicine. Further, the order made illegal the purchase, sale, trade, and transport of these substances (TRAFFIC USA 1993).

China's rhino-horn-based medicines are consumed domestically and by other Asian states. Until the threat of the Pelly Amendment, the PRC had refused to become a party to the 1987 CITES resolution to ban internal trade in rhino products (TRAFFIC USA 1993). It argued that its internal stocks of such products were acquired prior to 1981. It also continued to import rhino products. In 1989, China had a recorded stock of 10 metric tons of rhino horn, which was possibly the largest in the world. When the Pelly Amendment was invoked, however, the PRC stated that manufacturers would have six months to sell medicines already produced with parts or products of rhinos or tigers (*New York Times* 1993b).

It is difficult to ascertain how effective this State Council regulation will be, although a number of statements from top-level officials followed the issuance of the circular. A ban on the hunting of the Siberian tiger and the South China tiger, for example, has been in existence since the 1960s, but has yet to be implemented thoroughly (*New York Times* 1993b).

On September 8, 1993, CITES itself issued a directive to "consider stricter domestic measures up to and including the prohibition of trade in wildlife" for both imports to China and exports to Taiwan. Following this announcement, Ministry of Forestry Vice Minister Shen Maocheng stated that the implementation of China's decision to prohibit trade in rhino horn and tiger bone would be part of a major three-year program to ensure the enforcement of wildlife protection legislation. He further called for coordination with the international community to "crack down on illegal trafficking of endangered wild species of fauna and flora" (AFP 1993). In September 1993, Vice Premier Song Jian called a meeting to undertake a special study on further augmenting protection and administration of endangered species. At the meeting, it was decided to set a deadline for discovering which shops were dealing in rhino horn and tiger bone, registering the substances when they are found, and affixing them with a special seal to remove them from circulation. All medicines which contained these substances were to be withdrawn from the market before November 30, 1993. The participants further called for the development of substitutes for these substances in medicines. In addition, they condemned "weakness, incompetence, and corruption" in administrative and law enforcement departments (FBIS China Daily Report 1993). Moreover, at the 1994 CITES Conference of Parties, China and India spearheaded the formulation of an agreement to stop domestic trade in tiger parts.

## Record of Compliance

The Chinese have faced significant difficulties in implementing CITES despite their continued efforts. In addition to the bureaucratic infighting and mismanagement by officials, a number of other cultural and economic factors undermine the ability of proactive officials to implement the treaty effectively.

Poachers and dealers are clearly motivated by the possibility of making significant amounts of money. Dealers offer poachers \$3,000 or more for each panda pelt; the dealers then sell them to Hong Kong, Taiwan, and Japan for upwards of \$10,000 (Schaller 1993). In spite of fines and even the possibility of death—five men have been sentenced to death thus far and over 200 imprisoned—poachers appear willing to risk their lives for the chance of making significant amounts of money (*New York Times* 1993b). CITES officials, however, believe that the threat of the death penalty, along with extensive public awareness campaigns, has been a very effective deterrent. They have exerted substantial effort to go to the rural and remote mountainous regions to educate the peasants. One CITES official admitted, however, that it is far more difficult to educate the people in these areas, where there is more than a thousand years of tradition in the use of wildlife. He noted an example of one mountain dweller who stamped his thumbprint on a statement of commitment not to poach pandas and was caught the very next day with a panda skin.

While money is an important source of motivation for poachers, cultural and technical issues also appear as additional sources of China's poor compliance record on CITES. According to a U.S. wildlife expert, no patrols are undertaken in the reserve parks, only outside them. Chinese forestry officials argue that the village people are poaching for food; therefore, the officials are reluctant to interfere. According to this expert, however, poaching is increasingly the province of outsiders. In addition, he has noted that the guards at the reserve parks are reluctant to report incidents of poaching because they will be blamed. While he did point out that experimental patrols are taking place in Wolong at the panda preserve in Sichuan, Schaller, in contrast, found that neither media nor international pressure had any effect on the virtual complete lack of law enforcement (Schaller 1993). In addition, despite the harsh penalties that are enforced for poaching and trading, according to a foreign expert Beijing typically exerts little pressure on the provinces to cut down snares in the bamboo forests or to search the panda reserves for poachers.

In addition to the inability of Beijing officials to effectively manage the trading of endangered species, measures taken to respond to the problem may in fact occasionally contribute to its continuation. According to Schaller, the Chinese are dedicated to captive breeding as a means of protecting endangered species. However, another U.S. wildlife expert argues that the breeding programs themselves could be encouraging the growth of endangered species trade. Poor technical skills were also manifested in the case in which baby pandas taken to the Wolong center fell ill and died because of inexperienced and incompetent veterinarians. In 1994, the Chinese refused to release results of a recent panda census. According to one expert, it is unclear whether this signified that they were underreporting to get additional funds or overreporting in order not to be blamed for failure (*New York Times* 1994).

Chinese efforts to stem the tide of trade in endangered species appear to be woefully understated and underfunded. Moreover, the right incentive and/or penalty system for the implementing agents apparently remains to be developed. A CITES official specifically noted the impact of the economic reforms on hindering enforcement efforts. Previously a poster in

the airport for wildlife protection would be free; now, however, it costs between 30,000 and 50,000 yuan.

At the same time, however, the repeated calls by Chinese elites for action to control trade in endangered species show no sign of abating. Wang Bingqian, a vice president of the National People's Congress and one of the heads of the provincial inspection effort initiated in August 1993, stated in a speech before the NPC's Environment and Resources Protection Committee in April 1994 that "rampant poaching, killing, selling, and buying of endangered and rare animals which are under national protection are still going on in some places" (FBIS China Daily Report 1994). NEPA's director, Xie Zhenhua, further commented, "...illegal poaching, killing, smuggling, selling, and buying of protected wildlife animals have survived repeated government sweeps" (ibid., 19).

In addition, there are extensive efforts to educate the public through television programs and reports in newspapers. One potential boost to CITES enforcement also may emerge from the inspection efforts that were initiated in 1993. These inspections have included an assessment of wildlife protection in ten provinces and autonomous regions: Hebei, Jilin, Zhejiang, Fujian, Henan, Hunan, Sichuan, Guizhou, Inner Mongolia, and Guangxi Zhuang Autonomous Region. One thirteen-day inspection into law enforcement of environmental protection in Guangdong led to the exposure of a pharmaceutical company speculating in rhino horn (FBIS China Daily Report 1993).

## **London Convention (1985)**

### **Accession: Joining after the Laws Were in Place**

Prior to acceding to the London Convention in September 1985, the Chinese had passed the Marine Environmental Protection Law in 1983. This law, which was modeled on the London Convention itself, was designed to redress the large amounts of industrial waste residue and household refuse that were being "piled at the tideland" and "deliberately discarded at sea" (Fang, Zhou, and Cui 1993). The law covered numerous activities related to marine management, including construction of coastal engineering projects, exploration and exploitation of marine petroleum, fisheries and breeding, industry transport services, military operations, scientific research, and, most importantly for the London Convention, discharge and dumping of wastes into the sea. In addition, of the thirteen International Maritime Organization (IMO) treaties focused specifically on preventing pollution from ships, China has ratified five. China has also developed twenty-five regulations on the dumping of waste at sea.

Dumping is regulated through a permit system, which is managed by the State Oceanic Administration (SOA) and its division of Marine Environmental Protection. Any "entity" that wants to dump any kind of wastes into the sea is required to file an application permit with the state administrative department of marine affairs; the dumping has to be done at a designated site and within a designated period of time (Huang 1993). The SOA selects the dumping sites and also is responsible for closing them if it so desires. The sites must be approved by the State Council (Huang 1993). There are three lists which categorize the types of waste that various ministries or other actors desire to dump. These lists are based on those

developed in the original 1972 London Convention: the black list consists of substances which are not allowed to be dumped; those on the gray list can be dumped with prior special permits (valid for six months); and those on the white list require only prior general permits (valid for one year) to be dumped. There are also special onetime emergency permits. If the permits are granted, the permit recipient is required to pay five cents per cubic meter of waste.

The SOA has the power to penalize violators of the law. If found guilty, violators are required to abate pollution in a specified period of time, pay a pollution discharge fee, defray expenses for pollution control, and compensate the state for damage sustained. The amount of the fines is set by law, although the Ministry of Finance is involved in determining the fee schedule. In addition, for illegal dumping of waste at sea, there are specific criminal punishments, e.g. not more than three years of fixed-term imprisonment and, for especially serious violations, not less than three and not more than seven years. There are also regulations that provide for payment of compensation for ecological damage; in practice, however, such liability remains unenforced (Huei 1989).

### **The Management Structure**

A complex infrastructure has evolved to manage ocean dumping. At the national level, there is one waste dumping administration, one monitoring and one information service. At the marine district level, there are three management agencies and three monitoring institutions. The district-level authorities are responsible for issuing the general and special permits, while the SOA itself must issue the emergency permits. They are supported by five provincial management agencies and fifty-seven offshore inspection stations; and by two surveillance aircraft, twenty-seven supervisory vessels, and eleven scientific investigation ships. There are approximately 280 people who manage waste dumping and an additional 620 who are responsible for research, monitoring, and investigation of ocean dumping. The budget of these agencies is 4,480,000 yuan.

Although the SOA is the lead agency for marine dumping and for implementation of the London Convention, other ministries and agencies hold significant power in verification and monitoring. If the dumping of waste is from ships or boats, the harbor superintendency administration is responsible for examining the waste and ensuring that it does not fall outside the classification of the permit. Representatives of the administration also may accompany the vessel when it dumps its waste (Fang, Zhou, and Cui 1993). According to one U.S. expert, the various ministries that deal with marine affairs have “drawn distinctive turf lines.” He states that if a marine area has a fishery, then it falls under the jurisdiction of the Ministry of Agriculture. An area with military facilities is under the navy’s control, and transport lanes and areas with transport facilities are the “property of the transportation ministry.” Land-based sources of pollution are the responsibility of NEPA. An SOA official commented that, in general, the Ministry of Transportation wants dumping sites to be permitted closer to land, while the SOA pushes them further out. Often, these disagreements necessitate serious negotiations.

For some of these ministries, pollution control conflicts with their economic interests. A U.S. expert claimed, “The SOA cannot monitor everywhere, and if they find evidence of a ship polluting they will say something. However, if they go into an offshore oil rig which ‘belongs’ to the Petroleum Ministry and find excessive pollution from dumping, the Petroleum Ministry would bring forward their own researchers who would claim that ‘we pollute

very little.” Even NEPA and SOA sometimes have some conflicting interests over coastal areas/land-based sources of marine pollution. Although NEPA’s primary interest is land-based pollution, it is seeking jurisdiction over coastal management. SOA is reluctant to cede this control, however, because it would lose international funds.

### **Interaction with the International Community**

As the necessity of ocean dumping increases in the PRC, the role of external actors appears to be critical in advancing effective Chinese implementation of the London Convention. There are various training courses directed by the IMO on marine waste management in China, some conducted in conjunction with, and funded by, other international offices such as UNEP. According to a London Convention official, the Chinese SOA researchers and scientific officials are not very experienced or knowledgeable but they are eager to learn. According to this same official, China is developing the infrastructure to deal with the London Convention’s laws and training. They need specific guidance on what to do as they are “not very good with broad guidelines.” The IMO sponsored an ocean dumping symposium in fall 1993.

According to the former chairman of the scientific group for the London Convention, the lead Chinese representative with the scientific group, Zhou Jiayi, is “very aware of techniques and technology related to the treaty as well as the compliance of China with the Treaty.” He was very active in the negotiations and planning of the Waste Assessment Framework, which provides technical implementing guidelines for the convention. This same official also noted that China was for a long time simply an observer. In the six years since they signed on, however, the Chinese have become very active, particularly in the scientific groups. The Chinese have made a number of submissions to the scientific and political groups on their activities. According to one U.S. expert, the PRC, unlike many developing states, is taking an active role in the scientific negotiations on the London Convention. They are especially active in the Intergovernmental Panel on Radioactive Waste Disposal. China’s participation is fair when compared to all states but excellent in comparison with developing states. The PRC also has been very active in the International Oceanic Commission of UNESCO. According to another U.S. expert, the Chinese want a leadership role and have offered to host one of the World Data Centers, which entails developing archival oceanic data on a global scale. The centers are very expensive to develop and maintain.

The SOA has also begun to experiment with new methods of managing its marine pollution with assistance from the UNDP. It has chosen Xiamen for a four-year project in which the municipal government is in charge of coordinating hydro development, industrial enterprises, and agriculture, three areas that create runoff. The fee system for attaining permits for dumping is also regulated through this system of local governance. In other regions, according to SOA officials, the fees are not well regulated.

Chinese SOA officials themselves have subtly suggested that the London Convention needs to be strengthened in order for it to be more effectively implemented. In an informal paper prepared for an international conference, several SOA officials noted two weaknesses in the London Convention: first, the London Convention has no system of penalties for parties that violate the terms of the treaty; second, the convention does not provide a quantitative standard for “significant amounts” and “trace contaminants,” which makes it “very difficult to make decisions in many cases on whether the wastes can be disposed at sea

or should be prohibited and on whether the general permits or special permits should be issued.” These comments suggest an appeal to the international community for a stronger convention which could buttress the efforts of the SOA officials in preventing ocean dumping.

### **The Record of Compliance**

In general, there has not been significant evidence of illegal ocean dumping by the PRC. According to one published study, the failure to strictly regulate waste disposal on land has had the effect of permitting factories and enterprises to dispose of their wastes on shore or to release them directly into coastal waters. Therefore, there have been no real demands for ocean dumping. Coastal water pollution similarly is the result of “land-based discharges rather than dumping” (Jian 1993). Only an estimated 2.8 percent of marine pollution in the PRC is from ports or ships; in contrast, approximately 84 percent is from river discharge (Huang 1993).

There is evidence, however, that the central authorities are having difficulty controlling dumping in waters off Guangdong. One SOA official, for instance, commented that Guangdong “doesn’t listen.” He claims that Guangdong pays superficial attention to center directives, but local authorities really are in control. The SOA did close a dumping site in Daya Bay in Guangdong in 1992;<sup>3</sup> however, in general, according to this official, the SOA lacks the funds to monitor dumping in the region. In addition, there is concern that with the development of coastal areas and offshore oil drilling there will be increasing numbers of industries that wish to dump. There is also evidence that the high level of Chinese compliance is expected to change. According to one expert, with the increased combustion of coal and consequent increasing quantities of fly ash requiring disposal, China is considering disposal of fly ash as well as calcium carbonate residue from fertilizer production in the Bo Hai (Valencia 1992). If the Chinese are to begin ocean dumping, criteria for dumping site selection will need to be identified (Valencia 1992). Currently, the PRC has demarcated at least fifty-two marine dumping areas (Huang 1993).

The enforcement mechanisms developed by the SOA for ocean dumping are consistently being upgraded. The SOA has designated thirty-eight offshore dumping areas, which have been approved by the State Council. In 1992, 686 general permits were issued to permit 3.48 million cubic meters of dredged substances; this represented a decrease of 1.41 million cubic meters from the previous year. It is not clear that this decrease represents a positive change, however; it may be that the number of permit applications is declining due to an increased ability to dump illegally. Although remote sensing capabilities are being developed by a number of different agencies (the Petroleum Ministry, the Geology Ministry, and the Ministry of Transportation), enforcement is hampered by poor communication among these bureaucracies.

The level of Chinese compliance with the London Convention appears to be fairly high. They have submitted annual reports of permits issued and are actively participating in the scientific and management training sessions offered through the secretariat and other international organizations. There have been cases of illegal dumping by the Chinese; however, they did not lead to offshore pollution. The fines have ranged from 20,000 to 200,000 yuan; in the last few years, however, there have been fewer and fewer cases.

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<sup>3</sup> Although the official did not mention it, Daya Bay is also the site of a nuclear reactor.

Nonetheless, as one U.S. expert noted, the main obstacles for China in complying with the treaty are inadequate knowledge about technical matters, overcentralization of administration, and a short-term perspective that places development first and environmental protection second. In addition, future compliance may be jeopardized by evolution of the mandate of the treaty. As one Ministry of Foreign Affairs official noted, if the mandate of the London Convention is expanded to include coastal waters, as is currently being discussed, China will protest on the grounds of infringement of state sovereignty.

## **The World Heritage Convention (1985)**

### **Accession: A Policy Entrepreneur and the Garbage-Can Model at Work**

The “garbage can” model of politics emphasizes the randomness and serendipity of the policy process. Politicians in search of answers to their problems latch onto policy innovators, communities, and proposals that have been around for a while. The policies that the innovators advocate may or may not be related to the political concern the politician has—to attack a rival, to placate or cultivate a constituency, to garner funds. Thus, the policy process frequently involves the inadvertent wedding of different policy streams. That vision of politics, developed by Michael Cohen, Jack Walker, and John Kingdon in their cumulative work on organizational and American politics, captures China’s accession to the World Heritage Convention.

Three policy streams came together. The first was the policy community long interested in preserving China’s cultural relics. First established in the 1950s, the Bureau of Cultural Relics can trace its origins at least to the Republican era (1911–1949), when various archaeologist, architects, historians, artists, and their patrons in the government and commercial worlds feared the destruction of China’s extraordinary heritage of temples, palaces, bridges, tombs, archaeological sites, and artistic works. After 1949, this community found political patrons in Premier Zhou Enlai and Politburo member Chen Yi. The system it developed for identifying and preserving historical sites collapsed during the Cultural Revolution, however, when much of China’s cultural heritage was pillaged by marauding Red Guards. Further damage was done when many of the urban sites were turned into military bases, where the soldiers previously located in rural bases were encamped as they restored order in the cities. While not deliberately damaged, the sites decayed under military protection. By 1978, the bureau was back in business, with Zhou’s backing, and, directly under the State Council, it began to reclaim and restore the sites. In subsequent years, its nominal status changed; it retained its independent status until 1982 and from 1987 to 1993, while from 1982 to 1987 and again after 1993 it has been part of the Ministry of Culture. With Zhou Enlai’s death in 1976 it lost its patron, however, and with the exception of Vice Premier Gu Mu, now retired, its officials have felt that they have not had a strong patron at higher levels.

The second policy stream involved those concerned with preserving China’s natural and scenic areas. In the 1950s, the powerful State Capital Construction Commission (SCC) acquired responsibility for this task, presumably because its core mission was to guide China’s investment projects; therefore, it also decided what to preserve. The Cultural Revolution wreaked havoc in this environmental area as well. The SCC was abolished and

for nearly a decade local governments or the military controlled the fates of China's natural preserves. Much devastation occurred. By 1978, the prior structure had been resurrected, and the reestablished SSC convened a landmark meeting to assess the damage of the previous decade and to develop a strategy for preserving natural and cultural sites. Vice Premier Gu Mu, the head of the SCC, lent his full weight to the effort. Staffing the effort fell to the Bureau of Landscape in the SSC, and a remarkable, talented, and energetic policy innovator, Division Chief Liu within the bureau, stepped forward to organize a survey of the national situation.

The investigation lasted three years, bringing together groups from universities and ministries and teams of landscape architects, archaeologists, and biologists. The work took over two years, and in 1981 the SCC in coordination with the Bureau of Cultural Relics submitted a report to the State Council detailing the urgent need to preserve scenic and cultural spots. The SSC approved the report, but in 1982 the SCC was again abolished and its constituent bureaus distributed among other agencies. Gu Mu suffered a political setback. Responsibility for the preservation of natural sites was assigned to the General Administration of Urban and Rural Construction, which acquired ministerial status in 1988. Planning went forward under the new setup, and in 1982 the Law on Protection of Cultural Relics was promulgated. But the preservationists needed new patrons, and they found them in the Chinese People's Political Consultative Conference (CPPCC), an organ that gathers together distinguished personages from various walks of life, including the leaders of China's very small remnant non-communist political parties that date back to the Republican era. In 1982, the CPPCC helped select the forty-four national scenic spots that merited preservation. All this activity culminated in the June 1985 Provisional Regulations on Management of Scenic Spots and Historical Sites.

The third policy stream was now ready to enter the scene. After China entered the United Nations, various UN agencies began to set up shop in China, such as the United Nations Development Program (UNDP) and the United Nations International Children's Emergency Fund (UNICEF). Among these, of course, was UNESCO, and in keeping with that organization's methods, the Chinese National Committee of UNESCO was formed. Only after the 1985 regulations were passed, this committee approached the National People's Congress for approval to join the Heritage Convention. It was seeking activities to undertake and serving its appropriate linkage function between UNESCO and Chinese agencies. But it had not played any role in drafting the 1985 regulations or even, apparently, in encouraging the agencies involved. The initiative was from within. But a domestic system had been developed that could almost inundate the international community with sites worthy for inclusion as World Heritage sites.

### **Legal Infrastructure**

After accession to the treaty in December 1985, China continued to develop its legal framework for protection of cultural and scenic sites. In 1986, the Cultural Relics Bureau formulated a set of "Measures for the Management of Repairing Projects of Memorial Buildings, Ancient Buildings, and Grottoes." In 1992, the State Council ratified a set of rules to provide "concrete operational guidelines for the enforcement of the cultural relics protection law." These included three regulations to govern archeological excavation, excavations in collaboration with foreigners, and implementation. The State Bureau of Cultural Relics also has issued its own regulations on storage by museums and management

of ancient architectures. Provincial legislation to protect sites also exists: Anhui, Sichuan, and a local region of Hunan have all issued regulations to manage and preserve scenic spots.

### **The Management Structure**

The management structure in China for this treaty is complex, involving not only the central government but also provincial departments and municipalities. It also has evolved significantly over the years.

While the China National Committee of UNESCO has oversight responsibility, the State Cultural Relics Bureau and the Ministry of Construction are in charge of concrete implementation. The State Cultural Relics Bureau, which has about 110 administrative workers, handles international agreements and the management of work related to cultural heritage. It also formulates policies, promulgates decrees, coordinates relations with other departments, provides funds for protection projects, and offers training. In addition, the State Cultural Relics Bureau organizes the investigation of sites, registers items of cultural heritage, and submits them to the State Council for approval. From this list of State Council approved sites, the Bureau of Cultural Relics recommends sites for inclusion on the World Heritage List. Other agencies also nominate sites for World Heritage recognition.

The Ministry of Construction has, under its auspices, a Scenic Spots and Historical Sites Management department which manages scenic historical sites. In addition, this department “drafts regulations on strengthening management regarding protection, examines the overall plan for the state’s scenic spots and historical sites and urges local authorities to solve existing problems.” Some Chinese officials have implicitly suggested that the Ministry of Construction traditionally has not been proactive in its protection efforts. As one official commented, “Since China’s five national scenic spots were included in the World Heritage List, the Ministry’s department has been gradually strengthening its conservation efforts and administration of heritage projects and organizing activities conducive to conservation work.” The local regions in which the scenic spots are located also have been active in protection efforts. They hold publicity drives to enhance the environmental protection awareness of local people and tourists. In addition, at Huangshan, one of the five national scenic spots, tourists were banned from some areas to promote vegetation growth.

At least one Chinese official has noted that the inability of the management structure to clearly define the division of responsibility among the Ministry of Forestry, the Ministry of Construction, the Bureau of Cultural Relics, and the National Environmental Protection Agency makes coordination very difficult. Some national parks fall within the jurisdiction of NEPA, while others are the responsibility of the Ministry of Forestry. Any of the four agencies may initiate a nomination for a scenic site. These proposals are then submitted to the Chinese National Committee of UNESCO and a number of expert working groups which review the proposals. The committee’s secretariat, which consists of thirty people, then selects the list of sites to submit to the international body. Further, many provinces nominate sites within their boundaries. In addition, one Chinese official has noted that the “separation of ownership and use rights to different departments” has brought about a situation in which some actors are interested in reducing tourism to protect the cultural sites while others are more interested in increasing the number of visitors for greater profit. According to a U.S. National Park Service official, there is intense competition domestically among the Chinese bureaucracies involved in nominating sites. It is the Ministry of Con-

struction, however, which sends a representative to the Committee meetings; NEPA and Ministry of Forestry representatives frequently are absent.

Funding for protection of scenic and cultural heritage sites comes from several sources. In the mid-1990s the national government supplied about 140 million yuan annually; this was only twice the amount budgeted in 1982. The majority of the funds are derived from ticket sales and other sources such as fund-raising drives. For example, a significant public effort to raise money for the preservation of the Great Wall yielded 60 million yuan.

### **Interaction with the International Community**

In 1991 China became a member of the World Heritage Commission and in December 1992 it was elected the vice chair of the commission. According to a World Heritage secretariat official, China is very active in the World Heritage Commission and aggressively pursues efforts to get its sites on the list, producing elaborate presentations for each site proposal. By the mid-1990s the Chinese had nominated nine natural sites, of which five had been accepted, three declined, and one—panda reserves—still awaited action on the Chinese side. In August 1993, China nominated an additional four cultural sites as World Heritage sites.<sup>4</sup> An official from the International Union for the Conservation of Nature (IUCN) was impressed by the enthusiasm of the Chinese, especially during IUCN visits. For instance, the Chinese put together an eight-hour video detailing the visits of the IUCN officials to evaluate the sites.

China also has pursued training and funding opportunities from the World Heritage Commission and other sources. The State Bureau of Cultural Relics has established more than ten laboratories to develop improved preservation capabilities and has sent technicians to the International Center for the Study of the Preservation and Restoration of Cultural Property (ICCROM) to attend training courses. In addition to the IUCN missions to review the proposed sites, several other interactions with the secretariat and its representatives have taken place: a training seminar on natural areas in Beijing (1989), a training seminar for tourism management in Huangshan (1992), and, in fall 1993, a management training meeting in Beijing, a follow-up mission to Huangshan, and an IUCN Commission regional meeting on natural parks. The World Bank and the Getty Museum have been assisting the Chinese in restoring the Mogao Grottoes of Dunhuang. They have coordinated efforts to reduce sandstorms in the Mogao Grottoes area and to conduct environmental monitoring inside the caves. The Getty supplies instruments and trains workers for protection efforts. The PRC, in turn, has begun to export its newly trained experts; it will provide experts for the international effort to protect Angkor Wat in Kampuchea. Direct financial aid from abroad also has been forthcoming for China's protection efforts. In 1991, for example, the Venice and Great Wall Preservation Committee donated US\$146,000 to the PRC to rehabilitate part of the Great Wall at Mutianyu in Beijing. Twenty thousand dollars in external aid was also provided to help manage Huangshan.

The Chinese have been responsive to the suggestions of the international community for making changes to sites that appear to be in danger of noncompliance. In 1988, a UNESCO-sponsored delegation inspected the five historical sites in China and noted at least two problems: construction was destroying traditional urban structures in historic cities, and the PRC needed to develop its science and technology capabilities to protect the sites. In February 1989, a meeting was held in China by the newly formed National Committee of

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<sup>4</sup> Of these, Chengde, Wutangshan, and the Potala Palace were accepted.

Cultural Relics to address the comments and proposals made in the report. The Committee stressed that the PRC should “not allow these places of historic interest to be rated as ‘world heritages in imminent danger.’” The threat of international censure or embarrassment before the international community apparently spurred the State Council and some municipal governments to take action on several trouble spots. China suspended the joint-venture cableway in the Badaling section of the Great Wall, which was responsible for significant pollution; dismantled illegal structures in the area; and assigned blame to the responsible personnel. In addition, the PRC took action at the Imperial Palace and Dunhuang Mogao Grottoes to limit the number of daily visitors. Some Chinese officials have suggested that the treaty has been a great impetus to “clean up” the sites by forcing the provinces to undertake a moral commitment to fulfill the treaty. At the same time, as noted before, public embarrassment appears to be an even greater catalyst. At Wulingyuan, for example, peasants and merchants had overtaken many of the scenic spots. When an international delegation of experts announced its intention to visit, however, officials at all levels cooperated to clear them out.

For the management of these sites, the involvement of local-level officials is critical. Each site has a local custodial commission that consists of representatives from the Ministry of Construction and the National Scenic Area Office to manage the site. The Ministry of Construction is responsible for legislation, technical assistance, training personnel, and approving plans for the region. Although the center, specifically the Ministry of Finance, may provide funds in the form of a special allocation to help develop the surrounding infrastructure, the majority of the finances comes from local sources. Local officials may use taxes, ticket revenues, and other resources (as long as they do not damage the site) to finance site management. Of these, the primary source of income is ticket sales. Several provinces are especially noteworthy for the efforts of their leaders to protect scenic and cultural sites. Ministry of Construction officials cite several provincial government officials, specifically those in Anhui, Sichuan, Shandong, and Hunan, as being leaders in such efforts.

### **The Record of Compliance**

In spite of these activities and generally favorable reviews by outside experts concerning the nature of Chinese participation, there are suggestions of problems in Chinese compliance efforts.

First, according to one World Heritage secretariat official, some sites have come under suspicion for poor management. Taishan, for instance, reportedly has problems with flooding and tourism; however, PRC officials have refused to take action to limit the number of tourists. Also, the situation at both Wulingyuan and Jiuzhaigou has engendered concern by the committee for the “growing human impact and tourism.” The Chinese themselves have acknowledged that they are unable to protect many of their cultural sites. There is, for instance, a new express highway crossing the Great Wall. In addition, there are factories near the Peking Man site at Zhoukoudian which are causing serious environmental pollution. The Chinese tend to attribute their failings in protection efforts to a lack of funds and the developing status of the country. Foreign experts, however, offer additional reasons. A second World Heritage secretariat official commented, “In general China is committed to maintaining its sites. By Western standards, the physical planning and delivery of visitor services could use improvement.” He further noted that the Chinese have often stressed research rather than implementation.

In addition, several officials of international organizations have suggested that the PRC is interested in the World Heritage listing only for reasons of international recognition and access to bilateral funding and expert assistance. This has led in some cases to abuse of funds (e.g., unnecessary purchases of jeeps and walkie-talkies). The U.S. National Park Service, in fact, invested some funds in initial bilateral exchanges but concluded that they were essentially a waste of time. Perhaps a more serious problem is that, according to a U.S. official, the PRC has indicated that it will not invite World Heritage Commission monitoring trips to its sites; it considers such visits an infringement of Chinese sovereignty. The Chinese seem to welcome initial exploratory visits to PRC sites, but they often make follow-up difficult, in part because China lacks ancillary NGOs to provide necessary assistance.

Moreover, some Chinese officials have themselves expressed concern that the rapid rate of economic development, modernization of historic cities, and ever-increasing number of tourists will continue to “exert enormous pressure on and even destroy natural legacies.” These officials also argue that the 15 million yuan (roughly US\$3 million) earned each year from tourists who visit the five World Heritage cultural sites is far from enough to protect, conserve, display, and study the sites. They also note that the low level of public awareness has led to frequent incidents of “wanton carving and painting on the Great Wall and stealing of cultural relics from the Palace Museum.” In addition, they comment that the national tourist agencies oppose increases in ticket prices to help conserve the Palace Museum ground bricks of the Ming dynasty because they desire increased tourism. These officials are supported by some political leaders who fear a negative response from the press and public if ticket prices are increased. At Dunhuang, there were severe problems with degradation of the site from tourism, to which the local commission responded by selling “A” and “B” tickets to see “A” or “B” sites. New construction also presents a danger to archeological sites. In Datong, for example, consideration is being given to rerouting a major highway to preserve the grottoes; shaking from trucks on the highway has already caused damage, however. In Zhoukoudian, small lime kilns that threatened the site have also been removed.

Finally, one of the most pernicious problems plaguing the protection of cultural relics is theft and smuggling. Illegal excavation was previously considered theft. In 1991, however, legislation was enacted that made illegal excavation a criminal act punishable by four or more years in prison to death. Nonetheless, smuggling has grown, as witnessed by the booming market in Beijing in statues and other artifacts taken from graves.

## **The International Tropical Timber Agreement (1986)**

### **Accession: A Triumph for MOFERT Turned Burden**

China ranks sixth or seventh in world consumption of tropical timber. The majority of timber imported is used for plywood in construction. Some is processed into furniture or parts of furniture for export or domestic use. At the same time, China does have its own tropical forests, although they are limited to Yunnan, southern Guangdong, and the Hainan Islands. These resources are being exploited, with some illegal timbering occurring as well. China therefore is both an important consumer and a modest producer of tropical timber. Several countries that are important in China’s overall foreign policy—Malaysia, Thailand,

Indonesia, Burma, and Laos—have a major stake in their exports of tropical timber; logs and processed timber are major sources of foreign currency earnings for these countries.

Thus, at the time of accession to ITTA, management of China's external and domestic tropical timber policies involved three principal ministries: Foreign Economic Relations and Trade (MOFERT), Forestry, and Foreign Affairs. MOFERT in 1986 still enjoyed monopoly control over trade in timber. All import of timber had to pass through one of the trading corporations in its ministerial domain. MOFERT had an interest in assuring that supply of this commodity remained steady and sufficient. As an importer of 10 million cubic meters of tropical timber a year, China has to be concerned that it will become more difficult to secure this resource. Some of its suppliers are exhausting their reserves, and others are imposing restraints on log exports.

The Ministry of Forestry owned enterprises that processed tropical timber, though its corporations were not the only consumers of tropical. More important from the Ministry's perspective was its responsibility to exploit existing reserves wisely, to prevent illegal timbering, and to increase the domestic supply through expansion of tropical timber acreage and improvement in species. The latter concern fell particularly in the domain of the Chinese Academy of Forestry and its subordinate research agencies. Finally, the Ministry of Foreign Affairs was concerned that Chinese policies as a consumer—maintaining low prices and encouraging sustainable harvest to ensure long-term supply—did not alienate countries in Southeast Asia that China was courting for other purposes. China inadvertently could find itself aligned with the developed world—the consumer countries—on this issue, thereby risking the Ministry of Foreign Affairs' desire to champion developing country causes.

China's accession to and implementation of ITTA became, at least initially, a captive of MOFERT. The reasons for this were straightforward. First, the international community presented ITTA to China as strictly a commercial and trade promotion agreement. It lacked the obvious environmental dimensions it has subsequently acquired. And, as Ministry of Foreign Affairs officials now explain it, the head of MOFERT in 1986 was Politburo member Chen Muhua. She was much more powerful than the foreign minister at the time, Wu Xueqian, and therefore her subordinates were emboldened to proceed on ITTA without extensive consultations with Foreign Affairs. MOFERT did not assign high priority to developing capabilities to implement this agreement, however, since it could not become a beneficiary of the financial assistance that flowed from the agreement. That assistance went to the research and production side; that is, the concerns of the Ministry of Forestry. Indeed, MOFERT was responsible for paying a fee of roughly \$50–\$60,000 a year to the International Tropical Timber Organization (ITTO), calculated on the basis of the volume of tropical timber exports and imports, while ITTO has contributed \$3 million to Forestry for research and development in tropical timbers.

In light of this history, the perspectives of both the Ministry of Forestry and the Chinese Academy of Forestry are closer in line with the current focus of the ITTO than that of MOFTEC. The Ministry of Forestry has complained that MOFTEC will not permit it increased access to ITTO activities; however, as some officials have noted, the Ministry of Forestry lacks the appropriate combination of technical and diplomatic expertise to manage the issue in international negotiations. Within the ministry, the technical specialists on tropical timber do not speak English, while the liaison personnel in the International Cooperation Department who speak English and are responsible for ITTA within the ministry do not understand the technical details. Yet those proficient in English enjoy a privileged position in representing the ministry on issues involving international matters. In

addition, neither the Chinese Academy of Forestry nor the Ministry of Forestry can afford to attend the ITTO meetings without external funding (ibid.). According to a Ministry of Foreign Affairs official, both his ministry and NEPA are attempting to gain entry into this issue through international conferences on forests. This official believes that the only hope of snatching implementation of ITTA away from MOFTEC would be for the United Nations to initiate a new international negotiation on forestry or tropical timber that would be explicitly environmental in purpose and which would necessitate a reorganized Chinese working group with NEPA, Forestry, or the Academy of Forestry as the lead agency. Until then, implementation of this agreement will not be a priority.

### **The Management Structure**

Not surprisingly, MOFTEC was reluctant to provide information on its implementation of ITTA, and hence we cannot illuminate its efforts to monitor the import of tropical timber. In any case, it has lost its previous monopoly over trade in tropical timber through the state trading companies it controlled. Administrative decentralization, the growth of private enterprise, and the increased porousness of China's borders have transformed the lumber business, as the economic reforms have changed other aspects of commerce and trade. The Ministry of Forestry now imports tropical timber without reference to MOFTEC, as do many government agencies, trading companies, and manufacturers at the provincial level and below. As an indication of MOFTEC's non-involvement, ITTO requests statistics on China's annual production, imports, and exports of tropical timber. The data are very hard to obtain, and MOFTEC evidently plays no role in generating them. The statistics are generated by the State Customs Administration, a body independent of MOFTEC, and by the Chinese Academy of Forestry (CAF).

The de facto implementing agencies for ITTA are the International Cooperation Department in the Ministry of Forestry and CAF, not on the export-import side but for preservation and sustainable harvest of China's own tropical timber forests. A number of functional bureaus within the central ministry and at the provincial levels in Yunnan, Hainan, and Guangdong have responsibilities over tropical timber. For example, the Forest Security Bureau—the same agency responsible for protection of endangered species—is responsible for preventing illegal logging of tropical forests. While news reports detail the vigilance of these bureaus—such as numerous arrests and successful prosecution of illegal loggers—American experts believe that the legislation remains largely unenforced. CAF also has a research program on tropical timber, and the financial contributions of ITTO for enhanced management go through the ministry to CAF.

### **Interaction with the International Community**

The Chinese have been fairly active participants in ITTO negotiations and meetings and have asked for project funding from ITTO for sustainable management projects of tropical forests. ITTO has provided \$3 million to the Ministry of Forestry for tropical timber management.

In 1991, Jiang Jianjun, China's representative to the International Tropical Timber Commission, requested that China be included in the training programs for producing members, even though the Chinese are members of the consuming group. They received \$33,000 to learn how to identify, process, and utilize tropical timbers from Africa and

Southeast Asia. The three-year program will develop materials to help Chinese importers and users to understand tropical timbers; the literature will be supplemented by work on wood anatomy that is to be done by the Chinese Academy of Forestry's Research Institute of Wood Industry (ITTC 1991a).

A second project, also under the Chinese Academy of Forestry, was initiated in 1992. This was an effort to develop a database of wood species and substitute species (ITTC 1991b). This software has been distributed to agencies in the Netherlands and Austria. In addition, a two-year project was initiated under the auspices of the Chinese Academy of Forestry, Nanjing University of Forestry, and Zhongnan Forestry College to study the use of bamboo as a substitute for tropical timber. This project involved a massive effort of about 1,200 researchers from the Chinese Academy of Forestry and its Bamboo Information Center with extensive cooperation with experts from the United States, United Kingdom, Germany, Indonesia, and India. In addition, in 1993 ITTO contributed \$3 million to Hainan through the Ministry of Forestry and Chinese Academy of Forestry to establish a demonstration model for sustainable utilization and management of Hainan's tropical resources (ITTO 1993).

The World Bank has provided significant loans for the development of forest plantations: in 1991–1996, the bank invested \$500 million for China to develop sixteen plantations in 240 counties. The tropical forests that have been supported by this money are located in Hainan, South Guangdong, and Yunnan. In 1994, the World Bank approved a second loan of \$200 million for a Forest Resource Development and Protection program.

According to a State Department official, China may be “skewing the usual meeting of the minds among the consumer countries by making decisions more favorable to developing countries.” In this vein, in a statement to the UN Conference for the Negotiating of a Successor Agreement to the International Tropical Timber Agreement in 1993, the Chinese delegation stressed the necessity of developed consumer countries providing sufficient financial and technical support to developing countries to realize the goals of sustainable management and utilization of the tropical forest resources. They further stated, “No country should use environmental issues as an excuse to create obstacles for the development of timber industries and the international trade” (Chinese Delegation 1993). China also has noted that while a separate agreement on temperate forests should be included, ITTO should remember that China is a developing country and cannot have sustainable development in its temperate forests.

### **Record of Compliance**

Despite all of the training programs and program assessments, by August 1993 the PRC had not submitted a progress report on its efforts to meet Target 2000, the commitment by ITTO member countries to have all tropical timber entering trade from sustainably managed sources by the end of the next century. Moreover, China is the only member of the consumer countries that planned to increase substantially its tropical log imports during 1992–1993 (ITTC 1993). China is the second largest ITTO tropical log importer (Taiwan is included as a province of China in these calculations and is the largest importer within the PRC [ITTC 1993]).

In addition, the illegal logging domestically has been supplemented by illegal logging internationally; the Chinese have become active in the logging industry in Myanmar. In 1989, after logging was banned in Thailand, Myanmar permitted foreign logging companies

to do business. According to a TRAFFIC report, although most of the companies are Thai, in the north, they are being replaced by Chinese interests. Most of the illegal operations center on smuggling into Thailand; there is no direct evidence that the Chinese are participating in this smuggling. According to the director of one Thai company, most of the illegal loggers are Thai, although some have Chinese and Japanese backing (ITTC 1993).

## **The Montreal Protocol (1992)**

### **Accession: Initiative from the Scientific Community**

In 1984, Beijing University professor Tang Xiaoyan wrote a paper on the depletion of the ozone layer. An atmospheric scientist, Professor Tang sought to draw to the attention of her colleagues the global dimensions of this emerging issue. Her paper attracted attention, and a few colleagues began to discuss both the possible effects of depletion on China and China's potential role in accelerating its depletion. Professor Tang, a policy-oriented research scholar, succeeded in eliciting the interest of the State Science and Technology Commission and Politburo member Song Jian. After a gestation period, China sent an observer in 1987 to attend the Montreal meetings. The subsequent report circulated among the relevant community of technicians and scientists, but no recommendations were made as to whether China should join the agreement.

After the initial signatories ratified the Montreal Accord, international efforts began to be made to encourage Chinese participation. For example, Ministry of Foreign Affairs officials recall such an effort by the United Kingdom. The ministry began to realize that China would be subject to increasing pressure to join this international agreement; it also saw that China had the opportunity to help lead an effort among potential allies in the developing world, all of whom thought that without compensation from the developed world, the treaty would impose inequitable and heavy costs upon them. The ministry therefore developed a strategy to seek modifications in the accord prior to Chinese accession.

Meanwhile, NEPA asserted an interest in the issue and organized briefings for Chinese officials. Professor Tang then organized a research project and assigned a graduate student to write a thesis on consumption of ODS in China, the first time this topic had been studied. As a result of these efforts, top Chinese officials—with the encouragement of Song Jian—decided to break new policy ground. Until that time, China's officials were willing to consider making commitments only on local and regional environmental issues. They were unwilling to address global environmental problems with only a limited impact on China. They decided that policy should be reconsidered, though self-interest rather than a global consciousness was the motivating factor. They realized that failure to join the protocol could adversely affect China's trade, as the State Planning Commission (SPC) hoped to make China a major exporter of refrigerators and other products that at the time were using ODS. But the top leaders also decided that China would not join unless it derived clear benefits from joining the treaty.

NEPA then organized six ministries to evaluate the precise costs and benefits of signing the protocol: Light Industry (manufacturer of refrigerators), Chemical Industry (manufacturer of ODS), Public Security (manufacturer and user of halons), Electronics (user of ODS),

Commerce, and Aeronautics. The State Administration of Tobacco and Cigarettes, a major user of ODS and an important source of government revenue, joined later, as did the SSTC, SPC, and MFA. In the course of these discussions, the Chinese government concluded that it should sign the agreement but that it would insist on modifications before doing so. The Chinese calculated that their involvement was necessary to the ozone regime's success and that therefore they enjoyed considerable bargaining leverage. Three arguments enabled Chinese proponents of the agreement to convince their leaders to sign the agreement. Failure to sign would harm imports and exports. Financial support could be derived from the multilateral fund. And China had an international duty to reduce ODS production. At the time, China had two ozone measurement stations, and they recorded the decrease in the ozone layer. This data and the consequences were explained to top leaders. As one Chinese participant in the working group recalled, "The environmental issue at stake was based on excellent scientific research, in contrast to many other proposed international environmental treaties that are not based on as much scientific evidence. Moreover, the Chinese scientists were involved early in the deliberations and were able to make suggestions regarding the terms of China's entry. This helped the Chinese side to explain to their leaders the purpose of the treaty. The existence of a worldwide scientific community on the ozone issue and China's participation in it helped sell the issue."

As a result of the internal deliberations, during the Montreal Protocol negotiations and discussions leading to the London Amendments, the Chinese delegation indicated that the Montreal Protocol did not adequately address the financial and technological needs of the developing states. Therefore the Chinese did not accede to the treaty until the 1990 London Amendments, in which the developed nations agreed to establish a multilateral fund and offered stronger guarantees for the transfer of technology. Articles 5.2 and 5.3 of the Montreal Protocol call on parties to "facilitate access to environmentally safe alternative substances and technology" and to "facilitate bilaterally or multilaterally the provision of subsidies, aid, credits, guarantees or insurance programs..." Article 10 further calls upon parties to "cooperate in promoting technical assistance" to the developing states.

The Chinese delegates, along with the representatives from India, adopted two tacks during the negotiations. First, they argued that the developed countries were responsible for most of the damage to the ozone layer; hence, they should bear most of the cost for solving the problem. Second, the Chinese and Indian delegations claimed that given the need for developing countries to address more pressing issues such as poverty, hunger, and disease, they could not afford the costs of CFC abatement (Rosencranz and Milligan 1990). A member of the Chinese delegation also raised an important point of contention before the United Nations General Assembly in 1989. He stated, "Patent rights and copyrights should not become obstacles to the efforts of the developing countries to promote scientific, technological, and economic progress" (UNGA A/44/PV.42). Because of the pressure exerted by the PRC and India—two relatively low-producing CFC countries with estimated very high future production levels—a multilateral fund was established under the auspices of the World Bank. This fund provides \$240 million to Article 5 countries based on the principle of additionality (Stammer 1990).

As a result of the modifications in the Montreal Protocol adopted in the London Amendments, the Chinese committed themselves to sign the agreement and to prepare an implementation plan. The Chinese draft of the implementation plan sufficiently impressed international authorities that the UNDP hired Tang Xiaoyan, the architect of China's entry into the regime, to counsel India in the preparation of its plan.

## **The Legal Infrastructure**

In order to implement the Montreal Protocol, China began an active effort to develop a legal structure for phasing out ozone-depleting substances. Since 1990, the Chinese have issued several circulars. In 1990, they issued the Circular on Temporarily Suspending the Establishment of Factories Producing Fire Engines and Extinguishers. In 1991, the Ministry of Light Industry and NEPA issued a circular stipulating that the construction, expansion, and refurbishing of projects producing freon aerosol producing products was prohibited. In 1992, the Ministry of Public Security, the Ministry of Machine-building Industry, and the State Administration for Industry and Commerce stipulated that projects producing halons and halon extinguishers were prohibited. In 1993, the Ministry of Chemical Industry and NEPA declared that declaration and licensing systems should be introduced for the production of controlled substances and that projects producing controlled substances should be strictly managed.

## **The Management Structure**

China has established a vast bureaucracy to manage its ozone protection effort. In July 1991, the Chinese organized a leading group consisting of the National Environmental Protection Agency, which was the lead agency, the Ministry of Foreign Affairs, the State Planning Commission, the State Science and Technology Commission, and the Ministry of Finance as deputy agencies. The ministries of Light Industry, Chemical Industry, Public Security, Machine-building, Electronics, Commerce, Aeronautics and Aeronautic Industry, the General Customs Administration, and the Ministry of Foreign Trade and Economic Cooperation were all member agencies. This leading group then opened an office and formed a coordinating team to manage the routine work on ozone protection. It was responsible for developing China's program to implement the treaty and for managing the daily responsibilities that the treaty required. The Chinese funded the office with US\$100,000.

By 1992, the office had seven full-time staff and thirty-four part-time workers; two years later there were ten full-time staffers. NEPA formed a project management office which provided the convention secretariat with data and managed the multilateral fund moneys. In 1994 this office had a staff of ten and was funded primarily by multilateral fund money.

## **Interaction with the International Community**

In 1991, China applied for funding for numerous projects from the multilateral fund. The Chinese received funding for twenty-nine projects totaling \$20 million. By 1994 an additional twenty projects were awaiting funding. At this stage the World Bank was also preparing a \$15.6 million grant referred to as the Ozone Trust Fund, which will be supplemented by a \$10 million contribution from Chinese banks. The Ozone Trust Fund will be used for investment in six CFC phaseout projects in existing factories: two aerosol plants in Shanghai and Tianjin; two halon factories in Beijing and Zhejiang; and two foam-producing plants (in unknown locales). Other grants were also being developed.

DuPont and the U.S. Environmental Protection Agency also have been active in Chinese efforts to develop CFC substitutes, although each is proposing a different substitute. Moreover, the Chinese themselves are attempting to develop ozone-depleting substance substitutes. According to one Chinese report, the Ministry of Chemical Industry's research center in Zhejiang (Zhejiang accounts for one-third of China's reserves, production, and

exports of fluorine raw material) has already developed “dozens” of substitutes for freons. Some of them are under test use and are supplied to major refrigeration enterprises. They are further studying a potential substitute for halon (China Daily Report 1993).

During 1992–1993, China received money from the multilateral fund to form a working group to draft the Chinese program to eliminate ozone-depleting substances. In 1993, the Chinese submitted their country report to the multilateral fund Executive Committee. In it, they outlined the structure of China’s ozone-depleting substance industries. There were approximately forty enterprises that produced CFCs, with a total production capacity of 47,000 tons. In the mid-1990s the existing CFC production capacity in the PRC could not meet the domestic demand and therefore the PRC was importing 15,000–20,000 tons of CFCs per year from Japan, France, and the United States. It exports approximately 100–200 tons annually to Southeast Asia (United Nations Environment Programme 1993). In the country report, the Chinese set out 140 projects requiring an estimated US\$1.4 billion to implement. According to one U.S. expert, China’s report was quite impressive; however, he noted that the PRC request for the phaseout of ozone-depleting substances sought more money than the entire multilateral fund contained. Xia Kunbao, the head of NEPA’s foreign affairs department, has stated that the Executive Committee of the multilateral fund has approved a dozen projects to transform China’s “refrigeration, washing and cleaning, and electronics industries so as to phase out chlorofluorocarbons.” He further stated that some of the projects have already been implemented and that China is planning to implement the rest (Beijing Xinhua 1993).

### **Record of Compliance**

Although China has the highest levels of ozone-depleting substance consumption and production among the developing countries, it is not currently in danger of falling into noncompliance with the Montreal Protocol or the London Amendments. Under Article 5.1 of the Montreal Protocol, developing countries were to be granted a ten-year grace period in delaying their compliance in order to meet their “basic domestic needs.” During this time, developing states would be allowed to expand their CFC consumption level to 0.3 kg per capita. China’s potential CFC consumption during the 1990–2000 period was estimated to reach only .05 kg (Rosencranz and Milligan 1990). Thus, what is important in terms of China’s compliance with the protocol is that it submits its progress reports and develops the appropriate legal, managerial, technical, and economic infrastructure to fulfill its future commitments.

China’s first scheduled obligation to report its ODS production and consumption figures came in 1993. Its report was complete with the exception of data for 1992. Its 1994 report was also complete. Both a DuPont representative and a U.S. State Department official consider the PRC to be “proactive” for a developing country in its attempts to phase out CFCs. The Chinese are actively pursuing measures to manage the problem of small-scale factories that emit ODS, to control imports,<sup>5</sup> and to levy taxes and penalties. NEPA officials believe that they have the capacity to halt new projects that use ODS, but not those that currently consume them.

Nonetheless, international actors are already citing potential challenges to future implementation. First, there is an unconfirmed claim that the PRC is in the process of building a CFC plant with the assistance of a German firm. Second, many of the Chinese enterprises

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<sup>5</sup> In the mid-1990s, roughly 30 percent of the CFCs consumed in China were imported.

that produce and consume ozone-depleting substances are small and spread out; according to a U.S. State Department official, it is therefore more difficult to change over the production system. Third, at least one multinational corporation, DuPont, which has become involved in the Chinese effort to develop CFC substitutes, has found the Chinese bureaucracy a complex entity. One DuPont official commented that it is "very complicated" dealing with ministries in China. He notes that sometimes one ministry "disappears" from the negotiations. Based on the remarks of another U.S. expert, it is also plausible that the issue of intellectual property rights is hampering DuPont's efforts in the PRC. Finally, between 1986 and 1992, production of CFCs in China more than doubled, from 11,540 tons to 24,941 tons.

Chinese officials themselves have noted additional constraints to the effective implementation of the Montreal Protocol. These officials predict that by 2010 "the lowest rate of growth in the use of ODS" in China by various industries will be 6 percent, while the highest rate "is expected to reach 18-20 percent." Already, in this regard, the trends have been negative. Although per capita usage remains quite low, China's percentage of the world's total ODS consumption has increased dramatically, from 3 percent in 1986 to 18 percent in 1994. These officials expect that as the state attempts to control and reduce the use of ODS, some industries and consumers will resist, making implementation more difficult. In addition, they fear that because China is moving from a planned to a market economy, neither its market mechanisms nor its regulatory abilities are adequate to enforce implementation.

Finally, Chinese environmental officials suggest that while the international capability for implementing technological changes to prevent ozone depletion is high, the PRC's limited funds have prevented it from developing a similar level of commercialization for these technologies. In this vein, they note that the mechanisms for technology transfer from the developed to the developing states are not well developed and also hinder the capacity of developing countries to implement these technologies. One Chinese scientist intimately involved in the internal Chinese negotiations over the Montreal Protocol claims that the consultancy process of the World Bank, the UNDP, and the Asian Development Bank is not favorable to the PRC and does not support indigenous Chinese technological development. She argues that these organizations hire consultants who then favor the technologies with which they are familiar (e.g., from DuPont, ICI, etc.). Relatedly, Chinese officials commented that the "application procedures and restrictions on the use of funds received from the multilateral fund are excessively elaborate and involve a long waiting period." Concerned departments and enterprises are required to assign a certain level of manpower and financial resources to conduct first-stage preparations, including the acquisition, the translation of relevant materials and negotiations, and the hosting of foreign experts. All these factors have served to dampen the enthusiasm of some enterprises. As noted earlier, the Chinese estimate that they will need \$1.4 billion for the 140 projects they have proposed to phase out 60 percent of ODS. Thus far, however, they have received only \$30 million from external funding sources. As one scientist complained, China consumes 70 percent of ODS among developing countries but receives only 20 percent of the funds provided.

There is also substantial variation among the responsible ministries in terms of the rate and commitment of their implementation. The Ministry of Light Industry, the Ministry of Electronics, and the Ministry of Chemical Industries, which were the largest consumers of CFCs at the time China signed the Montreal Protocol, are considered to be more "advanced" in their outlook on developing and implementing ODS substitutes; the minister of Light Industry, especially, has played a leadership role in attempting to fulfill China's commit-

ment. In contrast, the ministries of Domestic Trade and Commerce have been less aggressive in working to reduce their consumption of ODS. According to NEPA officials, the Ministry of Domestic Trade, which is responsible for refrigerators, is short of manpower and highly decentralized.

The regionalization of the PRC has also introduced problems for central authorities in attempting to implement the protocol. The center's plans for gradual elimination of ODS will have adverse effects on industries at the local level. Especially for small enterprises, such policies can be very problematic. Furthermore, the projects funded by the multilateral fund must be approved by local-level governments and have local-level financial support for implementation. According to Chinese officials, thus far the provinces and cities have not developed legislation to support the elimination of ODS.

### **Lessons Learned: The Policy Implications**

Our interviews repeatedly revealed that the proponents of these five international agreements sought to secure access to hard currency and technology. While many individual Chinese understand and endorse the environmental purposes of the agreements, they were able to convince the skeptics by pointing to the agreements' short-term benefits and possible international penalties. This calculus of cost and gain not only was at work during the accession stage but also remains in effect during the implementation stage, particularly in the decisions at lower levels to comply with or disregard the regulations that Beijing has promulgated.

The implementing agencies in Beijing are unable in most instances to monitor provincial and local level compliance. They possess neither the resources nor the manpower to enforce central directives, and the State Council and the Ministry of Finance, facing severe shortfalls in central government revenues, have been unwilling to commit the requisite funds to strengthen the implementing agencies. Seeing the priorities at the center, local-level officials for the most part have not demonstrated a commitment to the implementation of these treaties. Whether through payment for looking the other way, or active participation by the officials themselves in noncompliance, in each treaty there is a financial incentive for evasion. For the World Heritage Convention, local officials may benefit from increased tourism to the sites. Noncompliance with the Montreal Protocol enables local officials to secure revenues from township and village enterprises that produce and consume ODS products. In CITES, several provinces have rented pandas abroad to the detriment of the implementation of the treaty. The SOA's concern over possible dumping in Guangdong and its inability to monitor dumping off the coast of that province may also indicate that local-level officials are benefiting from illegal dumping in the region.

Although the State Council and National People's Congress have been unwilling to sharply increase appropriations to deal with these problems, these leading bodies of the Chinese government are aware of and disturbed by the situation at local levels. By the mid-1990s they had launched a three-year effort in which State Council officials and National People's Congress representatives regularly inspected the compliance of provincial and local officials with environmental protection laws. The National People's Congress is also in the midst of expanding and toughening environmental legislation; Qu Geping left his position at NEPA in 1994 to head the legislative effort at the NPC. Through drafting and promulgation

of National Agenda 21 and other long-term planning documents, China's environmentalists are attempting to raise awareness of the country's ecological problems. And discussion has been under way for several years to raise NEPA to ministerial status and to transfer responsibility for many if not all environmental agreements to it.

We believe these are all constructive steps. Enhancing NEPA's status within the Chinese bureaucratic hierarchy would certainly be useful. But there are many other measures that both the international community and China could undertake to improve performance.

As far as the international environmental organizations are concerned, we recommend the following:

- We have seen that the accession stage heavily affects the implementation stage. International negotiators should understand the likely consequences of China's designation of its lead negotiating agency and seek information about the domestic dynamics shaping China's negotiating stance. Here are to be found the first clues about who in China favors the agreement, who is opposed, and what the various actors hope to gain or fear losing. In cooperation with Chinese allies, the international negotiators at this stage should develop strategies to broaden the base of domestic support. And pragmatic assessments need to be made about China's implementation capabilities, so that expectations on both sides can remain realistic.
- Once the agreement goes into effect, simply throwing money at the Chinese implementing agency is not helpful. As Schaller demonstrates in the CITES case and other international experts attest concerning the World Heritage Convention, significant abuse of funds exists. Chinese officials privately confirm that wages for Chinese personnel or the per diem charges of foreigners far exceed actual costs. Chinese personnel receive far less in yuan costs than international agencies are billed in foreign exchange. The difference is diverted to underwrite administrative costs of the agency. As a result, to a much greater extent than they realize, international organizations may support the Beijing operation, with the result that the central government's effort will atrophy once external support ceases. It is incumbent upon international agencies to understand the Chinese central government's actual budgetary and manpower commitments to sustain the agreements and to insist that these commitments be honored. International negotiators should accurately assess their own leverage in extracting satisfactory commitments from China's leaders. While they are deeply committed to preserving China's sovereignty, they do respond to tough-minded international bargaining.
- Many of the agreements require sophisticated equipment, technology, and substantial external financing. It does little good to entice China to enter an agreement and then not provide the expected, necessary support. Yet, that has happened repeatedly, with the result that the Chinese partners are politically exposed and somewhat bitter. Engaging China in environmental protection entails a protracted, serious commitment by the international community that cannot be lightly abandoned. Manpower training has to be a core aspect of the commitment. Especially important in this regard is the stationing in China of experts technically proficient in the issues at stake. They should expect to remain for a protracted period, though not at outrageous cost, until Chinese experts are well prepared to take their place.
- The core challenge entails institutional development at the provincial and local levels and among ancillary agencies whose cooperation is essential. While officials from the lead

bureaucracy typically support effective implementation and possess the authority on paper to enforce the agreement, they lack the power and authority to ensure compliance by other agencies. Thus, in CITES, the Ministry of Forestry is at odds with both the Ministry of Foreign Trade and Economic Cooperation and, potentially, the PLA. In the case of the London Convention, too, the effective supervisory power of the Ministry of Petroleum for its own dumping does not bode well for the efforts of the State Oceanic Administration. In addition, in efforts to comply with the World Heritage Convention, Chinese officials in the State Cultural Relics Bureau are challenged by officials from the national tourist agencies. These second-level agencies are powerful and their incentive for compliance is unclear. Thus, international agencies should pay attention to developing the interest and capacity of the ancillary agencies. Although the principal agency will typically seek to monopolize the resources, international agencies should resist the temptation to lavish all their attention on the lead agency and cultivate the secondary institutions as well. Moreover, nurturing institutions in Beijing while ignoring the provincial levels will not suffice. Attention must be given to enhancing the implementational capacities at lower levels, especially in locales considerably affected by the environmental problems at hand.

- In addition, international agencies and foreign governments must pay more attention to the full consequences of the institutional and structural changes they urge upon the Chinese government. Privatization, administrative decentralization, and price reform without concomitant development of a legal system, an independent judiciary, and an effective government revenue system weaken the authority of the central government to enforce environmental regulation. In addition to addressing environmental issues directly, international agencies and foreign governments must recognize that China's entire institutional infrastructure needs development in order to address environmental problems effectively.

Turning to China, we note the following:

- The key problem is effective implementation of existing regulations, not the absence of regulations. The Chinese have proved adept at drafting laws to implement the treaties that they have signed. Often, in fact, they have attempted to build up a legal infrastructure which is based on the treaty prior to the ratification of the treaty. In a few cases, as with the London Convention, Chinese officials feel that the guidance from the convention for legal statutes is insufficient. For the most part, the Chinese have developed a strong legal system on paper. Moreover, while in some cases implementational efficacy might be improved by stiffer penalties, the fact that poachers are willing to risk death for their actions suggests that the answer to improved compliance cannot be found through assigning further responsibility to China's already awesome coercive institutions.
- We strongly recommend that the Chinese government significantly increase the percentage of GNP it devotes to environmental protection in order to address the core problems that risk slowing China's economic growth—loss of arable land, water shortages, inefficient use of energy—and dashing hopes for an improved quality of life.
- We also believe that the Chinese media have a major role to play in improving public understanding of environmental issues. Most Chinese officials with whom we spoke believed that the public was not aware of the dangers posed by eroding air, water, and soil quality, and the public knew even less about such issues as global climatic change, depletion of the

ozone layer, or preservation of biodiversity. Hence, the public was not receptive to closing factories that manufacture or use ODS or to inspecting shops that use tropical timber. Improvement of environmental journalism in China, encouragement of more vigorous environmental reporting on television, and launching of county-level newspapers would be appropriate measures the Chinese government could undertake. At present, most of the 2,000 counties in China lack their own newspapers. Counties (*xian*) are still the basic building block of the Chinese political system. Enterprises and activities under their control account for a substantial portion of the violations of the five agreements. Yet these violations go unreported and unnoticed.

- We also believe that adherence to environmental regulations would be greatly enhanced by the presence of environmental associations. We know that under the current Chinese system, purely voluntary associations face severe constraints. They must secure governmental approval and register with the Ministry of Civil Affairs. Clearly the Chinese government is not yet prepared to welcome the formation of NGOs and interest groups. But even within the constraints it sets for itself, the government could allow and even encourage the development of so-called “GONGOs” that are typically found in other Asian authoritarian systems: government-organized nongovernment organizations. We believe that such organizations, semi-official but with support and membership drawn from the private sector, could do much in the environmental sphere. Their absence, indeed, sets China apart from all other major countries in the world, where environmental activists, organized together, have played roles in raising public awareness and monitoring governmental performance.

In the final analysis, the underlying issue for both the international community and China in the implementation of the five agreements concerns finances. How will the costs be allocated? What portion will be borne by international organizations and individual foreign governments? And within China, how will the costs be allocated among the central, provincial, and local governments? We do not find in any of these cases a readiness within China or at the international level to grapple with this problem in concerted, sustained fashion. If difficulties exist on these relatively inexpensive treaties, the problems on the larger, more complex issues of global climatic change and biodiversity can only be more vexing. In our five cases, agreements could be reached because the finances either were not directly addressed or pious and unrealistic pledges were made. Before even more agreements are reached without adequate attention being paid to implementational and financial issues, the Chinese experience suggests that attention be given to these issues both at the international and national levels. The five agreements seem like a good place to begin.

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### **About the Authors**

Michel Oksenberg is senior fellow at the Institute for International Studies at Stanford University, where he is also a professor of political science.

Elizabeth Economy is deputy director of Asia studies and fellow for China at the Council on Foreign Relations.

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