Assessing Chinese Government Response to the Challenge of Environment and Health

A Report of the CSIS Freeman Chair in China Studies

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Charles W. Freeman III
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Cover photograph: Cyclists pass through thick pollution from a factory in Yutian, 100km east of Beijing in China's northwest Hebel province, 18 July 2006. PETER PARKS/AFP/Getty Images.

Library of Congress Cataloging-in-Publication Data
CIP information available on request.
ISBN 978-0-89206-537-0

The CSIS Press
Center for Strategic and International Studies
1800 K Street, N.W., Washington, D.C. 20006
Tel: (202) 775-3119
Fax: (202) 775-3199
Web: www.csis.org

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ACKNOWLEDGMENTS

The authors wish to express their profound gratitude to the Rockefeller Brothers Fund for its generous support for research into this important topic and particularly to Ms. Shenyu Belsky at the Fund for her interest and guidance throughout the project. The authors are grateful to the many open, forthcoming, and dedicated individuals in China—from government, nongovernmental organizations, and business alike—who have so helpfully shared their time, insight, and wisdom with us.

We would also like to thank Ms. See-Won Byun, research intern with the Freeman Chair in China Studies, for her excellent research and editorial assistance with this study.

The report was produced by CSIS, but the views expressed are solely the responsibility of the authors.

EXECUTIVE SUMMARY[1]

The Nexus between Environment and Health

Globally, an estimated 24 percent of the disease burden and an estimated 23 percent of all deaths can be attributed to environmental factors.[2] Pollution and environmental degradation undermine a nation's health by contributing to genetic trauma in human births and oncology problems or by damaging immune systems.

China, the world's largest developing country and, as of 2006, the world's leading emitter of greenhouse gases, is no exception. In recent years, environmental threats to human health are escalating in many parts of the country, particularly southern China, a hot spot of runaway industrial development. The number of "mass incidents" in which Chinese protestors publicly object to environmental policies that raise the specter of long-term health challenges rises each year. Yet, the nexus between environment and health has been largely ignored by policymakers in China.

With the lack of political attention and resources for research, comprehensive, official data on the real impact of pollution on health are largely nonexistent in China. The little knowledge that does exist is still primarily anecdotal—proof that more complete analysis is becoming an urgent need.

An Issue of Significance

The nexus between environment and health in China is too significant to be ignored both within China and abroad. The worsening health impact of pollution has considerable domestic and international implications. As China aspires to build a "harmonious society" based on "scientific development" and to become a responsible global player, environmental health problems present a looming challenge for China, along with the international community, to tackle.

China's leadership in Beijing has become increasingly aware of the heavy socioeconomic cost of pollution domestically. Pollution burdens the Chinese economy and drives up health care costs. A deteriorating environment implies a heavy burden of disease in China and a rising cost of treatment for the Chinese government and the public. As public demonstrations against environmental and health risks of industrial projects have become increasingly common in Chinese cities, Beijing has begun to be sensitized to the potential impact of environmental health conditions on social stability. This raises the possibility that environmental health in China is becoming a matter on which the leadership's political legitimacy may, in part, rest.

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1. An earlier version of this report was presented at the International Workshop on Environment and Health in China: Perspective from the Social Sciences, sponsored by the Social Science Research Council, Hong Kong, April 17–20, 2008.

2. A. Pruss-Ustun and C. Corvalan, *Preventing Disease through Healthy Environments: Towards an Estimate of the Environmental Burden of Disease* (Geneva: World Health Organization, 2006).

But the challenge of environmental health is not just China's internal problem. The global implications of China's environmental health performance have clearly drawn much international attention in recent years as well. How China addresses its environmental health challenge will critically shape not only the building of a harmonious society at home but also China's emergence as a responsible stakeholder on the global stage.

China's Environmental Health Performance

Environmental health threats are severe and widespread in China. Air pollution is a major health hazard for urban Chinese. Water pollution's impact on health is particularly serious in rural China, where two thirds of the population does not have access to piped water. Another mounting environmental health concern both within China and abroad is the issue of food safety, which raised international concerns in 2007 during a series of scandals involving tainted Chinese exports. The health-threatening quality of these products has been largely attributed to loose regulations, including those involving environmental standards.

Although data are limited, regional variations in pollution's impact on human health appear to be significant. Environmental health risks fall heavily on China's poor rural regions, where almost 90 percent of the population does not have medical insurance and 95 percent of the elderly have no pensions.[3] As Beijing begins to manage urban-rural disparities and spread social benefits into China's less wealthy provinces, environmental health issues will almost certainly play a central role.

Barriers to Better Environmental Health Governance in China

Despite its many efforts to better preserve the environment and enforce existing environmental regulations, the government has failed to effectively integrate environment and health problems into its governance structure. The current system faces many challenges in response to existing and emerging health concerns. Improved governance of environmental health is a matter of demonstrable need. Yet, significant barriers exist for the creation of such a system.

A substantial disconnect clearly exists between central and local authorities in terms of awareness and policy implementation in areas of environmental protection and health care. Beijing's efforts to establish an effective nationwide environmental policy have been thwarted by local authorities at nearly every turn. In some cases, there is a real conflict between national priorities and local interests.

Bureaucratic hurdles have sometimes proven too great to create a coordinated official response to the emerging health threats from pollution. Although the State Environmental Protection Administration (SEPA, now Ministry of Environmental Protection, or MEP) and the Ministry of Health (MOH), along with their provincial and local branches, bear the main responsibility for China's environmental health problems, many other government agencies are involved. Due to bureaucratic stovepiping, turf battles, and unclear bureaucratic lines of authority regarding the nexus between environment and health, officials from all relevant bureaucracies rarely work together.

Another important part of an effective environmental health governance mechanism is the participation of civil society. However, public participation in solving environmental health

3. Xinhua, "China's Failing Healthcare System Searching for Remedy," October 6, 2007; "Aging Society's Old Problem," *Beijing Review* 50, no. 2 (December 2007): 6.

problems requires that private citizens or citizen groups report polluters and hold local governments accountable. This oftentimes puts the public in opposition with local industries and their local political patrons that rely on polluting firms to generate jobs and tax revenues. As a result, local governments are frequently suspicious of the activities of environmental nongovernmental organizations, or NGOs, in their jurisdiction.

Also, existing international partnerships in China generally do not address the nexus between environment and health. The focus on environmental issues in the context of the 2008 Beijing Olympics has stimulated international attention to the health of athletes that will compete during the Games, but the impact on health of the general public has not yet been a follow-on concern. As a result, pollution-related health issues have yet to become the focus of international environmental assistance to China.

Current Government Response

Although China's response to environmental health has been limited at best, increasing domestic and international attention to the nation's environment and health records *as separate and distinct issues* has driven recent responses of the central government in the right direction. Beijing has therefore begun to step up its efforts to tackle the emerging environmental health challenge.

The *National Environmental Health Action Plan (2007–2015)*, released in 2007 in response to the call for collaboration from the United Nations Environment Program (UNEP) and the World Health Organization (WHO), calls for enhancing interagency collaboration. The action plan is one of the first important steps in laying out a basic blueprint for the government response in the near term. The government has started funding research on pollution-health linkages in order to improve policymaking in the field. The government has also stepped up its efforts to tackle some major environmental problems that cause adverse public health effects; notably the state of the nation's water supply, which has reached epidemic proportions.

Recommendations

All in all, the government response—though beginning to take shape—is falling largely behind the rapidly deteriorating environmental health conditions in China. As suggested above, the ineffective response has social stability and political consequences for the leadership in Beijing. Several key steps would improve China's response to the emerging challenge of environmental health.

- **Enhance institutional reform and environmental health governance mechanisms.** As environment and health become top priorities for the central political agenda, they call for interagency strategies to form effective government responses. The challenge of environmental health presents an opportunity for China to further its ongoing institutional reform.
- **Increase accountability among officials.** The government needs to increase transparency and accountability with respect to the health impact of pollution. Performance on health-related aspects of environmental protection should be included as an important part of the evaluation of local authorities.
- **Encourage civil society participation in environment and health sectors.** NGOs and citizen groups should be permitted to participate in environmental health policymaking. Public participation should also be encouraged in environmental decisionmaking and environmental

impact assessments of local projects. Although local authorities clearly see themselves and their interests at odds with many such groups, they would be important potential allies for Beijing as it attempts to galvanize national political changes in the area.

- **Increase U.S.-China cooperation on environmental health.** Environmental health presents a promising area for international cooperation. In terms of the United States, there is an unprecedented opportunity to develop further environmental and health relations with China.

1 THE NEXUS BETWEEN ENVIRONMENT AND HEALTH

Globally, an estimated 24 percent of the disease burden and an estimated 23 percent of all death can be attributed to environmental factors.[1] Pollution and environmental degradation undermine a nation's health by contributing to genetic trauma in human births and to oncology problems and by damaging immune systems, etc.

According to WHO estimates, developing countries carry a disproportionately heavy environmental burden of disease. China, the world's largest developing country and, as of 2006, the world's leading emitter of greenhouse gases, is no exception. In recent years, environmental threats to human health are escalating in many parts of the country, particularly southern China, a hot spot of runaway industrial development. Pollution has led to chronic health problems, such as gastric disorders, diarrhea, asthma, bronchitis, and conjunctivitis, as well as acute poisoning and death. The number of "mass incidents" in which Chinese protestors publicly object to environmental policies that raise the specter of long-term health challenges rises each year.

Yet, the nexus between environment and health has been largely ignored by policymakers in China. To date, the cost of pollution has been mostly measured in simple economic terms by reference to industrial loss or cost of remediation. There is only limited understanding within the Chinese policy community on the linkage between pollution and health hazards.

Despite an apparent need, there has been no systematic effort to measure the health impact of pollution. Because political attention and resources for research are lacking, comprehensive, official data on the real impact of pollution on health are still largely nonexistent in China. Studies on cause and effect, or attempts to quantify the linkage between environment and health, are limited. The little knowledge that does exist is primarily anecdotal.

That anecdotal evidence, however, suggests that China's environmental health problems are getting serious. There has been a spike in the reported number of what have been called "cancer villages" along some of China's largest and most polluted rivers. In most of these "cancer village" cases, the cause of pollution is clearly recognized. Recent industrial pollution accidents and chemical spills have also shed light on the severe health hazards posed by environmental pollution.

There have been a few international efforts to assess the environmental health linkage in China. A recent report of the Organization for Economic Cooperation and Development (OECD) indicates that China's severely polluted environment has caused "significant damage to human health," hurting productivity and driving up health care costs.[2] According to estimates in unreleased World Bank statistics in a collaborative study by the World Bank and the Chinese government in 2007, 750,000 people die prematurely in China each year from high pollution levels.[3] However, the Chinese authorities reportedly asked the World Bank to remove the health data in

1. Pruss-Ustun and Corvalan, *Preventing Disease through Healthy Environments*.

2. Organization for Economic Cooperation and Development (OECD), *Environmental Performance Reviews—China* (Paris: OECD, 2007).

3. "750,000 a year killed by Chinese pollution," *Financial Times*, July 2, 2007.

the report as they were too "sensitive" and could potentially "cause social unrest." Accurate data isolating the health impact of pollution versus that of tobacco smoking is a further matter of some contention.

Overall, there are a growing number of public accounts indicating a severe health problem resulting from pollution in China. China is now in the midst of a significant reevaluation of its "pollute first and clean up later" strategy to better reflect the needs to balance its people and the nature. The nexus between environment and health needs to be highlighted and addressed as Beijing readjusts its socioeconomic development strategies.

2 AN ISSUE OF SIGNIFICANCE

The nexus between environment and health in China is too significant to be ignored both within China and abroad. The worsening health impact of pollution has considerable domestic and international implications. As China aspires to build a "harmonious society" based on "scientific development" (code words for more sustainable growth with more attention to the societal impact of development) and become a responsible global player, environmental health problems present a looming challenge and necessary task for China, along with the international community, to tackle.

Domestic Implications

Environment and health are at the top of Beijing's domestic agenda. The leadership has become increasingly aware of the heavy socioeconomic cost of pollution. Environmental protection and health care reform are both included as key priorities in Beijing's national reform agenda as outlined in the *11th Five-Year Plan (2006–2010)*.[1]

Pollution is burdening the Chinese economy. China's environmental problems cost the country more than $200 billion a year, roughly 10 percent of China's GDP in 2005.[2] A pilot effort led by Chinese authorities that would have presented a more detailed study of pollution-induced GDP loss, or the so-called green GDP, has been indefinitely postponed, reportedly because of pressure from local officials.[3] The postponement, rather than outright cancellation, of the study however reflects the government's increasing concern over the social and economic costs of pollution.

Pollution drives up health care costs as well. A deteriorating environment implies a heavy burden of disease in China and a rising cost of treatment for the Chinese government and the public. A government survey in January 2008 revealed health care costs as the top public concern of Chinese citizens.[4] While solid data is lacking, as suggested above, anecdotal information and interviews with Chinese health care officials suggest that widespread pollution is exacerbating the situation.

Beijing has begun to be sensitized to the potential impact of environmental health conditions on social stability. This raises the possibility that environmental health in China is becoming a matter on which the leadership's political legitimacy may, in part, rest.

Minister of SEPA (now MEP, elevated to a ministerial status in March 2008) Zhou Shengxian has blamed a rising number of riots, demonstrations, and petitions nationwide on public anger

1. National Development and Reform Commission (NDRC), "The Outline of the Eleventh Five-Year Plan for National Economic and Social Development of the People's Republic of China."

2. "Pollution costs equal 10% of China's GDP," *China Daily*, June 6, 2006.

3. BBC, "China Postpones Pollution Report," July 23, 2007, at http://news.bbc.co.uk/2/hi/asia-pacific/6911784.stm.

4. This was followed by social morals, security, education, and rising unemployment. "Health Care Tops List of Concerns in China," *Washington Post*, January 9, 2008.

at pollution, indicating that the Chinese public refuses to accept the worsening levels of environmental degradation.[5] Public demonstrations against environmental and health risks of industrial projects have become increasingly common in many Chinese cities. In June 2007, thousands of angry citizens marched in Xiamen to protest the construction of a chemical factory, leading to the eventual suspension of the controversial project.[6] Voicing health concerns, Shanghai residents participated in the city's largest public demonstration since 2005 to protest the planned extension of a train line.[7] With Beijing placing a great priority on reducing the number of "mass incidents," addressing environmental health problems has become a key challenge.

International Implications

The challenge of environmental health is not just China's internal problem. The global implications of China's environmental health performance have clearly drawn much international attention in recent years. With China's growing influence, the nation's prosperity and stability, in large part associated with its public health record, have a profound impact on the rest of the world. Also, in today's globalizing world, pollution and health threats cross national boundaries. China's environmental health challenge has therefore caused significant international concern.

Some of China's pollution-related health hazards have begun to spread into other countries. China's airborne mix poses serious human health risks to its Asian neighbors and other parts of the world. Researchers now confirm that dust clouds from Asia contain not only harmful industrial pollutants but also living organisms that could transmit diseases to humans, including deadly outbreaks like severe acute respiratory syndrome (SARS) and avian flu.[8] South Korea suffers from Chinese "yellow dust" that hits the Korean peninsula every spring, causing respiratory and eye diseases and damaging the farming and industrial sectors. Authorities in Los Angeles claim that almost 25 percent of particulates in the city's skies come from China. Some even predict that China will someday be responsible for a third of California's air pollution.[9]

With its 19 international lake and river systems, China's management of transboundary waters has caused distress in neighboring countries.[10] The regional impact of China's long-standing water pollution was best illustrated in November 2005 when an explosion took place at a state-owned petrochemical plant in Jilin province that released over 100 tons of benzene and nitrobenzene into the Songhua River. The river flows into Heilong River and another 600 kilometers downstream where it serves as the main water supply for the Russian city of Khabarovsk.

Another matter that has raised the official and public attention of the United States has been Chinese food and drug exports that pose health risks due to land and water contamination, overuse of pesticides, and loosely administered environmental standards. Recent recalls of tainted Chinese products have served as a wake-up call for the Chinese government on the subject.

In 2007, China pledged to spend $200 billion from 2008 to 2010 on reducing air and water

5. Xinhua, "Chinese Environmental Watchdog Tells Meeting 'Mass Incidents' on Rise," July 4, 2007.

6. "Protest in China: Mobilized by mobile," *The Economist*, June 21, 2007.

7. Reuters, "Hundreds Protest Shanghai Maglev Rail Extension," January 12, 2008.

8. "Dust Storms Overseas Carry Contaminants to U.S.; Scientists Study Whether Diseases Are Also Transported," *Washington Post*, February 6, 2008. See also Stanley A. Morain and William A. Sprigg, "Public Health Applications in Remote Sensing: Verification and Validation Report," September 30, 2007, http://aspires.gsfc.nasa.gov/staticData/PHAiRS%20V&V%20Report%20v10.1%20-%20Final.pdf.

9. Associated Press, "China's Air Pollution Reaches U.S. Skies," July 28, 2006.

10. Jennifer L. Turner and Juli S. Kim, "China's Filthiest Export," *Foreign Policy in Focus*, February 7, 2007.

pollution.[11] China's environmental commitments are accompanied by an increasing willingness to cooperate bilaterally and regionally in fighting such issues as environment, climate change, and infectious disease. The leadership's populist reform approach on one hand, and China's transnational efforts on the other, are upping the domestic and international ante on Beijing to meet its promises. How China addresses its environmental health challenge will critically shape not only the building of a harmonious society at home, but also China's emergence as a responsible stakeholder on the global stage.

11. Ibid.

3 CHINA'S ENVIRONMENTAL HEALTH PERFORMANCE

Environmental health threats are widespread and increasingly severe in China. In China's official 2006 environment report, SEPA called China's overall environmental situation "serious," with frequent pollution accidents affecting the quality of life for many people.[1]

Health experts point out that worsening air and water pollution and food contamination made cancer the leading cause of death in China in 2006. Between 2005 and 2006, cancer deaths increased by 19 percent in cities and 23 percent in rural areas.[2] It should be said, however, that some officials attribute the rise in oncology cases not to new environmental or industrial problems, but to the newfound ability to detect such diseases. MOH officials have privately told executives of at least one U.S. pharmaceutical company engaged in cancer therapy that many of the cancer deaths in rural China were previously diagnosed as death by old age or other natural causes.

Air Pollution and Health

Air pollution is a major health hazard for urban Chinese in particular. Only 1 percent of China's 560 million urban residents breathe air considered safe by European Union standards.[3] An estimated 200 Chinese cities do not meet WHO standards for airborne particulates that cause respiratory diseases. In Guangzhou, the capital of southern industrial powerhouse Guangdong province, fine particulate levels are up to five times U.S. safety limits.[4]

China is now the world's largest emitter of sulfur dioxide, a major contributor to urban air pollution generated largely from burning coal. At the end of the *10th Five-Year Plan (2001–2005)*, China's sulfur dioxide emissions were 42 percent higher than the established target.[5] Statistics from the Netherlands Environment Assessment Agency indicate that China overtook the United States in 2006 as the world's largest emitter of carbon dioxide, the main greenhouse gas blamed for the bulk of global warming.[6]

As a result, respiratory diseases are becoming one of the top killers in China. A jump in chronic lung diseases—usually associated with the elderly—among young people is difficult to explain unless one blames China's air pollution as a major factor.

1. State Environmental Protection Administration (SEPA), *China Environmental Situation Report* (2006), Beijing, June 4, 2007.
2. Reuters, "Health Expert Blames Pollution for Cancer Rise," May 16, 2007.
3. "As China Roars, Pollution Reaches Deadly Extremes," *New York Times,* August 26, 2007.
4. Zijun Li, "Filthy Air Choking China's Growth, Olympic Goals," World Watch Institute, February 14, 2006, https://www.worldwatch.org/node/3881.
5. World Bank and the State Environmental Protection Administration (SEPA), *Cost of Pollution in China: Economic Estimates of Physical Damages* (Washington, D.C.: World Bank, 2007).
6. BBC, "China Overtakes U.S. in Greenhouse Gas Emissions," June 20, 2007.

Water Pollution and Health

The destruction of water resources is perhaps China's largest environmental challenge domestically. China's water statistics are sobering. Seventy percent of China's rivers and lakes are polluted, and about a quarter of all the water in China's seven main river systems is "too toxic for human contact."[7] A Beijing-based environmental organization, Friends of Nature, reported that a quarter of the Chinese population, or at least 320 million people, are drinking unclean water.[8] The OECD estimates that 30,000 Chinese children die each year from illnesses linked to dirty water consumption.[9]

Water pollution's impact on health is particularly serious in rural China, where two-thirds of the population does not have access to piped water. The lack of piped water contributes to diarrheal disease and cancers of the digestive system. The World Bank estimates that the cost of these health impacts is roughly 1.9 percent of rural GDP.[10] As a result, about 115 million rural Chinese rely primarily on surface water for drinking, which poses greater health risks compared to other drinking sources. In an official 2006 survey, China's surface water was generally classified as having "intermediate levels" of pollution. A third of the 744 tested samples received the worst pollution rating.[11]

According to SEPA, with more than half of China's 21,000-plus chemical plants located along the Yangtze and Yellow Rivers, industrial waste is a major source of water pollution. The health risks posed by China's most severely polluted rivers, which provide water for drinking and irrigation, have resulted in the emergence of "cancer villages" in surrounding areas.[12] The World Bank statistics reveals that 11 percent of digestive system cancer cases in China may be caused by polluted drinking water.[13]

Frequent water pollution incidents have made it into major national and international news in the past several years. Fifty-nine percent of 161 emergency environmental pollution incidents SEPA handled in 2006 involved water pollution.[14] These incidents posed severe public health risks. In the Songhua River crisis in November 2005, after an initial attempt to deny and cover up the chemical spill, the accident caused Harbin—capital city of neighboring Heilongjiang province—to cut off water supplies to its 3.8 million residents for four days in order to prevent benzene exposure. Six months later, a severe algae outbreak in China's third-largest lake, Taihu, led to a week-long contamination of drinking water for millions in eastern China's Jiangsu province.

Food Safety Concerns

Another mounting environmental health concern both within China and abroad is the issue of food safety, as seen in a series of scandals in 2007 involving tainted Chinese exports. The health-threatening quality of these products has been largely attributed to overly loose regulations in the food sector, including environmental standards.

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7. Associated Press, "Chemical Leak Poisons Water Supply in Central China," January 24, 2008.
8. Xinhua, "Unclean Drinking Water Threatens Health of 320 Million Chinese," March 13, 2007.
9. OECD, *Environmental Performance Reviews—China*. See also "OECD Paints Bleak Picture of Pollution in China," *The Guardian*, July 17, 2007, http://www.guardian.co.uk/environment/2007/jul/17/china.internationalnews.
10. World Bank and SEPA, *Cost of Pollution in China*.
11. Xinhua, "Tougher Law to Curb Water Pollution," February 29, 2008.
12. BBC, "China's 'Cancer Villages' Pay Price," January 17, 2007.
13. World Bank and SEPA, *Cost of Pollution in China*.
14. Xinhua, "Tougher Law to Curb Water Pollution."

According to China's food safety watchdog, the General Administration of Quality Supervision, Inspection, and Quarantine (AQSIQ), in the first half of 2007 almost 20 percent of inspected domestic products were classified as substandard.[15] Poor product quality has harmed China's image as the world's manufacturer, with some American companies promoting their products as "China-free" to alleviate consumer concerns.[16]

Excessive use of fertilizer, polluted water, heavy metals and solid wastes are leading to China's soil contamination across the country. In 2007, the Ministry of Land and Resources acknowledged that about 10 percent of China's arable land was contaminated by pollution, and the situation is getting worse.[17]

These contaminants make their way into the nation's food production, which directly attacks human health. One study found that 70 percent of vegetables in south China exceeded national standards for nitrates, and another estimated that nearly half of fruits and vegetables contained excessive amounts of banned organophosphates and carbonate pesticides.[18] China's tainted food supply has also fallen under heightened international scrutiny after a series of recent recalls of exported Chinese food products and drugs in the United States and elsewhere.

Regional Variations

Environmental health risks fall heavily on China's poor rural regions, where almost 90 percent of the population does not have medical insurance and 95 percent of the elderly have no pensions.[19] A 2001 report on environment and health in China by UNEP highlights the importance of access to health care services.[20] The report suggests that such access plays a key role in determining overall health risks due to pollution. In addition, individuals in rural communities are far less likely than their urban counterparts to see qualified health care workers trained in basic environmental oncology or other pollution-induced health risks, which are prevalent in China's countryside.

For instance, although Beijing and Shanghai have higher levels of air pollution than many rural areas, they have the lowest health risk ratings in China, given better access to health care as well as relatively low levels of water pollution and better nutrition. The high-risk ratings of Chinese provinces such as Guizhou, on the other hand, are attributable not only to substantial pollution and poor nutrition but much limited access to health care services.

15. Xinhua, "Survey: 80.9% of China's Products Up to Standard," July 3, 2007.

16. "Contaminated Image," *South China Morning Post*, September 5, 2007.

17. Xinhua, "PRC Official: 10 Percent of Arable Land Contaminated with Pollutants," April 22, 2007.

18. Zijun Li, "Soil Quality Deteriorating in China, Threatening Public Health and Ecosystems." Worldwatch Institute, July 27, 2006, http://www.worldwatch.org/node/4419; Jessica Hamburger, "Sea of Pesticides Surrounds China's Organic Farms," *Global Pesticide Campaigner* 11 (December 2001).

19. Xinhua, "China's Failing Healthcare System Searching for Remedy," October 6, 2007; "Aging Society's Old Problem," *Beijing Review* 50, no. 2 (December 2007): 6.

20. World Health Organization (WHO) and UN Development Program (UNDP), *Environment and People's Health in China* (Geneva: WHO, 2001).

4 BARRIERS TO BETTER ENVIRONMENTAL HEALTH GOVERNANCE IN CHINA

Over the past few years, China has stepped up its efforts to improve its environmental regulatory governance. However, the government has failed to effectively integrate environment and health problems into its governance structure. The current system faces many challenges in response to existing and emerging health concerns. Improved governance of environmental health is a matter of demonstrable need.

Yet, significant barriers exist to the creation of such a system. Many obstacles to further progress are institutional and may take decades to overcome absent truly heroic efforts on the part of both China's central and local governments, as well as the international community. In other words, fixing environmental health problems requires an expenditure of political capital that may be beyond the capacity of relevant authorities.

Center-local Disconnect

Despite Beijing's new emphasis on conservation, the responsibility for implementing central mandates falls largely on local authorities. However, there is a substantial disconnect between central and local authorities in terms of awareness and policy implementation in the areas of environmental protection and health care. Beijing's efforts to establish an effective nationwide environmental policy have been thwarted by local authorities at nearly every turn. In many localities, local political leaders continue to disregard environmental protection in favor of economic growth. Local government corruption, cover-ups, misreporting, and lax enforcement have often been the unfortunate rule, rather than the exception with respect to environmental regulations.[1]

As part of China's economic decentralization strategy, local authorities are encouraged to collect taxes and implement local policies in order to stimulate growth. However, a decentralized strategy, to a large extent, restricts Beijing's ability to intervene in local affairs. In some cases, there is a real conflict between national priorities and local interests. Beijing has put environmental protection near the center of its macro policies guiding China to achieve sustainable development. Yet, changing gears to place an emphasis on environmental awareness as a supplement to the "growth at any cost" model is not something that can be done lightly. A go-go approach to economic development still prevails.[2]

In spite of China's Environmental Impact Assessment (EIA) Law put into effect in September 2003, environmentally risky projects have continued to take place in China. Under the EIA Law, although SEPA has authority over large-scale projects, the approval rights for industrial planning lie in the hands of local governments, whose decisions are based largely on economic growth.

1. Charles W. Freeman III, "Center-Local Relations: Hu's in Charge Here?" China Balance Sheet Project working paper, Peterson Institute for International Economics and Center for Strategic and International Studies, January 2008.

2. Ibid.

Pointing to "loopholes" in the existing mechanism for preventing environmental crises, SEPA vice minister Pan Yue has argued for integrating environmental assessments into the planning and policymaking stage as the only way to prevent further crises and protect people's health.[3]

Official evaluation of local officials is still largely based on growth figures. With competing interests, Beijing's well-intended environmental rules have oftentimes been ignored or not enforced at local levels. For most local officials, as long as they can deliver economic growth and control the number of mass incidents within their localities, they can expect promotion. Maintaining progressive environment and health records naturally becomes a job with secondary priority. According to Professor Wang Canfa, who directs the Center for Legal Assistance for Pollution Victims (CLAPV) in Beijing, just 10 percent of environmental laws and regulations are actually enforced in localities.[4]

While local environmental protection bureaus (EPBs)—major local entities responsible for policy implementation—may be willing to implement stricter environmental health rules, they are often crippled by conflicts of interest. Local EPBs have problems enforcing environmental rules, due to the lack of political support, financial and human resources, and bureaucratic influence. EPBs are under a dual leadership: they depend on local governments for funding and personnel, and they receive policy mandates from SEPA or higher-level EPBs. Even after the elevation of SEPA to a full ministry in the spring of 2008, the power to appointment local environmental officials still rests with the local governments. As a result, EPBs remain answerable to local governments that are heavily dependent on tax revenues from local industries and thus are heavily subject to political influence by such industries.

On paper, China's environmental regulatory framework is rather advanced, particularly among developing countries. Over the past two decades, the Chinese government has passed numerous environmental laws and regulations. With assistance from the international community, China's environmental legislation has moved quickly from a focus on command and control regulations to more progressive market incentive laws.[5] Up to now, there have been over 100 laws covering air and water pollution, vehicle emissions, pesticides, food safety, and occupational health and safety in various industries.[6] Nevertheless, the central government's environmental mandate has continued to be compromised by the weak capacity of EPBs and the conflict of interests at local levels.

In addition, the operational details of environmental regulatory requirements set by Beijing are often unclear, and implementation guidelines can often be long in coming. Willful noncompliance is commonplace, as localities are uncertain what exactly they need to do in order to meet the requirements, and on many occasions their interests clash with those of Beijing.

Bureaucratic Barriers

While SEPA and MOH, along with their provincial and local branches, bear the main responsibility for China's environmental health problems, many other government agencies are involved.

3. "Projects near water threaten environment," *China Daily*, April 6, 2006.

4. Xinhua, "China Improves Enforcement of Environmental Laws," October 6, 2005, http://news.xinhuanet.com/english/2005-10/06/content_3586956.htm.

5. Jennifer Turner, "China's Environmental Crisis: Opening Up Opportunities for Internal Reform and International Cooperation," China Balance Sheet project working paper, Peterson Institute for International Economics and Center for Strategic and International Studies, March 2006, http://www.chinabalancesheet.org/Documents/Paper_Environment_Paper.PDF.

6. Jennifer Holdaway, "Environment and Health in China: Problems, Responses and Social Science Research," Social Science Research Council Working Paper, November 2008.

Altogether, there are over 18 agencies at the central level sharing the responsibility one way or the other. Neither surprisingly nor uniquely a problem in the environmental context, this presents a significant regulatory hurdle in China. Due to bureaucratic stovepiping, turf battles, and unclear bureaucratic lines of authority regarding the nexus between environment and health, officials from all relevant bureaucracies rarely work together. Such bureaucratic obstacles have sometimes proven too great to create a coordinated official response to the emerging health threats from pollution.

Response from SEPA (Now MEP)

As the country's chief environmental watchdog, SEPA (now MEP) takes the majority of responsibilities for environment-related health problems, at least in theory. However, until very recently, SEPA had been a weak, understaffed agency with a very small budget. Compared to the U.S. Environmental Protection Agency (EPA) with over 18,000 people nationwide, SEPA had only 219 full-time employees in Beijing and about 2,000 employees in local EPBs. Its capacity had been far too limited to conduct effective environmental health enforcement over the past years. In addition, its low political standing had made it difficult for SEPA alone to bring adequate political attention to environmental health challenges.

Beijing's recent decision, announced in the first plenary of the National People's Congress (NPC)—China's parliament—in March 2008, to create the MEP from the bones of SEPA has a political significance that will bear watching over the next several years. SEPA's low political standing in the past meant it did not have the institutional power to lead and coordinate the government response with its bureaucratic rivals. For all intents and purposes, SEPA had been "marginalized" in the bureaucratic turf wars among several ministries, such as the Ministry of Labor and Social Security, Ministry of Agriculture, Ministry of Water Resources, Ministry of Land and Resources, and even MOH.

The elevation of SEPA to full ministerial status represents Beijing's strengthened commitment to solving environmental problems. With a new Environment Ministry in place, one would expect a more powerful environmental leadership to drive policy at the central level. Yet, some believe that the formation of the new Environment Ministry merely introduced a prolonged bargaining process as the National Development and Reform Commission (NDRC), China's top economic planner, will continue to play the role of policymaking heavy and will continue to intervene in environmental matters. Also, with the power of appointment of local EPB officials resting with local authorities, a vertically integrated environmental protection bureaucracy to ensure effective implementation is still missing in the picture.

Response from MOH

MOH is another major bureaucracy with the responsibility for environmental health risks, but it adopts an approach that focuses on the consequences of pollution on health, rather than a proactive and preventative one. MOH handles pollution-associated illness primarily through its Center for Disease Control and Prevention (China CDC) and its local branches. However, there is limited sharing of pollution information with local EPBs for CDCs to establish a clear understanding of the cause of pollution-associated illness and develop preventative methods.

At the policy level, MOH does not have a special division that is responsible for environmental health problems. The MOH's Division of Infectious Disease Control Inspection and Environmental Health Supervision was set up in 2006 to incorporate environmental health into its own mandate. Yet, it is still a relatively new and small division that faces competing interests within the

Health Ministry. Due to the division's low status and weak capacity, its efforts on environmental health issues has yet to become MOH's top priority. The division has a close working relationship with its SEPA counterpart—SEPA's Division of Environmental Health and Monitoring—to lead the government action on pollution and health. But bureaucratic tangles still present a major obstacle to information sharing and further cooperation.

Interagency Collaboration

Addressing environmental health problems also involves many other agencies beyond environment and health authorities. Responsibilities for environment-related health issues are spread among several other relevant agencies at the central level, including NDRC, Ministry of Education, Ministry of Land and Resources, Ministry of Construction (Ministry of Housing and Urban-Rural Construction from March 2008), Ministry of Water Resources, Ministry of Agriculture, among others, as well as their local branches. [See appendix for the institutional framework for environmental health.] The lack of a supra-ministerial body with a core mandate for environmental health means China needs an interagency and collaborative strategy.

However, challenges of collaborating with different bureaucracies are not unique to China. The World Bank has described environmental health as an "institutional orphan," and an OECD study of the integration of environmental and health policies in Europe found a similar problem.[7] In China, the problem is the country's system of political patronage that encourages bureaucratic stovepiping and turf battles among environmental and health officials, as well as officials from other agencies. As a result, different agencies have rarely worked together at the substantive level.

The recently announced *National Environmental Health Action Plan (2007–2015)*, China's first action plan for this emerging challenge, was signed by 18 agencies. The action plan calls for enhanced coordination mechanisms on environment and health. While it reflects Beijing's recent commitment to stepping up its interagency efforts, the action plan faces significant implementation challenges on the ground. Agencies outside the environment and health systems have little incentive to take on extra work and expense. Unclear bureaucratic lines of authority over environment and health issues, along with the lack of a powerful national entity to lead and coordinate government efforts, have led to inefficiency in government response and unwillingness to collaborate in practice.

The interagency challenge is worsened at local levels by the conflict of interests within local governments. Local environment and health departments compete for limited resources and rarely have any incentive to work together. As GDP figures largely determine local official evaluation, EPBs are often reluctant to release sensitive pollution information. Without accurate and updated data on the sources and levels of pollution, local health departments are unable to assess the environmental burden of local disease and have therefore failed to form an effective local response.

Limited Public Participation

Another important part of an effective environmental health governance mechanism is the participation of civil society. The Chinese public suffers from severe health hazards by breathing

7. James A Listorti and Fadi M. Doumani, *Environmental Health: Bridging the Gaps* (Washington, D.C.: World Bank, 1996), p. 11. See also Sunanda Kishore, *Environmental Health Issues in Poverty Reduction Strategies: A Review*, World Bank Environment Strategy Paper No. 12 (September 2006). Also, OECD Working Party on National Environmental Policies, "*Improving Coordination between National Environmental and Health Policies: Final Report*," October 2006.

polluted air and drinking contaminated water. Private citizens' voices need to be heard in environment and health decisionmaking. After all, civil society is a primary stakeholder in environmental health issues.

Despite the government's wary attitude toward nongovernmental organizations (NGOs) and its strict registration requirements, Beijing has gradually become tolerant of public participation in environmental decisionmaking. Environmental groups in China have flourished over the past decade, forming the largest portion of Chinese NGOs. Yet, these groups have learned to survive only in "safe" spheres, such as environmental education, tree planting, biodiversity protection, and recycling. Environmental advocacy is an approach that is considered too adversary.

Effective public participation in solving environmental health problems requires private citizens or citizen groups to report polluters and hold local governments accountable. This oftentimes puts the public in opposition with local industries and their local political patrons that rely on polluting firms to generate jobs and tax revenues. As a result, local governments have tightened their scrutiny over the activities of environmental NGOs in their jurisdiction. Due to increasing sensitivity, few environmental activists or groups have focused their work on the nexus between environment and health. Grassroots efforts to expose cases of environmental or health failings face tremendous pressure, ranging from harassment to arrests, and aversion to dissenting voices from local governments.

For example, Wu Lihong, an environmental activist who resides in southern China's Jiangsu province, spent years campaigning for the cleanup of his local lake, Lake Taihu. The region's thriving chemical industry has been destroying Lake Taihu, China's third-largest freshwater body. Lake pollution culminated in May 2007, when an algae bloom turned the lake fluorescent green. At least 2 million people who reside amid the canals, rice paddies, and chemical plants around Lake Taihu had to stop drinking or cooking with their main source of water.[8] However, as Wu's protest made waves nationally, he was arrested by local authorities before the outbreak and sentenced to three years in prison for fraud and extortion. The case of Lake Taihu demonstrates the waning official tolerance for grassroots activism on environmental issues in localities.

In the past two years, the central government has also tightened its control on NGOs in environment, health, and other sectors due to mistrust stemming from the "color revolutions" in central Asia as well as intensifying concerns about politically motivated public disruptions in the run-up to the Beijing Olympics. Recent crackdowns have made it difficult for environmental or health groups to broaden their scopes to address the nexus of environment and health and to become effective partners of the government to tackle the emerging challenge.

Lack of International Cooperation

In recent years, the international community has played an important role in assisting the Chinese government's response to emerging challenges in environment and public health arenas. SEPA has partnered with many foreign governments, multilateral agencies, international NGOs, corporations, and foundations in various environmental protection programs. MOH and its China CDC have also participated in many international assistance programs targeted at public health issues, such as HIV/AIDS and tuberculosis (TB). These international programs have introduced new intervention methods and technology and innovative partnerships in environment and health sectors.

8. "In China, a Lake's Champion Imperils Himself," *New York Times*, October 14, 2007.

Nevertheless, existing international partnerships in China have rarely addressed the nexus between environment and health. While most of the environmental projects acknowledge the health impact of pollution, only a few have an environmental health component in their programming. The focus on environmental issues in the context of the 2008 Beijing Olympics has stimulated international attention to the health of athletes that will compete during the games, but the impact on health of the general public has not yet been a follow-on concern.

A China-U.S. joint SEPA-EPA program, where EPA's Integrated Environmental Strategies (EPA/IES) initiative conducted studies with SEPA and various research centers to estimate how the implementation of clean energy and transport technologies and policies could benefit local air quality and related human health conditions, is one example. With continued cooperation between EPA and SEPA, the project has expanded into a broader, national program addressing air pollution and public health in China.

The government is also organizing several study tours and workshops, many of them in cooperation with the WHO, which has facilitated the promulgation of China's first *National Environmental Health Action Plan*.[9] Through the U.S. National Institutes of Health (NIH), China CDC's National Institute for Environmental Health and Related Product Safety (IEHS) and Yale University are cooperating on a $1-million, five-year program of training and exchange between environmental experts from both institutions.[10]

Several U.S. universities, including Western Kentucky University, Harvard University, and Cornell University, have in recent years undertaken environmental health research Chinese universities. A notable example is the joint study between Cornell University and Beijing University on air quality and human health in Beijing covering the periods before, during, and after the 2008 Olympics.

However, pollution-related health issues have yet to become the focus of international environmental assistance to China. The severity of China's environmental health conditions calls for increased attention and support from the international community to address this specific linkage.

9. Holdaway, "Environment and Health in China."

10. Xiaoqing Lu and Bates Gill, "Assessing China's Response to the Challenge of Environmental Health," *China Environment Series*, issue 9 (2007), Woodrow Wilson International Center for Scholars.

5 CURRENT GOVERNMENT RESPONSE

Although China's response to the challenge of environmental health has been limited at best, increasing domestic and international attention to the nation's environment and health records *as separate and distinct issues* has driven recent government response in the right direction. Chinese president Hu Jintao for the first time called for "conservation culture" in his keynote political report to the national congress of the Communist Party of China in late 2007.[1] The central leadership in Beijing has therefore begun to step up its efforts to tackle the emerging environmental health challenge.

Joint Environment and Health Mechanism

Beijing has appeared to acknowledge the urgent need to coordinate efforts of different bureaucracies on environment and health problems. In February 2007, MOH and SEPA issued a joint circular to establish a collaborative mechanism on environment and health. According to the official document, MOH and SEPA pledge to create a leadership group with a joint secretariat chaired by MOH and SEPA ministers; create a joint office on environment and health within both agencies; conduct joint environmental health monitoring, surveying, and research; and handle public environmental emergencies together.[2]

The creation of the collaborative mechanism—the first of its kind—holds new promises for a joint environment and health mechanism that is expected to promote better collection and sharing of data and a more coordinated and informed government response. Yet, the effectiveness of implementing the collaboration plan remains unclear to date.

Later that year, the *National Environmental Health Action Plan (2007–2015)* was released in response to the call for collaboration from UNEP and WHO. The action plan, signed by 18 agencies, calls for enhancing interagency collaboration and establishing a "state organizational structure for environment and health," in which SEPA and MOH take the lead and other agencies participate.[3] Under such a collaborative mechanism, SEPA and MOH share joint responsibilities for the organization and coordination of national environment and health work.

Nevertheless, the action plan is still a work in progress. As noted above, interagency collaboration is not an easy task. However, placing SEPA (and now MEP) and MOH in the leading ministry positions provides an important catalyst for the two bureaucracies to become better integrated,

1. "Hu Jintao advocates 'conservation culture' for 1st time," *China Daily*, October 15, 2007.

2. State Environmental Protection Administration (SEPA), *Notice on Establishing MOH and SEPA Collaboration Mechanism on Environment and Health* [Guanyu yinfa weishengbu guoji huanbao zongju huanjing yu jiankang gongzuo xiezuo jizhi de tongzhi], February 15, 2007, http://www.sepa.gov.cn/law/gz/bmhb/gwygf/200703/t20070301_101219.htm.

3. Ministry of Health (MOH), *China National Environmental Health Action Plan (2007–2015)* [Guojia huanjing yu jiankang xingdong jihua], November 2007, http://www.moh.gov.cn/open/web_edit_file/20071108173502.doc.

which ultimately ensures joint environmental health stewardship in China. With SEPA's recent elevation to ministerial status, the two ministries share more equal institutional power, which to some extent helps overcome the typical challenges plaguing interagency efforts in China. With further institutional reform taking place, other relevant agencies are likely to join this collaborative mechanism gradually.

The action plan is one of the first important steps in laying out a basic blueprint for the government response to environmental health in the near term. As next steps, Beijing needs to tackle the challenges of translating the plan into real action, particularly in localities, and ensuring funding commitments from the central and local governments.

Government-funded Research

Environmental health is a nascent area of government-funded research in China. Both China's environment and health authorities have recently created their own research entities to study the nexus between environment and health: the Department of Environmental Pollution and Health (DEPH) of the China Research Academy of Environmental Sciences (CRAES) within SEPA (now MEP); and the National Institute for Environmental Health and Related Product Safety (IEHS) of the China CDC within MOH. However, as primary research arms of SEPA and MOH, both DEPH and IEHS are chronically understaffed and underfunded.

SEPA's Division of Environmental Health and Monitoring also provides funding for research on pollution-health linkages conducted by other institutions. For instance, the division has commissioned Beijing University and the Academy of Sciences to conduct several small-scale environmental health surveys in recent years.[4] Although limited in scope, these research projects generate some important data on the pollution-health nexus that helps improve policymaking and agenda setting.

In early 2008, SEPA announced its plan to conduct China's first national survey of pollution sources. Commissioned by the State Council, the two-month study initiative aims to identify and collect data on sources of industrial, agricultural, and residential pollution. Beijing has pledged that the results of the census will not be linked to any punishment or evaluation of the performance of local administrations.[5]

The government has also started to cooperate with the international community in its effort to better understand the nexus between environment and health. SEPA, along with MOH and the China CDC, was involved in a multiyear research study with the World Bank to measure the cost of environmental damage in China. Despite the fact that Chinese authorities reportedly requested the removal of almost a third of the report's content due to concerns that its findings could induce social unrest, their participation in the joint research project represents a small step in the right direction.[6]

National Water Agenda

Besides mechanism-building measures and institutional reform, the government has stepped up its efforts to tackle some major environmental problems that cause adverse public health effects. Notably, water pollution, which has reached epidemic proportions, is among the most significant

4. Authors' interviews with SEPA officials in the Division for Environmental Health and Monitoring, March 2008.

5. Xinhua, "China's 1st Nationwide Pollution Census to Start in February," January 4, 2008.

6. "750,000 a year killed by Chinese pollution," *Financial Times*, July 2, 2007.

environmental concerns of both the central leadership and the Chinese public. In response to the growing prevalence of water crises and rising public discontent, China has intensified its water protection efforts in recent years. While many challenges remain, the growing political attention to water protection is evident.

The central government in January 2008 issued a long-term agenda for the protection of China's major lakes and rivers.[7] The plan aims to improve the water quality of major lakes by 2010 and restore them to their original state by 2030. Central authorities have ordered local governments to intensify their crackdown on polluting factories and upgrade existing waste treatment facilities to meet new water quality standards. More than 1,000 factories have already been shut down in the region of Lake Taihu, with the planned closure of an additional 1,600 over the next two years.[8]

Industrial pollution has been a major focus of China's water protection efforts.[9] The "green credit policy" introduced in July 2007 was the country's first industrial policy to target pollution, aimed to reduce bank lending to energy-intensive, pollution-heavy companies. China now plans to introduce a "green insurance system" to insure all industries with pollution risks, improve the monitoring of polluting industries, and grant victims immediate compensation. Under a joint plan by SEPA and China Insurance Regulatory Commission (CIRC), the system is designed to ease the financial burden on companies, victims, and the government in cases of serious environmental accidents. With planned nationwide implementation by 2015, a trial period beginning in 2008 will focus on industries involved in recent pollution accidents.

Water pollution control topped the supervisory priorities of the NPC in 2008, furthering the legal development already underway.[10] The NPC adopted an amended Water Pollution Prevention and Control Law that toughens punishment for local violations of environmental rules. Previously facing only administrative penalties, company heads and others directly responsible for causing water pollution crises will now be fined by up to half of their previous annual income, and enterprises up to 30 percent of the direct losses.[11] Most importantly, the amended law requires water protection be directly connected to performance evaluation of local officials and thus a key measure of the suitability of local officials for promotion. That should spell increased local compliance: even though local officials are heavily influenced by local company heads, they are also interested in advancement.

Although Beijing's new water agenda faces such barriers as center-local disconnect and interagency challenges, it indicates a growing political will to address the nexus of environment and health, and it serves as a positive example for the government to handle other types of environmental health problems.

7. Xinhua, "China Sets Timetable for Pollution Control in Major Lakes," January 22, 2008.
8. Agence France-Presse, "Government Shutters 1,000 Factories Near Polluted Lake," September 13, 2007.
9. Xinhua, "China Ushers in "Green Insurance System" to Curb Pollution," February 18, 2008.
10. Xinhua, "Water Pollution Tops Legislature's Supervision List," March 8, 2008.
11. Xinhua, "Tougher Law to Curb Water Pollution."

6 RECOMMENDATIONS

All in all, the government response—although beginning to take shape—is falling largely behind the rapidly deteriorating environmental health conditions in China. As suggested above, the ineffective response has social stability and political consequences for the leadership in Beijing. Several key steps would improve China's response to the emerging challenge of environmental health.

- **Enhance institutional reform and environmental health governance mechanisms.** As environment and health become top priorities for the central political agenda, they call for interagency strategies to form effective government responses. The challenge of environmental health presents an opportunity for China to further its ongoing institutional reform.

  The first national action plan reflects the Beijing's commitment to interagency collaboration. Ensuring the implementation of this new commitment should be both a principled goal and a practical obligation for the central government.

  The SEPA-MOH joint mechanism would be strengthened with the active participation of other ministries, including the Ministry of Agriculture, Ministry of Land and Resources, and Ministry of Water Resources, among others. China needs a comprehensive environmental health governance mechanism that ultimately includes effective interagency efforts to formulate joint environmental health policies and a supra-ministerial body or working group to ensure the enforcement of these policies.

- **Increase accountability among officials.** The government needs to increase transparency on the health impact of pollution. Data on pollution and its health impact needs to be regularly collected, analyzed, and released to the public.

  Efforts should be made to enhance accountability among officials, particularly local officials, and hence improve enforcement of Beijing's rules at local levels. Performance on health-related aspects of environmental protection should be included as an important part of the evaluation of local authorities.

- **Encourage civil society participation in environment and health sectors.** NGOs and citizen groups should be permitted to participate in environmental health policymaking. Chinese NGOs' experience in environmental protection and public health issues has proven their effectiveness as government's partners. They have increasing public acceptance and an agenda, particularly after the Beijing Olympics, which will be deemed less likely to "embarrass" China on the world stage. They should be encouraged to work with the government as China starts to tackle the emerging challenge posed by the nexus of environment and health. Despite the suspicion in which many NGOs are held in China, they would be valuable allies as Beijing seeks to consolidate authority over local officials in environmental regulation.

Public participation should also be encouraged in environmental decisionmaking and environmental impact assessments of local projects.

- **Increase U.S.-China cooperation on environmental health.** Environmental health presents a promising area for international cooperation. The international community should redouble its efforts in this emerging area.

  In terms of the United States, there is an unprecedented opportunity to develop further environmental and health relations with China. As the world's leading greenhouse emitters, the two countries share many common challenges and interests with regards to environment and health. U.S.-China cooperation on environmental health issues will help strengthen bilateral ties, which are continually strained by trade tension, Taiwan, and other factors. The U.S.-China Strategic Dialogue (SED), or its successor in a new administration, could potentially serve as a platform for a new cooperation agenda on environmental health.

  Existing U.S. environmental assistance programs should incorporate a new component to address the nexus between environment and health. U.S. governments, foundations, and corporations, along with other partners, should enhance their funding and collaboration to assist the Chinese government in improving its environmental health record.

APPENDIX
INSTITUTIONAL FRAMEWORK FOR ENVIRONMENTAL HEALTH: NATIONAL AND LOCAL AGENCIES

National Agencies

Agency Name	Responsibilities of Environment and Health
State Environmental Protection Agency (now Ministry of Environmental Protection)	Prepares and implements national policies, legislation, and regulations related to water and air quality, solid waste management, nature protection, and nuclear/radiation safety; formulates environmental quality criteria and pollutant discharge/emission standards at the national level; organizes environmental quality monitoring and enforcement activities with local environmental authorities; coordinates plans for addressing transboundary environmental issues; organizes research and development.
Ministry of Health	Monitors drinking water quality and control of water-borne diseases; supervises environmental sanitation; oversees food safety issues through the State Food and Drug Administration (now under MOH).
National Development and Reform Commission	Integrates issues into overall national planning system and into sector-specific policies; coordinates plans among ministries and commissions; reviews and approves all investment projects including environmental projects.
Ministry of Education	Incorporates environmental and health knowledge into school curricula; implements outreach and educational activities.
Ministry of Science and Technology	Technical development, promotion, and study programs.
Ministry of Finance	Central-level financing, repayment of loans, and fiscal supervision; manages investment and negotiations with international financing agencies.
Ministry of Land and Resources	Land-use planning, mineral and marine resource management, and land rehabilitation; develops and implements regulations for the allocation of land-use rights.
Ministry of Construction (now Ministry of Housing and Urban-Rural Construction)	Environmental infrastructure, including water supply and wastewater treatment plants and solid waste management.
Ministry of Communications	Develops communication plans and policies to improve environmental and health protection.
Ministry of Water Resources	Manages and supervises water resources and groundwater quality; formulates policy for water resource development, protection, and conservation; coordinates domestic, production, and environmental water use.
Ministry of Agriculture	Manages agricultural policies, agricultural land-use planning, agricultural chemicals, aquatic natural reserves, agro-biodiversity and grasslands; manages agricultural activities related to water use and wastewater discharge.
Ministry of Commerce	Establishes relevant trade development plans and policies that are in favor of environment and health.
State Administration of Radio Film and Television	Manages propaganda work of environment and health on radio and television.

National Bureau of Statistics	Compiles environmental information into China's statistical data.
State Administration of Work Safety	Develops and organizes the implementation of environmental and health protection policies in the workplace.
Information Center Legislative Affairs Office of the State Council	Coordinates the implementation of research, development, and the revision of laws and regulations related to environment and health.
China Meteorology Administration	Monitors regional air quality and climate change; organizes meteorological research and disseminates data.
State Administration of Traditional Chinese Medicine	Develops approaches in traditional Chinese medicine to environmental health.
Ministry of Forestry*	Forest management, protection, and conservation.
Ministry of Supervision*	Participates in environmental enforcement campaigns carried out by SEPA.
State Oceanic Administration*	Coastal and marine water management and protection; pollution control in coastal land areas is done jointly with SEPA.

Key Local Agencies

Department Name	Responsibilities of Environment and Health
Environmental Protection Bureau	Oversees environmental impact assessment and other procedures for new development projects; monitors pollution releases from industries; assesses fees for pollution discharges; initiates legal action against firms that fail to meet environmental requirements; undertakes environmental reporting, education, and outreach activities.
Environmental Protection Committee of local People's Congress	Endorses local environmental regulations; reviews work carried out by executive bodies at the same or lower administrative levels; considers environmental complaints raised by citizens.
Environmental Protection Commission of local government	Coordinates work of EPBs and other government organs.
Mayor's office	Takes key decisions on large investment projects involving industrial development and environmental protection.
Local planning commission	At the county level and above, reviews EPB environmental protection plans and integrates them into local economic and social development plans.
Local industrial bureau	Deals with day-to-day industrial pollution abatement. Some have environmental protection divisions that assist enterprises with technical aspects of pollution control; helps settle disputes and improve communications between enterprises.
Local finance bureau	Manages city revenues and expenditures and plays important roles in the pollution discharge fee system; approves annual plans of municipal EPBs for use of pollution levy funds.

* Not included among the 18 participating agencies in the *National Environmental and Health Action Plan*.

Sources: *China National Environment and Health Action Plan* (SEPA, MOH, 2007); *Environmental Compliance and Enforcement in China: An Assessment of Current Practices and Ways Forward* (OECD, 2006); *Environmental Governance in China* (China Council for International Cooperation on Environment and Development, 2006)

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评析中国政府针对环境和健康挑战所做出的反应

本报告为国际战略研究中心费和中国研究项目撰写

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2008年6月

国际战略研究中心（CSIS）

国际战略研究中心概况

在一个充满不断变化的全球机遇和挑战的时代中，国际战略研究中心（CSIS）为决策者提供对战略的洞察以及实用的政策解决方案。CSIS进行研究与分析，并制定着眼于未来和预测变革的政策动议。

CSIS由David M. Abhire与Arleigh Burke上将在冷战白热化之时创建，致力于简单但紧急的目标，即找出美国做为一个国家如何生存，人民如何繁荣昌盛之道。自1962年以来，CSIS已成为世界上卓越的公共政策机构之一。

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前美国参议员，Sam Nunn于1999年成为CSIS理事会主席，John J. Hamre自2000年以来任CSIS总裁及首席执行官。

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封面摄影：骑自行车的人们穿行于工厂制造的沉重污染中，地点为北京以东100公里的中国河北省玉田，2006年7月18日。
PETER PARKS/AFP/GettyImages

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鸣谢

作者非常感谢洛克菲勒兄弟基金会为调研这一重要课题而慷慨提供资助，我们尤其感谢基金会Shenyu Belsky女士在项目全过程中表达的关心和提供的指导。作者也对中国政府、非政府组织和企业界许多思想开放、坦诚和敬业的人士表示感谢，他们花时间，并与我们分享其观点和智慧，从而使我们受益。

我们也感谢费和中国研究项目调研实习生See-Won Byun女士，她为本调研项目提供了卓越的研究和编辑支持。

虽然本报告出自国际战略研究中心，但作者对报告中表达的观点完全负责。

综述[1]

环境与健康的关联

全球而言，估计24%的疾病负担和23%的所有死亡可归咎于诸项环境因素。[2]由于污染和环境恶化导致新生儿的基因创伤和肿瘤问题或造成免疫系统损坏，使一国健康水平受损。

中国做为世界上最大的发展中国家和截止2006年底，世界上领先的温室气体排放国，也不例外。近几年来，中国许多地方，尤其是南方，工业飞速发展的热点，环境对人类健康的威胁正在加重。每年，发生“群众性事件”的次数增加，中国示威者公开反对会使长期健康受到严峻挑战的环境政策。然而，中国决策者基本上忽视环境与健康之间的关联。

由于缺乏政治层面的关注和研究资源，在中国基本不存在关于污染真实影响健康的全面官方数据。存在的少许知识也仍主要是无足轻重的，这表明更加完整的分析正成为一项迫切的需求。

一个重大问题

无论对于中国内部还是外部，中国环境与健康之间的关联重要到无法忽视的地步。污染给健康带来不断恶化的影响对国内外有着相当的影响。随着中国追求在“科学发展”基础上建立“和谐社会”并成为一个负责任的国际角色，环境与健康问题对中国及国际社会都成为需要应对的一项巨大挑战。

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[1] 2008年4月17-20日，美国社会科学研究协会在香港主办了“中国的环境与健康：社会科学之观点国际研讨会”。本报告的早期版本提交该研讨会。

[2] Pruss-Ustun和C. Corvalan所著“通过健康环境防止疾病：关于疾病给环境带来负担的估计”（瑞士日内瓦：世界卫生组织，2006年）。

在北京的中国领导人已愈加认识到污染给国内带来的高昂社会经济代价。污染给中国经济带来负担并导致医疗服务成本上扬。不断恶化的环境意味着中国面临沉重的疾病负担，中国政府和民众都面对为治疗这些疾病而不断上升的成本。随着中国的城市越来越多地出现公众因工业项目给环境和健康带来危险而进行示威，中央领导已开始对环境健康状况给社会稳定所产生的影响感到敏感。这就提出了这样一种可能性，即中国的环境健康正部分成为领导层政治合法性的所在问题。

然而，环境与健康的挑战不仅仅是中国的内部问题。近几年来，中国环境健康实绩对全球的影响显然也已引起国际上的高度关注。中国如何应对其环境健康的挑战不仅将至关重要地影响到国内建设和谐社会，而且影响到中国在国际舞台上脱颖成为一个负责任的相关利益者。

中国环境健康实绩

中国存在严重和普遍的环境健康威胁。对于生活在城市的中国民众而言，空气污染对健康构成重大危害。对于中国农村地区而言，水污染给健康带来的影响尤为严重，三分之二的农村人口无法获得经管道输送的水。食品安全是令中国国内和国际上感到忧虑的另一严峻的环境健康问题，2007年，涉及被污染的中国出口产品的一系列丑闻引起了国际上的关注。这些产品质量危及健康，主要是因为松散的管理制度，其中包括环保标准。

虽然数据有限，但污染似乎给对民众健康带来相当的区域性不同影响。中国贫穷的农村地区面临严重的环境健康风险，而几乎90%的农村人口没有医疗保险，95%的老年人没有养老金。[3]随着北京开始应对城乡差距，向中国那些富裕程度较低的省份提供更多的社会福利，环境健康问题定将发挥中心作用。

[3] 新华社2007年10月6日题为“ 中国失败的医疗体系寻求出路” 的报道；北京周刊 第50期第2号（2007年12月）“ 老龄化社会的老问题” 一文：6

中国改善环境健康治理面临的阻碍

尽管中国政府努力采取措施来更好地保护环境和实施现有的环保法规，但它未能有效地将环境和健康问题纳入其治理结构之中。现有的体系在应对目前和正在出现的健康关注方面面临诸多挑战。改善环境健康的治理势在必行。然而，建立这样一个体系面临诸多重大阻碍。

就环保意识和政策实施而言，在环保和医疗领域中央和地方当局之间显然存在相当的脱节。北京建立有效的全国环境政策的努力屡遭地方当局的阻挠。在一些情况下，全国工作重点与地方利益之间产生真实的冲突。

一些情形已证明，官僚阻碍是如此巨大，导致官方无法针对因污染而正出现的各种健康威胁做出有协调的反应。虽然国家环保总局（现在已为环境保护部）、卫生部及其在各省和地方的分支机构，主要负责处理中国的环境健康问题，但政府许多其它的部门也参与这方面的工作。由于官僚推诿、势力争斗以及环境和健康之间权限职责分工不尽明确，所有相关官僚部门之间基本上是各行其事。

民间组织的参与是有效的环境健康治理机制的另一重要组成部分。然而，若公众参与解决环境健康问题，则要求普通公民或公民团体举报污染者并使地方政府负责。这经常使公众处于于地方工业企业以及地方政府的对立面，地方政府要依赖这些污染环境的企业来创造就业和税收。因此，地方政府经常对其管辖地区内的非政府环保组织的活动持怀疑态度。

此外，目前在中国的国际合作伙伴一般不触及环境和健康关联问题。2008年北京奥运会促使了对环境环境问题的重视，但仅仅是国际上关注奥运会期间的参赛运动员的健康，而非继续关注环境对公众健康的影响问题。结果，污染相关的健康问题仍未成为国际上为中国提供环保援助的重点。

政府目前的反应

虽然中国对环境健康的对应举措充其量来说是有限的，但国内和国际上对中国环境和健康实绩做为两个*不同和鲜明的问题*的愈加关注，已促使中央政府最近沿着正确的方向做出反应。因此，北京已开始加强应对正在出现的环境健康的挑战。

2007年，为了响应联合国环境规划署（UNEP）和世界卫生组织（WHO）要求进行协作的呼吁，中国出台了*国家环境与健康行动计划*（2007至2015年），号召加强部门间的协作。该行动计划构成绘制政府近期内采取对应措施之蓝图而迈出的重要步骤之一。为了改进这一领域的决策，政府已开始出资支持对污染-健康之间的关联这一课题展开研究。政府也已开始加大处理那些给公众健康产生负面影响的重大环保问题的力度；主要是全国供水的现状，这一领域的严重程度已达到导致流行病的范畴。

建议

总而言之，尽管中国政府的对应举措正开始成型，但很大程度上滞后于迅速恶化的环境健康状况。如上所示，北京领导层要为行之无效的对应举措付出社会稳定和政治上的代价。几项关键的措施将改进中国针对正在出现的环境健康的挑战做出的反应。

加强机构改革和环境健康治理机制。随着环境和健康成为中央政府政治议程的首要重点，需要通过部门间战略来制定有效的政府对应举措。环境健康的挑战为中国进一步推进其进行中的机构改革提供了机会。

加强官员之间的问责。政府需要提高关于污染影响健康问题的透明度和问责制。环保业务中涉及健康方面的实绩应当成为评估地方当局表现的重要组成部分。

鼓励民间组织参与环境和健康领域的工作。应允许非政府组织和公民团体参与涉及环境健康的决策进程。也应鼓励公众参与地方项目的环保决策和环境影响

评估。虽然地方当局显然认为他们及其所代表的利益与许多此类团组形成对立，但随着北京努力在这一领域激励全国性的政治变革，他们潜在可成为北京重要的同盟。

加强美中在环境健康方面的合作。环境健康为进行大有可为的国际合作的一个领域。对美国而言，这是一个在环境和健康领域进一步发展与中国的关系的前所未有的机会。

1. 环境与健康的关联

全球而言，估计24%的疾病负担和23%的所有死亡可归咎于诸项环境因素。[1]由于污染和环境恶化导致新生儿基因受创和肿瘤问题，以及损坏免疫系统等，因而危及一国的健康水平。

据世卫组织估计，发展中国家承受尤为沉重的因环境造成的疾病负担。中国作为世界上最大的发展中国家和截止2006年底，世界上领先的温室气体排放国，也不例外。近几年来，中国许多地方，尤其是南方，工业飞速发展的热点，环境对人类健康的威胁正在加重。污染已导致慢性健康问题，如消化道疾病、腹泻、哮喘、气管炎、结合膜炎，以及急性中毒和死亡。每年，发生“群众性事件”的次数增加，即中国示威者公开反对会使长期健康受到严重挑战的环境政策。

然而，中国决策者基本上忽视环境与健康之间的关联。迄今为止，主要以简单的经济术语，如工业生产的损失或纠正的成本来衡量污染的代价。中国决策圈内仅对污染和健康危害之间的关联有着有限的理解。

尽管明显存在需要，但仍未努力从整体角度来衡量污染给健康带来的影响。由于缺乏政治层面的关注和调研资源，中国仍基本不具备关于污染真实影响健康的全面官方数据。对因果关系的研究，或试图量化环境与健康之间的关联的努力是有限的。少许知识若存在也仍是无关紧要的。

然而，既便无关紧要的证据也表明，中国的环境健康问题正日趋严重。沿着中国最大和污染最严重的河流区域所报告的称为“癌症村”的数目急剧上升。在大多数“癌症村”中，污染显然是罪魁祸首。最近的一些工业污染事故和化学制剂泄漏也使人们对环境污染给健康带来的严重危害窥见一斑。

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[1] Pruss-Usturn和Corvalan所著“健康环境防止疾病”。

国际上为评估中国环境与健康的关联做出了几次努力。经合发组织（OECD）最近的一份报告表明，中国严重污染的环境已“对人类健康导致严重的危害”，使生产率受损并使医疗服务成本上升。[2]根据世界银行与中国政府于2007年共同进行的一项研究但未公布的世行数据的估计，高污染水平每年导致中国75万人过早死亡。[3]然而，据报中国当局要求世行删除报告中关于健康的数据，原因是这些信息太“敏感”，可潜在“导致社会动乱”。将污染对健康的影响与吸烟的影响相分离的准确数据又是可导致某些争议的另一问题。

总体而言，越来越多的公共报道表明中国的污染导致严重的健康问题。目前，中国正处于重新评估其“先污染后清理”战略的过程中，以更好地反映人与自然之间求得平衡的需要。随着北京重新调整其社会经济发展战略，需要突出和解决环境与健康之间的关联问题。

[2] 经合发组织（OECD）“环境表现审议—中国”（巴黎：经合发组织，2007年）。

[3] “中国污染每年造成75万人死亡”，金融时报，2007年7月2日。

2. 一个重大问题

无论对于中国内部还是外部，中国环境与健康之间的关联如此之重要，已无法忽视。污染给健康带来不断恶化的影响对国内外有着相当的影响。随着中国追求在“科学发展”（更加可持续发展，更加关注发展对社会的影响的代名词）基础上建立“和谐”社会并成为一个负责任的国际角色，环境健康问题对中国及国际社会构成需要应对的一项巨大挑战和必要任务。

国内影响

环境与健康问题列北京国内议程的首位。中国领导人已愈加意识到污染导致高昂的社会经济代价。如第*11个五年计划（2006至2010年）*所示，环保和医疗服务改革均做为关键的重点列入北京的全国改革议程之中。[1]

污染正给中国经济带来负担。中国的环境问题给该国导致每年2千亿美元以上的损失，约占中国2005年国内生产总值（GDP）的10%。[2]据报由于来自地方官员的压力，中国当局已无限期推迟了其主导的一项试点研究计划，该计划本应就因污染导致的 GDP 损失或所谓的绿色 GDP 做出更详尽的研究。[3]然而，推迟出台，而非干脆取消这一项研究，表明政府愈加关注污染带来的社会和经济代价。

污染也使医疗服务成本上升。不断恶化的环境意味着中国面临沉重的疾病负担， 中国政府和民众都面对为治疗这些疾病而不断上升的成本。2008年1月，

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[1] 国家发展和改革委员会（NDRC）“中华人民共和国全国经济和社会发展第11个五年计划纲要”。

[2] 2006年6月6日*中国日报*“污染导致的损失相当于中国GDP的10%”。

[3] 英国广播公司（BBC）2007年7月23日“中国推迟污染研究报告”，可登陆以下网站了解这一报道：http://news.bbc.co.uk/2/hi/asia-pacific/6911784.stm.

政府的一项调查显示，医疗服务成本为中国公民首要关注的问题。[4]虽然缺乏扎实的数据，但如上所述，无足轻重的信息和通过采访中国卫生官员均表明，普遍的污染正加剧这一情形。

北京已开始对环境健康状况给社会稳定所产生的影响感到敏感。这就提出了这样一种可能性，即中国的环境健康正部分成为领导层政治合法性之所在的一个问题。

国家环保总局（现在的环境保护部，2008年3月升为部级单位）周生贤认为，全国范围越来越多的暴动、示威和请愿都是公众对污染感到愤怒的结果，这表明中国公众拒不接受环境污染恶化的现实。[5]中国的城市越来越多地出现公众因工业项目给环境和健康带来危险而进行示威。2007年6月，数万愤怒的公民在厦门游行示威，抗议建设一家化工厂，最终使这一有争议的项目被终止。[6]出于对健康的忧虑，上海市民参与了该市自2005年以来规模最大的公共示威活动，抗议所计划的扩展一条铁路线的项目。[7]随着北京高度重视减少发生“群众性事件”，解决环境健康问题已成为一项关键的挑战。

国际影响

环境健康的挑战不仅仅是中国的内部问题。近几年来，中国环境健康实绩对全球的影响显然也已引起国际上的高度关注。随着中国影响力的不断上升，该国在很大程度上与其公共卫生记录相关的繁荣和稳定对世界有着重大的影响。此外，在当今全球化世界中，污染和健康方面的威胁跨越国境。因此，中国环境健康的挑战已引起国际上相当的关注。

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[4] 民众接下来关注的问题分别是社会道德、安全、教育和失业加剧。源自*华盛顿邮报*2008年1月9日“医疗服务位居中国公众所关注问题的首位”一文。

[5] 2007年7月4日新华社题为“中国环保监督机构披露‘群众性事件’增多”的报道。

[6] 2007年6月21日*经济学人*杂志题为“中国的抗议：由手机动员”的文章。

[7] 2008年1月12日路透社题为“上千人抗议上海磁悬浮列车扩展项目”的报道。

中国一些与污染相关的健康危害已开始漫延至其它国家。中国由空气传播的污染物对其亚洲邻国和世界其它国家民众健康构成严重威胁。目前，研究人员证实来自亚洲的粉尘云不仅含有有害的工业污染物，而且含有活微生物，可将疾病传给人类，其中包括爆发致命的 SARS 和禽流感。[8]韩国每年春季都要遭受来自中国的“ 黄尘”袭击朝鲜半岛之害，导致呼吸道和眼病，损坏农作物和工业生产。洛杉矶当局声称该市天空中几乎25%的颗粒物来自中国。有些人甚至预测中国未来有一天将成为加州三分之一的空气污染之源。[9]

中国境内有19条跨境国际河湖系统，中国对这些垮境水域的管理已引起邻国的忧虑。[10]2005年11月，吉林省一家国有石化工厂发生爆炸，导致100多吨的苯和硝基苯流入松花江，这是说明中国长期存在的水污染产生地区性影响的最佳实例。松花江汇入黑龙江，下游600公里处为俄罗斯城市哈巴罗夫斯克的主要供水来源。

引起美国官方和民众关注的另一件事涉及中国食品和药品出口，由于土地和水污染，过度使用农药以及执行环保标准不得力，因而致使这些出口产品对健康带来风险。最近召回被污染的中国产品已就这一问题给中国政府敲响了警钟。

2007年，中国承诺在2008至2010年期间出资2千亿美元降低空气和水污染。[11]在做出治理环境之承诺的同时，中国也愈加愿意通过双边和地区层面的合作来共同解决如环境和气候变化以及传染病这样的问题。一方面是中国领导人推进受

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[8] 2008年2月6日*华盛顿邮报*题为“ 来自海外的沙尘暴将污染物带进美国；科学家在研究是否也将疾病带到了美国” 一文。也请见Stanley A. Morain和William A. Spring于2007年9月30日所撰“ 公共卫生运用远程传感：核实和证实报告” 一文。请登陆网站：http://aspires.gsfc.nasa.gov/staticData/PHAiRS%20V&V%20Report%20v10.1%20-%20final.pdf.

[9] 美联社2006年7月28日题为“ 中国的空气污染到达美国的天空” 的报道。

[10] 2007年2月7日聚焦外交政策期刊刊载Jennifer L. Turner和Juli S. Kim所著“ *中国最肮脏的出口*” 一文。

[11] 出处同上。

欢迎的改革进程，另一面是中国跨国界的努力，这都将促使北京在国内外关注之下履行其承诺。中国如何应对其环境健康的挑战不仅将至关重要地影响到国内建设和谐社会，而且影响到中国在国际舞台上脱颖成为一个负责任的相关利益者。

3. 中国环境与健康实绩

环境健康威胁在中国广为存在，并且愈加严重。2006年，在中国官方提供的环境报告中，国家环保总局称中国总体环境状况“严峻”，污染事故频发，影响到许多人的生活质量。[1]

卫生专家指出，不断恶化的空气和水污染以及及食品污染使得癌症成为2006年中国的头号杀手。2005至2006年，城镇人口中因癌症导致死亡的比重增加了19%，农村地区增加了23%。[2]然而，应当指出的是，一些官员认为，肿瘤患者数目增加并非由新的环境或工业问题所致，而是因为新具备了发现这些疾病的能力。卫生部官员私下对至少一家从事癌症治疗的美国制药公司主管表示，中国农村许多因癌症死亡的病人之前被诊断为老死或其它形式的自然死亡。

空气污染和健康

空气污染尤其对生活在城市中的中国人构成重大的健康危害。在中国5.6亿城市居民中，只有1%的人呼吸着以欧盟标准衡量为安全的空气。[3]中国估计有200座城市达不到世卫组织关于导致呼吸道疾病的悬浮在空气中的颗粒的标准。在南部工业中心广东省省会广州市，空气中的微颗粒含量超过美国安全标准的5倍。[4]

中国目前为世界上最大的二氧化硫排放国，二氧化硫主要源自燃烧煤，是导致

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[1] 国家环保总局（SEPA）“*中国环境状况报告（*2006年）”，北京，2007年6月4日。

[2] 2007年5月16日，路透社题为“卫生专家将癌症上升归咎于污染”的报道。

[3] 2007年8月26日*纽约时报*题为“随着中国飞速发展，污染达到致命的极点”的报道。

[4] 2006年2月14日，世界观察协会李子军（音译）所著“肮脏的空气窒息着中国的增长，奥林匹克目标”一文。请登陆网站：http://www.worldwatch.org/node/3881。

城市空气污染的主要污染物。在第10个五年计划末（2001-2005年），中国二氧化硫排放超标达到42%。[5]荷兰环境评估机构的数据表明，中国在2006年取代美国成为世界上头号二氧化碳排放国，这是导致全球大部分全球变暖的主要温室气体。[6]

因此，呼吸道疾病正成为中国的主要杀手之一。通常是老年人患慢性肺病，但难以解释为何中国年青人患此疾病人数急剧上升，除非我们视中国的空气污染为一主要因素。

水污染与健康

从国内而言，水资源的破坏可能是中国最大的环境挑战。中国水资源数据令人忧心。中国70%的河流和湖泊受到污染，中国7大主要河流体系中约四分之一的水“毒性过高，不宜与人发生接触”。[7]一个位于北京的环保组织，自然之友，指出，中国四分之一的人口，或至少3.2亿人饮用不清洁的水。[8]经合发组织估计，每年有3万中国儿童因饮用肮脏的水所导致的疾病死亡。[9]

水污染对健康的影响在中国农村尤为严重，三分之二的农村人口无法获得通过管道输送的用水。缺乏管道水导致腹泻疾病和消化系统癌症。世界银行估计，健康受影响的成本约占农村 GDP 的1.9%。[10]因此，约1.5亿中国农村人口的饮

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[5] 世界银行和国家环境总局（SEPA）题为“*中国的污染代价：有形损害的经济估算*”的报告（华盛顿，世界银行，2007年）。

[6] 2007年6月20日英国广博公司（BBC）题为“中国超越美国，成为温室气体最大排放国”的报道。

[7] 2008年1月24日，美联社题为“化学品泄漏使中国中部用水有毒”的报道。

[8] 2007年3月13日，新华社题为“非清洁饮用水危及3.2亿中国人的健康”的报道。

[9] 经合发组织“*中国—环境实绩审议*”。也请见2007年7月17日英国卫报题为“经合发组织描绘中国灰暗的污染状况”一文。请登陆网站：
http://www.guardian.co.uk/environment/2007/jul/17/china.internationalnews.

[10] 世行和国家环保总局“*中国污染的代价*”。

用水主要依赖地表水，它对健康带来的风险要大于其它饮用水水源。2006年，官方调查报告表明，中国的地表水总体被归类为遭受“ 中度” 污染。在744件检测的水样中，有三分之一得到最坏的污染评级。[11]

据国家环保总局报告，在中国2万1千多家化工厂中，一半以上的化工厂位于长江和黄河沿岸，工业废料是导致水污染的主要来源。中国污染最严重的河流提供了饮用水和农业灌溉用水，这些河流给健康带来的风险已导致周边地区出现“ 癌症村” 。[12]世界银行统计数据表明，中国11%的消化道系统癌症病例可能由受污染的饮用水所致。[13]

过去几年，频繁出现的水污染事件已成国内外主要新闻的内容。2006年，在国家环保总局处理的161件紧急环境污染事件中，59%的事件涉及水污染。[14]这些事件给公众健康带来严峻的风险。在2005年11月爆发的松花江水污染危机中，起先是试图否认和掩盖化学品泄漏事故，这一事件致使邻近省份黑龙江省省会城市哈尔滨切断为其3百80万居民供水达4天，以防止居民遭受苯污染。6个月后，中国第三大湖太湖爆发严重的蓝藻，导致中国东部江苏省千百万人的饮用水被污染长达一周。

对食品安全的担忧

如2007年涉及被污染的中国出口产品的一系列丑闻所示，食品安全是令中国国内和国际上感到忧虑的另一严峻的环境健康问题。这些产品质量危及健康，主要是因为食品行业的法规过于松懈，其中包括环保标准。

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[11] 2008年2月29日，新华社题为“ 从严法规，控制水污染” 的报道。

[12] 2007年1月17日英国广播公司题为“ 中国癌症村付出代价” 的报道。

[13] 世界银行和国家环保总局“ *中国污染的代价*” 。

[14] 新华社题为“ 从严法规，制止水污染” 的报道。

根据中国质检总局（AQSIQ），中国食品安全监督机构的报告，2007年上半年，在被检验的国内产品中，有20%被列为不达标。[15]。低劣的产品质量损害了中国做为世界制造商的形象，为了使消费者放心，美国一些公司将他们的产品推销为“非中国制造”。[16]

过度使用化肥、被污染的水、重金属和固态废料正使中国全国的土壤受到污染。2007年，国土资源部承认，中国约10%的可耕地被污染，而且情况正在恶化。[17]

这些污染物进入全国食品生产环节，直接损害人类健康。一项研究发现，中国南方70%的蔬菜中硝酸盐含量超过国家标准，另一项研究估计，几乎一半的水果和蔬菜含有过量的被禁止的有机磷酸盐和碳酸农药。[18]最近，美国和其它国家出现了一系列召回中国出口的食品和药品的情形，这也使中国受污染的食品供应处于加强了的国际监督之下。

地区差异

中国贫穷的农村地区面临严重的环境健康风险，几乎90%的农村人口没有医疗保险，95%的老年人没有养老金。[19]2001年，联合国环境规划署在关于中国的环境和健康的一份报告中强调了医疗服务可获性的重要。[20]报告指出，这样的可获性在判断因污染导致的健康风险中方面发挥关键作用。此外，与城市居民

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[15] 2007年7月3日新华社“调查：中国产品达标比重为80.9%”。

[16] 2007年9月5日*南华早报*题为“受污染的形象”一文。

[17] 2007年4月22日，新华社题为“中国官员：10%的可耕地被污染物污染”的报道。

[18] 2006年7月27日，世界观察协会李子军（音译）发表题为“中国土壤质量退化，威胁公众健康和生态系统”一文。请登陆网站：http://www.worldwatch.org/node/4419; 也请见Jessica Hamburger在*全球杀虫剂运动刊物*2001年12月第11期中发表题为“杀虫剂之海包围着中国的有机农场”一文。

[19] 2007年10月6日新华社题为“中国失败的医疗服务体系寻求出路”的报道；北京周刊第50期（2007年12月）题为“老龄化社会的老问题”一文。

[20] 世卫组织和联合国计划开发署题为“*中国的环境和民众健康*”报告，2001年。

相比，农村人口接近合格的医疗服务工作者的机会要小得多，这些合格医疗工作者受过基本的环境肿瘤学或其它因污染导致的健康风险处理的训练，而中国农村普遍存在这些健康风险。

例如，虽然北京和上海的空气污染比许多农村地区要严重，但这两个城市的健康风险评级属中国最低，因为民众的医疗服务可获性高，并且水污染水平相对较低，民众营养较好。另一方面，在中国那些健康风险评级居高的省份，如贵州，高风险不仅由严重的污染和营养不良所致，而且还可归咎于医疗服务的匮乏。

4. 中国改善环境健康治理面临的阻碍

过去几年，中国已加强改进环保法规治理的工作。然而，政府未能有效地将环境和健康问题融合到其治理结构中。目前的体系在应对现有和正在出现的健康问题方面面临多重挑战。改进对环境健康的治理势在必行。

可是，创立这样一个体系面临着相当的阻碍。取得进一步进展所遭遇的许多阻碍都是机构性的，如果中国中央和地方政府以及国际社会不真正做出大刀阔斧的努力，可能需要几十年才能加以克服。换言之，解决环境健康问题需要花费的政治资本可能超出相关当局的能力。

中央 - 地方之间的脱节

尽管北京新近强调保护环境，但基本上要依赖地方当局来执行中央的使命。然而，中央和地方当局在环保和医疗服务的意识和政策实施方面存在相当的脱节。每当北京努力建立有效的全国性环境政策时，几乎都遭到地方当局的抵制。在许多地方，地方政治领导人继续不理会保护环境，主张经济增长。就环保法规而言，地方政府的腐败、掩盖、误报和执法不得力较普遍存在，而非偶发，这是不幸的。[1]

做为中国经济非集中化战略的一部分，鼓励地方当局征收和实施地方政策，以刺激增长。然而，非集中化战略在很大程度上束缚了北京干预地方事务的手脚。在某些情形下，全国工作重点与地方利益之间存在真实的冲突。为了引导中国实现可持续发展，北京已将环保列为其宏观政策的中心部分。但是，调整思维，强调环保意识，对“不惜一切代价求增长”的模式进行补充，这并非能

[1]傅瑞伟所著“中央—地方关系：胡能做主？”一文，重估中国崛起 (China Balance Sheet) 项目工作文献，彼得森国际经济学院和国际战略研究中心，2008年1月。

轻易做到。不顾一切往前冲的经济发展模式仍在风行。[2]

尽管环境影响评估法（EIA）于2003年9月生效，但对环境构成风险的项目仍在中国上马。根据 EIA，虽然国家环保总局对大规模限目有决定权，但地方政府掌握工业计划的审批权，经济增长基本上是他们做决定的基础。

在指出现有防止环境危机机制中的“ 漏洞” 时，国家环保总局副局长潘岳提出将环保评估纳入计划和决策阶段，这是避免今后出现危机和保护人民健康的唯一方法。[3]

基本上仍在根据经济增长数据来对地方官员进行官方评估。由于不同利益的相互竞争，北京意图良好的环保法规经常被地方忽视或不执行。对大多数地方官来说，只要他们所在的地区保持经济增长，控制当地出现群众性事件的次数，他们就仕途亨通。保持积极的环保和健康实绩自然摆在次要地位。王灿发教授为位于北京的污染受害者法律援助中心主任，他说，只有10%的环保法规在地方实际得以实施。[4]

地方环保局是地方负责实施政策的主要实体，尽管它们可能愿意执行更严格的环境健康法规，但经常被各种利益的冲突而废止。由于缺乏政治上的支持、财政和人力资源以及官僚的影响，地方环保局难以实施环保法规。地方环保局处于双重领导之下：他们的资金和人员均由地方政府调拨，但受命于国家环保总局或上级环保部门的政策使命。即便国家环保总局于2008年春季升为部级单位之后，地方环保官员的任免仍由地方政府说了算。因此，地方环保局仍对地方政府负责，后者的税收大大重依赖地方企业，因此在相当程度上处于这些工业

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[2] 出处同上。

[3] 2006年4月6日*中国日报*题为“ 水边项目危及环境” 的报道。

[4] 2005年10月6日，新华社题为“ 中国加强实施环境法规” 的报道。请登陆网站：http://news.xinhuanet.com/english/2005-10/06/content_3586956.htm.

部门的政治影响之下。

从纸面上看，中国的环保监管框架颇为先进，特别是针对发展中国家而言。过去20年，中国政府通过了多种环境法律和管理规定。在国际社会帮助下，中国的环保立法迅速从强调计划和控制的法规转向更积极基于市场刺激的法规。[5]到目前为止，已颁布了100多项法律，覆盖空气和水污染、机动车尾气、农药、食品安全以及各行各业的职业健康和安全。[6]然而，由于地方环保局势单力薄，加上地方各种利益的冲突，中央政府的环保使命继续被打折扣。

此外，中央制定的环保监管条例的作业细节经常不甚明了，实施指南经常是姗姗来迟。故意不遵守环保法规是家常便饭，原因是各地不清楚究竟该如何行事才能合规，而且在很多情况下，地方自身利益与北京构成冲突。

官僚阻碍

虽然国家环境总局、卫生部及其在各省和地方的分支机构，主要负责处理中国的环境健康问题，但政府许多其它的部门也参与这方面的工作。

中央一级共有18家以上的机构或多或少地分担这一职责。从环保意义上说，这既不奇怪也非独特性的问题，但在中国构成了严重的监管障碍。由于官僚之间的势力争斗以及环境与健康之间的关联方面官僚权限划分不清，所有相关官僚部门的官员们基本上是各行其事。这些官僚阻碍有时已证明无法促使官方针对因污染导致的健康威胁做出有协调的反应。

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[5] Jennifer Turner撰写题为“ 中国的环保危机：开启内部改革和国际合作的机会” 一文，彼得森国际经济学院和国际战略研究中心关于中国资产负债项目工作文章，2006年3月。请登陆网站：http://www.chinabalancesheet.org/documents/paper_Environment_Paper.PDF.

[6] Jennifer Holdaway所著“ 中国的环境与健康：问题、对应与社会科学研究” ，社会科学研究协会工作文章，2008年11月。

国家环保总局（现为环保部）的反应

做为国家主要环保监管部门，国家环保总局（现为环保部）主要负责与环境相关的健康问题，至少理论上如此。然而，直到最近以前，国家环保总局一直是一个势单力薄，人员缺乏和预算资金非常有限的单位。与美国环保署在全国共有1万8千名工作人员相比，国家环保总局在北京只有219名全职员工，各地方环保局共有约2千名员工。多年来，它有效地执行环境健康法规的能力被大大限制。此外，其在政治上的弱势地位使其难以孤身从政治层面就环境健康的挑战引起充分的关注。

2008年3月，在中国议会，全国人大第一次全体大会上，北京决定在国家环保总局框架基础上成立环境保护部，这一决定的政治含意值得在今后数年加以观察。过去，国家环境总局因政治地位低下，意味着它不具备机构权限在其对手部门之间就政府的反应发挥引领和协调的角色。无论出于何种意愿和宗旨，国家环保局在与多个部委的官僚势力争斗中被“边缘化”，如劳动和社会保障部、农业部、水资源部、国土资源部，甚至还有卫生部。

将国家环保局升格为部级单位，表明北京更加致力于解决环境问题。鉴于有了新的环保部，人们一般会期待出现一个更强有力的环保领导层来在中央一级推动决策。然而，一些人认为，新成立环保部仅仅是延长了讨价还价的进程而已，中国主要经济计划单位，国家发展和改革委员会（发改委）将继续发挥主导决策的角色，并将继续干预环保事务。另外，由于仍由地方政府任命地方环保局官员，因此仍缺乏一个垂直一体化的环保机构来确保有效实施政策。

卫生部的反应

卫生部为负责环境健康风险的另一主要机构，但它着重于污染对健康的后果，而非采取积极主动和预防性的做法。卫生部主要通过其疾病防控中心及其在地

方的分支来处理与污染相关的疾病。然而，为了明确了解导致与污染相关疾病的原因和制定预防方法，疾病防控中心与地方环保局只在有限基础上分享污染方面的信息。

在政策层面，卫生部没有专门设一个处室负责环境健康事务。2006年，卫生部设立了传染病控制检查和环境健康监管处，将环境健康纳入其自身使命之下。但这仍然是较新和规模较小的处室，并且要面对卫生部内许多相互竞争的利益。由于该处室地位低，力量薄弱，它在环境健康问题上做出的努力尚未成为卫生部的首要工作重点。这一处室与国家环保总局环境健康和监测处有着密切的工作关系，主导政府就污染和健康问题展开行动。

机构间的协作

解决环境健康问题，也需要环境和卫生部门以外的许多其它机构的参与。就中央一级而言，由几家相关的机构来负责与环境相关的健康问题，这些机构为发改委、教育部、国土资源部、建设部（2008年3月起改名为住房和城乡建设部）、水利资源部、农业部及其在各地的分支[请见附录环境健康事务的机构框架]。鉴于中国未设立一个核心使命为环境健康的超部级机构，因此需要制定部门间和协作性战略。

然而，不同官僚机构进行协作的挑战并非中国独有。世界银行将环境健康描绘为“机构孤儿”，经合发组织对欧洲环境和健康政策一体化所做的一项研究也发现类似的的问题。[7]中国的问题在于其政治庇护，它助长环境和健康官员之间以及其它机构之间的官僚推诿和势力争斗。结果，不同机构之间鲜有实质性的合作。

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[7] James A Listorti和Fadi M.Doumani所著：环境健康：弥补差距（华盛顿，世界银行，1996年），第11页。也请见Sunanda Kishore所撰“*扶贫战略中的环境健康问题：审视*”，世行环境战略报告第12（2006年9月）。也请见经合发组织国别环境政策工作小组“*改进各国环境和健康政策之间的协调：最终报告*”，2006年10月。

中国最近出台了全国环境健康行动计划（2007至2015年），这是针对这一新出现的挑战的首次行动计划，该计划由18个部门共同签署。行动计划要求加强环境和健康的协调机制。虽然这反映了北京最近关于加强机构间协调的承诺，行动计划在实际实施中将遇到相当的挑战。环境和健康系统以外的机构没有多少动力去承担额外的工作和发生额外的支出。环境和健康问题方面官僚权限分工的不清加上缺乏一个强有力的全国性实体来主导和协调政府的行动，导致政府反应的低效率和在实践中不愿意彼此协作。

地方政府内部各类利益的冲突导致地方一级的部门间协调更具挑战性。地方环境和卫生部门彼此争夺有限的资源，基本上没有动力协调工作。由于 GDP 数据基本上决定对地方官员的政绩评估，地方环保局经常不愿意披露敏感的污染信息。由于缺乏准确和更新过的关于污染源和程度的数据，地方卫生部门无法评估地方疾病的环境负担，也就无法形成有效的对应举措。

有限的公众参与

民间团体参与，是有效的环境健康治理机制的另一重要组成部分。中国民众因吸入污染的空气和饮用被污染的水而面临严峻的健康风险。环境和健康决策过程中需要听取普通百姓的心声。民间团体毕竟是环境健康领域的主要利益相关者。

虽然北京对非政府组织（NGOs）持提防态度，对其制定了严格的注册登计规定，北京已渐渐能容忍公众参与环保事务的决策进程。过去10年，中国的环保团体蓬勃发展，为中国非政府组织中最大的一个部分。然而，这些团组已学会只在“ 安全” 的领域存活，如环保教育、植树、保护生物多样性和循环使用资源。倡导环保的做法被认为有对抗之嫌。

公众有效参与解决环境健康问题，要求普通公民或公民团组举报污染者并使地方政府负责。这经常使公众处于地方工业企业以及地方政府的对立面，地方政府要依赖这些污染环境的企业来创造就业和税收。因此，地方政府严密监督其管辖地区内的非政府环保组织的活动。因为这一问题已愈加敏感，没有几个环保活动人士或团组着重于环境和健康之关联问题上。基层一级举报环境或健康事件的努力面临巨大的压力，这包括被骚扰和逮捕以及设法避免与地方政府唱反调。

例如，吴利宏（音译），中国江苏省的一名环保活动人士，多年来一直为清理他家乡的湖泊，太湖而奔波。该地区迅猛发展的化工行业使中国第三大淡水水系，太湖备受摧残。2007年5月，对太湖的污染达到登峰造极的地步，太湖暴发蓝藻，使其变成一汪荧光绿。沿着环太湖的运河、水稻田和化工厂周边的至少2百万居民不得不停止饮用这一主要水来源。[8]然而，正当吴的抗议在全国掀起浪潮时，他在蓝藻暴发前被地方当局逮捕，并以欺诈勒索罪名被判入狱三年。太湖这一实例表明，官方对各地方草根组织参与环境问题的容忍度正在下降。

过去两年，出于因中亚“色彩革命”引起的不信任以及对北京奥运会前出现由政治目的而驱使的公共骚乱的愈加担忧，中央政府也加强了对环境、卫生和其它领域非政府组织的控制。最近的从严控制已使环保或卫生团体难以扩大其工作范围来触及环境与健康的关联问题，以及成为政府应对正在出现的挑战的有效伙伴。

缺乏国际合作

近几年来，国际社会在帮助中国政府应对正在出现的环境和公共健康的挑战中发挥了重要作用。国家环保局在各种环保项目中与许多外国政府、多边机构、国际非政府组织、企业和基金会结成了伙伴。卫生部及其疾病防控中心也参与

[8] 2007年10月14日，*纽约时报*题为“中国一名护湖人身陷危险”的报道。

了着眼于应对公共卫问题，如爱滋病和结核病的许多国际援助项目。这些国际项目引入了环境和卫生领域的新的干预方法、技术和富有创新的伙伴关系。

然而，中国现有的国际伙伴基本上不触及环境与健康的关联问题。虽然大多数环保项目认知污染对健康的影响，但只有几个项目在制定计划时加进了环境健康的内容。2008年北京奥运会促使了对环境问题的重视，但仅仅局限于国际上关注参加奥运会的运动员的健康，而非继续关注环境对公众健康的影响问题。

中国国家环保总局与美国环保署联合项目就是一个例子，美国环保署在其综合环保战略（EPA/IES）倡议之下与中国国家环保总局及各个不同的研究中心通过诸项研究来评估实施清洁能源和运输技术及政策如何使中国的空气质量和与此相关的民众健康受益。随着中国国家环保总局与美国环保署继续展开合作，该项目也扩展成一个旨在解决中国空气污染和公众健康的更广泛的全国性项目。

中国政府也正在组织好几项考查访问和研讨会，其中许多活动与世卫组织进行合作，世卫组织促使中国首次出台*全国环境健康行动计划*。[9]通过美国国家健康研究院（NIH），中国疾病防控中心下属的国家环境健康与相关产品安全研究院与耶鲁大学正开展耗资100万美元，为期5年的培训和交流项目，参加者为这两个机构的环保专家。[10]

最近几年，美国好几所大学，包括西肯得基大学、哈佛大学和康奈尔大学已开始从事研究中国的环境健康问题。康奈尔大学与北京大学就2008年奥运会前、期间和之后北京空气质量和民众健康进行联合研究为一突出的例子。

然而，与污染相关的健康问题仍未成为国际上在环保领域援助中国的重点。中国环境健康状况是严重的，需要国际社会更加关注和支持，以解决环境与健康的关联问题。

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[9] Jennifer Holdaway所著“ 中国的环境与健康” 一文。

[10] 吕筱青与季北慈所著“ 评估中国对环境健康挑战的对应” 一文，威尔逊国际学者中心*中国环境问题期刊第9期*（2007年）。

5. 政府目前的反应

尽管中国对环境健康提出的挑战所做的反应，至多也只能说有限，随着国内国际对***做为独立并重大问题***的中国环境和健康记录关注的增加，已驱动政府最近朝正确的方向做出反应。2007年底，中国国家主席胡锦涛在中共全国代表大会上所作的政治报告中，首次呼吁“ 环保文化”。[1]至此，北京的中央领导层开始加大力度，应对日益呈现的环境健康挑战。

环境和健康的联合机制

北京似乎承认要在环境和健康问题上对各官僚机构进行协调的必要性。2007年2月，卫生部和国家环保总局出台了一份联合文件，建立一个关于环境和健康的协作机制。根据官方文件，卫生部和环保总局保证成立领导小组，由两部部长主持秘书处，在两个部委内各设立环境和健康联合办公室；监控环境健康、调查及研究；以及共同处理公共环境的紧急情况。[2]

建立协作机制—其为首个此类机制—带来的希望是，一个联合的环境与健康机制能够更好地收集和共享数据，和一个更协调和知情的政府反应。然而，迄今为止，实施这个协作计划的效率仍不甚清晰。

当年晚些时候，做为对联合国环境规划署和世卫组织对协作的呼吁做出的回应，出台了*国家环境与健康行动计划（2007-2015年）*。由18个部门签署的行动计划号召部门之间开展协作，并建立一个“ 环境与健康的国家组织架构”，在这个架构中，环保总局和卫生部牵头，其它部门参加。[3]在这一协作机制之下，二个部门为组织和协调国家环境与健康工作共同承担责任。

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[1] 2007年10月15日*中国日报*，“ 胡锦涛首次倡导‘ 环境文化’ ”。

[2] 国家环保总局（*关于印发卫生部国家环保总局环境与健康工作协作机制的通知*），2007年2月15日，http://www.sepa.gov.cn/law/gz/bmhb/gwyfg/200703/t20070301_101219.htm.

[3] 卫生部*国家环境与健康行动计划*（2007-2015年），2007年11月，http://www.moh.gov.cn/open/web_edit_file/20071108173502.doc.

然而，行动计划仍在进行完善。如上所述，部门间协作并非易事。但将环保总局（现在的环保部）和卫生部放在领先地位，就为两个官僚机构更好地融提供了重要的催化剂，从而最终确保成为中国环境与健康的领头羊。最近，环保总局被升级为部级单位，两部委就共享更多同级别机构权限，从某种程度上有助克服困扰中国机构间合作中遇到的典型性挑战。随着进一步机构改革的进行，其它相关机构可能逐步加入到这个协作中。

在政府近期内对环境与健康做出反应方面，行动计划是为画出蓝图迈出的步伐之一。在下面的步骤中，北京需要应对将计划变为真正行动的挑战，尤其是在地方的行动，以及确保中央和地方政府资金承诺的到位。

政府出资的研究

在中国，环境与健康由政府出资进行研究，是一个崭新的领域。中国的环境和健康部门最近成立了他们自己的研究机构，研究环境与健康之间的关联；它们是，环保总局（现环保部）中国环境科学研究院（CRAES）的环境污染和健康部（DEPH），卫生部中国疾病防治中心（CDC）国家环境与健康及相关产品安全研究院（IEHS）。然而，做为环保总局和卫生部的研究机构，DEPH和IEHS常常是人员不足和和资金短缺。

环保总局的环境健康与监控处也为其他机构对污染与健康间关联的研究提供经费。例如，该处近几年委托北京大学和科学院进行了几项小规模的环境与健康调查。[4]尽管规模有限，这些研究项目产生了一些关于污染—健康之关联的重要数据，有助于改进决策和设立议程。

2008年初，环保总局宣布了一个方案，对污染源进行中国首次全国调查。受国务院之托，为期两个月的研究旨在鉴别和收集工业、农业和居民污染源的数据。北京保证，调查的结果将不与对当地政府的表现的任何处罚或评估挂钩。[5]

[4] 作者与环保总局环境健康与监控处官员进行会谈。2008年3月。

[5] 新华社，“ 中国首次全国范围污染调查于2月开始” ，2008年1月4日。

政府在其更好地理解环境与健康之间关联的努力中，也开始与国际社会合作。环保总局、卫生部和中国CDC与世界银行一起进行多层次研究，来衡量中国环境损害。尽管据报中国当局要求删除报告中三分之一的内容，这些内容可能造成社会不稳，但他们加入到研究项目这一行动本身代表了朝正确方向迈出了一小步。[6]

全国水议程

除了采取机制建设措施和实施机构改革以外，政府已加大处理给公共健康带来负面影响的一些重大环境问题的力度。水污染已达到导致流行病的地步，这是令中央领导人和中国公众最忧心的环境问题之一。近年来，针对不断出现水危机和公众不满的加剧，中国已加强了其保护水不受污染的努力。虽然仍存在许多挑战，保护水资源显然愈加得到政治层面的关注。

2008年1月，中央政府发布了关于保护中国主要湖泊和河流的长期工作计划。[7]计划旨在2010前改善主要湖泊的水质，在2030年前使这些湖泊恢复原貌。中央政府已命令各地方政府加强对污染环境企业的打击力度，并提升现有水处理设施以满足新的水质标准。太湖地区已有1千多家工厂被关闭，计划在今后两年内再关闭1600家工厂。[8]

在中国保护水资源努力中，重点在于控制工业污染。[9]2007年7月，中国实施了“绿色信贷政策”，这是该国首次出台针对污染的产业政策，旨在减少银行对能源密集性和严重污染环境的企业的贷款。中国目前计划实施“绿色保险体系”，为所有存在污染风险的行业投保、加强对污染行业的监控以及立即为受害者提供补偿。根据环保总局和中国保监会联合制定的计划，在出现严重环境污染事故时，该体系旨在缓解企业、受害者和政府的财政负担。计划在2015年

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[6] 金融时报，“每年有75万人因中国的污染而死亡”，2007年7月2日。

[7] 新华社，“中国制定控制主要湖泊污染的时间表”，2008年1月22日。

[8] 法新社，“政府关闭遭污染的湖附近1千家工厂”，2007年9月13日。

[9] 新华社，“中国引入‘绿色保险体系’来遏制污染”，2008年2月18日。

前全国范围实施这一保险体系，在2008年开始的试行期期间，着重于涉及最近发生污染事故的行业。

控制水污染为全国人大2008年的首要监管重点，进一步推进正在运作的法律建设。[10]全国人大通过了经修正的水污染和控制法，该法律从严对地方违反环保法规的惩处。从前，污染环境的企业只受到行政处罚，如今，为导致水污染危机负直接责任的企业领导人和他人将被处以最高相当于其上年年收入一半的罚款，企业罚款最高可为直接损失金额的30%。[11]最重要的是，修订后的法律要求将保护水资源与考查地方官员实绩直接挂钩，从而使其成为决定官员是否升迁的一项关键指标。尽管地方官员在很大程度上受地方企业领导人的影响，但他们对升官也是感兴趣的，因此这应当能促使地方遵守环保法规。

虽然北京新制定的保护水资源议程面临诸如中央—地方脱节和机构间协作的挑战，但它表明当局愈加具备政治上的意愿来解决环境和健康之间的关联问题，而且为政府处理其它种类的环境健康问题树立了一个积极的典范。

[10] 新华社，“ 控制水污染为人大监督工作的首要重点” ，2008年3月8日。

[11] 新华社，“ 从严法规，制止水污染” ，2008年2月29日。

6. 建议

总而言之，尽管政府正在形成其对应举措，但基本上滞后于中国迅速恶化的环境健康状况。如上所述，低效的反应会给北京领导人带来社会稳定和政治方面的后果。几项关键步骤将改进中国对正在出现的环境健康挑战的对应。

加强机构改革和环境健康治理机制。随着环境和健康问题成为中央政治议程的重点，要求通过机构间战略来形成政府有效的对应举措。环境健康的挑战为中国继续推进进行之中的机构改革提供了机会。

首次全国行动计划表明北京致力于机构间合作的决心。对中央政府来说，确保落实这一新的承诺既是一项主要的目标，也是一项务实的义务。

在其它部委的积极参与之下，环保总局—卫生部联合机制应得以加强，这些部委包括农业部、国土资源部、水利资源部。中国需要一个全面的环境健康治理机制，该机制最终将融入机构间的努力来共同形成环境健康政策，并成立一个超部级的机构或工作小组来确保这些政策得以实施。

加强官员问责制。政府需要提高关于污染影响健康问题的透明度。需定期收集、分析和公布污染及其影响健康的数据。

应努力加强官员，尤其是地方官员的问责，从而改善中央的政策在地方得以实施的情形。环保中涉及健康的工作表现应成为评估地方当局政绩的一项重要标准。

鼓励民间团体参与环境和健康工作。应允许非政府组织和公民团体参与环境健康问题的决策。中国环保和公共健康领域非政府组织的经历已证明他们可成为政府的有效伙伴。公众愈加开始接受这些组织，他们的议程，尤其是北京奥运会之后，将被视为不太可能使中国在世界舞台上“难堪”。随着中国开始解决环境与健康之关联所带来的新的挑战，应鼓励非政府组织与政府并肩行动。尽

管许多非政府组织在中国仍受到怀疑，但随着北京寻求收紧地方官员对环保法规的权限，非政府组织可成为北京宝贵的同盟。

也应鼓励公众参与地方项目的环保决策和环境影响评估。

美中加强环境健康领域的合作。环境健康是一个充满希望的国际合作领域。国际社会应加倍在这一新兴领域的努力。

就美国来说，存在前所未有的机会与中国进一步发展在环保和健康领域的合作关系。做为世界上主要的温室气体排放国，两国在环境和健康领域面临许多共同的挑战和利益。贸易紧张、台湾问题和其它因素不断给双边关系带来紧张，美中在环境健康问题上展开合作，将有助于加强双边关系。美中战略经济对话（SED）或新政府上台后的后续机制可潜在为就环境健康实施新的合作议程提供一个平台。

美国现有的环保援助计划应通过增加新的成份来触及环境与健康之间的关联问题。美国各级政府、基金会和企业以及其它伙伴应加强资金支持和合作，帮助中国政府改进其在环境健康方面的记录。

附录

环境与健康的机构框架：国家与地方机构

全国性机构

机构名称	**环境和健康领域的职责**
国家环保局（现为环保部）	制定和实施有关水和空气质量、固态废料管理、保护大自然以及核/辐射安全的全国政策、法律和法规；制定全国环境质量标准和污染物处理/排放标准；组织地方环保部门环境质量监管和执法活动；协调关于解决跨境环保问题的计划；组织研究与发展活动。
卫生部	监测饮用水质和控制水生疾病；监督环境卫生；通过国家食品和药物管理局（现在隶属卫生部）监控食品安全问题。
发改委	将各问题综合在全国整体计划体系中以及具体部门的政策中；在各部委之间协调计划；审批包括环保在内的所有投资项目。
教育部	将环境和健康知识融入教学课程；实施外延和教育活动。
科技部	技术开发、促进和研究项目。
财政部	中央融资、贷款还款和财政监控；管理投资及与国际融资机构谈判。

国土资源部	土地使用规划、矿产和海洋资源管理和土地复原；制定和实施土地使用权分配的法规。
建设部（现为住房和城乡建设部）	环保基础设施、包括供水和污水处理厂和固态废料管理。
交通部	交通计划和政策，以改善对环境和健康的保护
水利资源部	管理和监测水资源和地下水质量；制定水资源开发、保护和节水的政策、协调居民、生产和环境用水。
农业部	管理农业政策、农业用地计划、农用化学品、水产自然资源、农业—生物多样性和草地；管理与用水和废水处理相关的农业活动。
商务部	制定与保护环境与健康相关的贸易发展计划和政策。
国家广播、电影电视管理局	管理广播和电视关于环境和健康的宣传工作。
国家统计局	将中国环境信息输入中国统计数据。
国家安全生产管理局	制定和组织实施工作场所保护环境和健康政策。
国务院法制事务办公室信息中心	协调实施与环境和健康相关的法律，法规研究、发展和修订。
中国气象管理局	监控地区空气质量和气候变化；组织气象研究和传播数据。

国家中医管理局	制定中国传统医学处理环境健康的做法。
林业部*	森林管理、保护和节约。
监察部*	参与由环保总局开展的环保执法运动。
国家海洋局*	沿海和海洋水域管理与保护；与环保总局共同控制沿海陆地的污染。

地方主要的机构

机构名称	环境和健康领域担负的职责
环保局	监督新开发项目的环境评估分析和其它程序；监控工业污染排放、制定排污收费标准；对环保未达标的企业采取法律行动；实施环保报告、教育和扩展活动。
地方人大环保委员会	通过地方环保法规；审议同级或下级行政部门的工作；讨论公民提出的环保报怨。
地方政府环保委	协调环保局和地方政府其它部门的工作
市长办公室	就涉及工业发展和环境保护的大型投资项目做出关键的决定。
地方计委	审议县级以上环保局环保计划，并将其融入地方经济和社会发展计划中。
地方工业局	处理日常工业污染物的减排。一些工业局设立环保处，就控制污染的技术问题为企业提供协助；帮助调解纠纷，改善企业之间的沟通。
地方财政局	管理市政府税收与支出，在排污收费制度方面发挥重要作用；审批市环保局使用排污征费基金的年度计划。

*未列在*国家环境与健康行动计划*中罗列的18个部门中。

资料来源：*中国全国环境和健康行动计划*（国家环保总局、卫生部，2007年）、*中国环保达标及执行情况：对目前做法的评估及前景*（经合发组织，2006年）；*中国的环境治理*（中国环境与发展国际合作协会，2006年）。

关于作者

傅瑞伟在CSIS主持费和中国研究项目的工作。来CSIS前，他在中国同盟中任总裁，该同盟由律师事务所合作组成，帮助客户在有关美中贸易、投资和政府关系战略方面进行筹划。在中国同盟之前，他任主管中国事务的助理美国贸易代表（USTR），美国政府的中国贸易主谈判员，在勾画与中国、台湾、香港、澳门和蒙古的总体贸易方面起到了主导作用。在担任助理USTR期间，他负责美国方面的努力，以将中国融入世贸组织的全球贸易架构中。他也就广泛的问题谈判并解决贸易方面的难题，包括保护知识产权、金融和非金融服务、税收、产业标准和技术政策；以及农产品市场准入。贯穿于他职业生涯的中国和亚洲其它国家的工作经验，使他在政府、企业和非盈利部门中从事过工作。在加入USTR之前，傅瑞伟担任阿肯色州共和党参议员Frank Murkowski的国际事务律师，提供尤其侧重东亚地区的贸易、外交和国际能源方面的咨询。除了在中国同盟中的任职，他在私营部门的经历包括担任国际先驱导报驻香港行政管理人员，以及在波士顿担任证券律师和专注于亚洲和东欧新兴市场的风险投资家。在非盈利领域，他曾驻香港，担任亚洲基金会负责中国和台湾经济改革项目主任。傅瑞伟获波士顿大学法学院法学博士，在读期间担任法学周刊编辑并以优异成绩毕业。他获塔夫斯大学亚洲研究学士学位，主攻经济学，同样以优异成绩毕业。他曾就读于上海复旦大学和台北语言学院。做为第二代“ 中国通” ，他成长于亚洲和美国之间，并会讲中国普通话。

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