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*China Research Report*

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*Overcoming Barriers to Growth through Environmental Measures  
—Political Reform a Must; Numerical Targets Needed to Slow  
Global Warming—*

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- The supply side holds the key to China's ability to sustain its rapid growth
- The goal is to achieve both environmental protection and economic growth, but when they are in conflict with each other, agreement on the specifics is proving hard to reach
- It is time for China to make firm international commitments to reduce CO2 emissions and act accordingly

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During the 30 years since China began its course of reform and opening in 1978, the Chinese economy has grown at the blistering average annual rate of 9.8%. Today, however, the global economic crisis is putting the brakes on this growth. Will this slowdown be a temporary phase in the normal economic cycle, or does it signify the end of China's rapid growth period, as the first oil shock in 1973 did for the dramatic expansion of the Japanese economy? Answering this question will require examining not just trends on the demand side, such as exports, investment, and consumption, but also supply-side restrictions over the medium to long term from factors such as the environment and energy. Based on this understanding of the situation, the Japan Center for Economic Research assembled a research team, which I co-chaired with Professor Zhu Jianrong of Toyo Gakuen University, and published a report titled "China: Overcoming Barriers to Growth."

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The rapid expansion of China's economy in recent years has brought broad improvement to the lives of the nation's people. At the same time, urbanization and industrialization have proceeded at a high pitch, and discrepancies have become more apparent between the country's vast population and the resources it requires. This has led to environmental destruction on a massive scale.

According to the major UK oil firm British Petroleum, as of 2007 China's annual energy consumption amounted to 1.863 billion tons (oil equivalent). This represents 16.8% of global consumption and places the country second only to the

United States in the amount of energy it consumes. Considering that per capita energy consumption in China remains far below the level seen in the world's developed nations, it is likely that the country's total energy consumption will continue to grow as its economy develops.

The increase in Chinese energy consumption has been accompanied by an even greater increase in CO<sub>2</sub> emissions. This trend has been driven in particular by China's heavier dependence, compared to developed nations, on coal and other fossil fuels that emit higher levels of CO<sub>2</sub> when burned. In 2006, China's total CO<sub>2</sub> emissions reached 5.61 billion tons, placing the nation very narrowly behind the United States, the world's top emitter with 5.70 billion tons (see the table). It is only a matter of time before China becomes the world's leading carbon dioxide emitter.

#### **CO<sub>2</sub> Emissions by Major Nations (2006)**

	Emissions (bn tons)	Global share (%)
United States	5.70	20.3
China	5.61	20.0
Russia	1.59	5.7
India	1.25	4.5
Japan	1.21	4.3
Germany	0.82	2.9
World total	28.00	100.0

Source: International Energy Agency

According to Pan Yue, vice minister of China's Ministry of Environmental Protection and an opinion leader on environment-related issues, the situation is grim. A third of China's land is subjected to acid rainfall; a fourth of the nation's population drinks water that is not up to minimum safety levels; and a third of China's urban residents breathe extraordinarily polluted air. It is obvious that worsening environmental conditions are posing a serious threat to the health of the Chinese people.

Conditions are considered to be especially bad in five geographic areas: (1) the "three rivers" (Huai, Liao, and Hai Rivers) and "three lakes" (Lakes Tai, Dian, and

Chao), freshwater bodies with extremely high pollution levels; (2) the regions impacted by two national projects, the construction of the Three Gorges Dam and the South-North Water Transfer Project; (3) regions where regulations are in place to diminish the impact of SO<sub>2</sub> pollution and acid rainfall; (4) the capital Beijing, where air pollution is particularly severe; and (5) the Bohai Sea, which has seen a drastic worsening of water quality. The Chinese government is now rolling out measures targeting these areas specifically.

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The Chinese government's stance on environmental issues has changed considerably over the years. During the planned-economy era lasting up to 1978, the official position that "no pollution exists in a socialist state" meant that there were practically no nationwide appeals concerning the importance of environmental protection or moves to boost environmental awareness among the Chinese people. Even after the nation embarked on the course of reform and opening, for many years environmental measures were neglected as economic development became the overriding priority. More recently, however, as awareness that increasingly serious environmental problems are impacting economic growth and social stability has spread, the authorities have moved vigorously to craft measures to tackle those problems.

China's Eleventh Five-Year Development Plan covering economic policy for the years 2006–10, calls for making resource conservation a basic policy of the nation. It also calls for the development of a "recycling economy," the protection of the ecosystem, a rapid shift to a social infrastructure that uses fewer resources and has less environmental impact, and a balance between economic development on one hand and people, resources, and the environment on the other. Building on these steps, the Plan goes on to state the need for China to promote information technology use in the national economy and society and to make steady progress toward achieving new types of industrialization. By pursuing development that is rooted in resource conservation and that is clean and safe, with proper attention to environmental concerns, the nation can achieve sustainable growth into the future.

In terms of concrete figures, the Plan sets key targets for environmental preservation and lower resource use: energy consumption per unit of GDP is to be reduced by 20% over five years, emissions of major pollutants are to be slashed by 10%, and the nation's forest coverage is to be boosted from 18.2% to 20%.

In his report delivered at the Seventeenth National Congress of the Communist Party of China, held in October 2007, General Secretary Hu Jintao called for the creation of a "conservation culture" in China and the formation of industrial structures, formulas for growth, and consumption models rooted in the conservation of energy and resources and the preservation of the ecosystem. This speech marked a departure from

the country's previous course of rapid economic growth at the cost of environmental degradation.

These laudatory efforts by the Chinese government, however, have now run into a wall: while people are in favor of this policy as a whole, they oppose it in the specifics of what is to be done. This is making it difficult to achieve the desired results.

First of all, realizing the official goal of balancing economic growth and environmental protection is proving to be a challenge. Eager to achieve concrete results, the central government has strengthened its supervision of regional authorities. While there has been considerable progress in China's coastal regions, in areas where economic development has been slow to arrive, the attitudes of the people and the approaches taken by local governments have also been slow to adapt. Officials continue to mouth the goal of balancing growth and the environment, but in the Chinese interior there has been little change to the basic stance of favoring development above all else.

Another problem is the limit to which the public at large can be mobilized toward achieving environmental goals. The central government is relatively open to expansions of local residents' movements and activities by nongovernmental organizations to deal with environmental issues, but local authorities continue to take a dim view of such activism and seek to restrict it.

Moreover, there is little sign that China will soon see increased freedom of the press or other bold moves toward democratization of its political process. Local governments and corporations shamelessly seek to prevent information from leaking out in order to cover up the numerous pollution accidents that take place. At the root of the problem lie collusive ties between local governments and the private sector and pervasive corruption among local officials. Clearing away these factors will in the end require political reforms enabling true freedom of the press and drastically expanding direct election of local officials.

Beginning in the 1960s Japan made great progress in reducing pollution and restoring its natural environment to health, a process in which grass-roots movements among the people are held to have played a more important role than efforts by the national and local governments. China will similarly have to grant more autonomy to its press and its people, making popular power a greater part of its environmental measures.

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As the example of climate change caused by greenhouse gas emissions makes clear, current environmental problems can no longer be dealt with by nations acting individually. Addressing global environmental issues is one of the most important tasks facing humanity as a whole today. COP15, the fifteenth Conference of the Parties to the United Nations Convention on Climate Change, will convene in Copenhagen, Denmark,

in December 2009. There, the parties will discuss issues including the framework to succeed the Kyoto Protocol, set greenhouse gas emission reduction targets to be met by 2050, and propose a new action plan. If the Copenhagen conference ends without agreement on reduction targets or national obligations, environmental destruction is certain to continue worsening on a global scale, exposing all of humanity to the threat of climate change.

To date, as a developing country, China is not obliged to adopt any concrete targets for emission reductions or make any environment-related pledges, and has not played an active role in achieving any agreement on reductions in global negotiations. The nation is a rising economic giant, though, and it is among the world's top emitters of greenhouse gases. As such, it is now being pressed to shoulder its share of responsibility in providing the international public good of a better global environment through ameliorating global warming.

In response to this pressure, China should now make a binding international pledge to meet numerical emission-reduction targets. Professor Hu Angang of Tsinghua University, who co-authored our report, recommends a roadmap including the following concrete steps: (1) putting an end to growth in CO<sub>2</sub> emissions by 2020, (2) reducing annual emissions of CO<sub>2</sub> to 2.2 billion tons by 2030, thereby returning them to the level of 1990, and (3) reducing annual emissions to half of that level, 1.1 billion tons, by 2050. This course is in line with the emerging consensus of the need to reduce global emissions to below 20 billion tons by 2050.

A public pledge by China to reduce CO<sub>2</sub> emissions and its efforts to achieve that goal would be concordant with the nation's ideals of achieving science-based development and creating an ecologically minded civilization. At the same time as it contributed to the improvement of its own environment and to that of the world as a whole, the country would also be able to make use of international pressure to suppress domestic resistance to environmental measures. Chinese action in this area would also prompt other important nations, like the United States and India, to work more energetically for the formation of a post-Kyoto Protocol regime. In these ways, a Chinese promise to reduce emissions would benefit China as a nation at the same time that it helped humanity as a whole.

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