

China vs. Earth

Elizabeth Economy | April 19, 2007

The message is clear: Shanghai under water, Tibetan glaciers disappearing, crop yields in precipitous decline, epidemics flaring. These are just some of the dire consequences that Chinese scientists predict for their country this century if current climate change is not addressed. Yet China's leaders pay about as much attention to the issue as does George W. Bush. In fact, a report issued last year by the Climate Action Network-Europe ranks China fifty-fourth out of fifty-six countries for its climate change response, just behind the United States and ahead only of Malaysia and Saudi Arabia.

Beijing knows the costs of inaction: A recent major official study on climate change predicts up to a 37 percent decline in China's wheat, rice and corn yields in the second half of the century. Precipitation may decline by as much as 30 percent in three of China's seven major river regions: the Huai, Liao and Hai. The Yellow and Yangtze rivers, which support the richest agricultural regions of the country and derive much of their water from Tibetan glaciers, will initially experience floods and then drought as the glaciers melt.

Moreover, a one-meter rise in sea level will submerge an area the size of Portugal along China's eastern seaboard--home to more than half the country's population and 60 percent of its economic output. Already climate change-related extreme weather is taking its toll: In 2006 such disasters cost China more than \$25 billion in damage. Finally, a study by Shanghai-based researcher Wen Jiahong suggests that the lethal H5N1 virus will spread as climate change shifts the habitats and migratory patterns of birds.

Yet China's leaders show little inclination to move aggressively to forestall such calamities. As a result of China's reliance on coal to fuel its economy, its emissions of the greenhouse gas carbon dioxide have tripled over the past thirty years and are now second only to those of the United States. In late 2006 the International Energy Agency predicted that China would surpass the United States as the largest contributor of CO₂ by 2009, a full decade earlier than anticipated. China already uses more coal than the United States, the European Union and Japan combined and is the world's second-largest consumer of oil after the United States. (India, which lags well behind China in its overall consumption of coal, is nonetheless on track to become a major CO₂ contributor over the next ten years and is already the fifth-largest contributor of greenhouse gases globally.)

China's development strategy suggests that little will change in the foreseeable future. With plans on the books to urbanize half the Chinese population by 2020, energy consumption will soar. City residents in China use 250 percent more power than their rural counterparts. And China's love affair with the private car is set to rival that of the United States. A conservative estimate by the Asian Development Bank predicts that the number of cars in China could increase by fifteen times present levels over the next thirty years, more than tripling CO₂ emissions.

If China's development trajectory continues as planned, its increase in greenhouse gas emissions will likely *exceed that of all industrialized countries combined over the next twenty-five years*, surpassing by five times the reduction in such emissions that the Kyoto Protocol sought. In short, it's a nightmarishly bad picture.

It would be unfair, however, to characterize China as doing nothing to address climate change. The leadership's worries about both energy security and domestic air pollution--five of the world's ten most polluted cities are in China--are propelling them to set bold targets for reshaping their energy mix and enhancing energy efficiency.

The Chinese government has called for renewable energy to provide 10 percent of the nation's power by 2010 and 15 percent by 2020. Key state-owned enterprises and provincial governors must make 20 percent reductions in their energy intensity (that is, energy consumed per unit of GDP) over the next three years. On that front there is a lot of room for improvement: China's buildings consume 250 percent more energy than buildings in other countries with comparable climates. Beijing has responded with a raft of tough new building codes for energy efficiency. Much like the United States, cities and provinces are now taking matters into their own hands. Shenzhen, for example, has passed a regulation that solar power be used to supply hot water in all new residential buildings under twelve stories.

Already there is some success. With the assistance of the US-based Natural Resources Defense Council (NRDC), China built its first LEED (Leadership in Energy and Environmental Design) certified building. Fittingly, the building houses the Ministry of Science and Technology, in Beijing. Ten stories tall, it uses 70 percent less energy than similar buildings and saves 10,000 tons of water annually through rainwater collection. NRDC energy expert Robert Watson, one of the chief architects of the project, claims that if every new nonresidential building in China matched this one, the electricity savings would equal the amount of energy provided by the Three Gorges Dam.

But China is littered with well-intended demonstration projects that go nowhere. If these new regulations are to have an impact, Beijing's tough rhetoric must be matched by real enforcement, a task that has proved elusive in the past. In 2002 the Chinese government pledged to cut sulfur dioxide 10 percent by 2005. (SO₂ is not a greenhouse gas but is a noxious byproduct of coal power that causes acid rain and urban smog; getting rid of it is a good idea.) But SO₂ emissions have increased 27 percent. From all accounts, few if any of the coal-fired power plants that China is bringing online almost every week embrace state-of-the-art clean technology. Moreover, Beijing has already missed its first-year target for the 2006-10 plan to increase the energy efficiency of industry.

Why can't this supposed command economy impose solutions if its leadership sees a problem? There are several reasons behind China's consistent failure to meet environmental goals.

First, the central government in Beijing actually has little on-the-ground enforcement capability in the provinces. Local environmental protection officials report to and are beholden to local government officials, not to the State Environmental Protection Administration in Beijing. One of the West's great misconceptions is that what Beijing says goes. In fact, local officials are often in cahoots with factory managers and allow industry to pollute well above legal limits--either because the officials have a financial stake in the enterprise or because they are afraid that closing a factory, or making it more expensive to operate, will diminish local employment and lead to social unrest, which is now a very serious problem all across China.

In other cases, local officials want to do the right thing but are too weak in the face of powerful enterprise managers.

At root, however, China's lax environmental enforcement results from Beijing's failure to create a system of green-oriented incentives and penalties. Pricing of natural resources, pollution levies and promotion incentives for officials should all be geared toward environmental protection. Instead, growth at all costs is the guiding logic. Moreover, China's leaders are afraid to unleash civil society, in the form of the media, the legal system and NGOs, to help hold local officials accountable for wrongdoing. Already there are tens of thousands of mass demonstrations over environmental pollution every year. Officials fear that opposition demands will escalate out of control, unleashing a far more powerful push for broader political reform. So the government relies on its old methods, limiting transparency, accountability and free expression.

On the international stage, China faces pressure and incentives to become more environmentally responsible. Beijing's interest in promoting energy efficiency and the development of renewable energy resources--as well as a desire to be perceived as a constructive global actor--drove China's ratification of the Kyoto Protocol. And China has become an active player in the Protocol's Clean Development Mechanism (CDM), tapping into opportunities for technology transfer and international investment. China already has some seventy CDM projects under way--well over half of which supply foreign investment and/or technology for renewable energy projects. According to an Asian Development Bank expert, China could generate an annual revenue stream of more than \$2 billion by participating in externally funded CDM projects.

But without more substantial commitment to meet real targets for radical emissions reductions, China's greenhouse contributions will overwhelm its best efforts.

If there is a meaningful Chinese discussion about tackling climate change, it takes place largely behind closed doors, well out of sight of foreigners. Perhaps recent natural disasters will motivate Chinese leaders: Over just the past year China has suffered floods in the east that have affected more than 10 million people, while drought this spring left 13 million people and 12 million farm animals without enough drinking water.

The Communist Party's argument over the past fifteen years has been: Since China came late to the industrialization game, the core economies, with their significantly greater historical greenhouse gas contributions, must pay for a global transformation away from fossil fuels. Now it is China's turn to develop, so deal with it.

"Development is the first urgent task," said Qin Dahe, a member of the Chinese Academy of Sciences and co-chair of the United Nations Intergovernmental Panel on Climate Change. "It's a firm principle and, moreover, we need good and fast development. Only then will we be able to step by step solve the problem" of climate change. Chinese officials are also quick to point out that on a per capita basis, China's greenhouse gas emissions are dwarfed by those of the developed countries: Per capita discharge is only 61 percent of the world's average and 21 percent of that of OECD (Organization for Economic Co-operation and Development) countries.

A more subtle indication of how China's leaders understand the global climate change regime is revealed by the regulatory framework China has established for the Kyoto-related CDM projects. In essence, Beijing places a higher priority on projects that contribute to the development of the economy and transfer technology to China than on projects that make reductions in greenhouse gas emissions.

When growth and green can be accomplished together, the Chinese government embraces environmentalism. For example, it actively discriminates in favor of CDM proposals that transfer technology and advance the country's capacity in renewables, energy efficiency and methane recovery. But reforestation projects or projects that propose to reduce emissions of HFC-23--a greenhouse gas with global warming potential more than 11,000 times that of CO₂--are discouraged because they do not involve enough capital or provide technology transfer. Working within these confines, the Kyoto-related CDM framework offers important ways for OECD countries to nudge China away from fossil fuels.

Paradoxically, another reason climate change is not a bigger issue in China has to do with local pollution. Anyone who has visited an inland Chinese city knows how terrifyingly bad the air is. Chinese media are replete with horrifying statistics: An estimated 400,000 people die prematurely from respiratory diseases related to air pollution each year; one-quarter of China's land is desert, and the desert is advancing at the rate of 1,900 square miles per year, producing tens of thousands of environmental migrants; and in China's north and west, severe and growing water scarcity is impinging on economic growth, limiting agricultural and industrial output. As a result even the burgeoning environmental nongovernmental sector in China discusses climate change only as an afterthought. Strangely, few outside the scientific community make the connection that climate change may be exacerbating and exacerbated by these "domestic" problems.

The world's most industrialized countries started the climate crisis, but China might well finish the job. Not having China on board for a more stringent post-Kyoto accord is simply not an option.

In late April the Chinese government is expected to release a national plan on global climate change. From all accounts, the document will reinforce the government's

commitment to energy efficiency and renewables while also setting forth prevention policies for natural disasters. What it will not do, unsurprisingly, is embrace any targets or timetables for greenhouse gas emission reductions. For that to happen, two things are necessary. First, the United States, preferably with Australia and India in tow, must agree to aggressive emission reductions, perhaps along the lines currently pursued by California. Without a strong US commitment, the international community has no credibility in pressuring the Chinese.

Second, OECD countries will have to be far more generous and comprehensive in compensating China in its struggle to enforce tougher energy efficiency and renewable standards. That can be done with both financial incentives and technology transfers. What finally brought the Chinese on board with Kyoto and previous international environmental agreements was the attraction of getting paid to do the right thing. If the United States joins the fight against climate change--and if the price is right--there is every reason to believe that China can commit to doing the right thing again.

Source URL: <http://www.thenation.com/article/china-vs-earth>