

# Economic miracle, environmental disaster

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- Article from "What Matters" looks at degradation of China's Huai River Basin
- Book of photo essays looks at 18 environmental, economic and other issues
- "What Matters" edited by "Day in the Life" creator David Elliot Cohen

By Elizabeth C. Economy

Photographs by Stephen Voss

*The following is an excerpt from "What Matters," the latest book by "Day in the Life" series creator David Elliot Cohen. For more information, see [whatmattersonline.com](http://whatmattersonline.com)*

Decades of extraordinary growth have catapulted China to the top of the world's economic charts, earning the admiration of much of the rest of the world.

Indeed, China's continued economic rise has been one of the few certainties of the 21st century. Increasingly, however, the China story is not one of economic miracle but of environmental disaster.

Worries over air quality at the Beijing Olympics, tainted products and China's rapidly growing contribution to global climate change have focused international attention on the environmental downside of China's growth.

At home, the Chinese people watch as environmental degradation and pollution transform their landscape, and in the process endanger their health and future livelihoods.

No one is exempt from the environmental consequences of China's brand of unfettered economic development, but as Stephen Voss' pictures so heartbreakingly illuminate, China's poorest are particularly vulnerable. [▶ Hear Voss describe his photos in an audio slideshow »](#)

In China's cities, merely walking out the front door results in an immediate assault on the senses. The Chinese people complain most often about noise pollution. A cacophony of construction booms and car horns is a permanent fixture of life. The sky is often blanketed in a thick gray haze of pollutants.

The culprits are the ever-present coal-fired power plants and giant heavy-industry complexes that fuel the country's growth, and more and more the noxious emissions of automobiles.

The Chinese are in the midst of an American-style love affair with private cars. The country is adding 14,000 new cars to its roads every day and is in the process of laying 52,000 miles of new roadways -- 10,000 more miles than the entire U.S. interstate highway system. By 2030, China is expected to surpass the United States as the country with the most cars on its roads.

More broadly, Chinese consumption patterns are also following those of the West, despite the warnings of prominent Chinese cultural and environmental leaders. The country's moneyed city dwellers desire air conditioners, refrigerators and second homes.

Popular leisure activities for the wealthy include carbon-intensive activities such as yachting, golfing and car clubs. In the process, urban residents consume 350 percent more energy than rural Chinese, and more than 70 percent of this energy comes from dirty burning coal. Every seven to 10 days, another coal-fired power plant, big enough to serve all the households in Dallas or San Diego, opens somewhere in China.

The environmental toll is enormous. China has five of the world's 10 most polluted cities, and on an average day in China's major cities, 75 percent of the residents are breathing unclean air. The end result: 750,000 Chinese die prematurely every year from air pollution-related respiratory diseases.

For all their wealth, China's cities have yet to conquer the challenge of clean water. Among all of China's 660-odd cities, only one small city of 200,000, Lianyuan in Hunan Province, can claim to provide clean drinking water straight from the tap. In the rest of the country -- even the country's capital, Beijing -- residents boil their water or buy it in bottles.

Even then, they have no real assurance that the water is safe to drink. And in this desperately water-scarce country, the urban infrastructure does little to conserve. Urban China loses up to 20 percent of its water through leaky pipes. Cities such as Shanghai and Tianjin have sunk six feet over the past decade and a half as precious underground water reserves are drawn down, causing skyscrapers to tilt and encouraging coastal flooding.

Yet tilting skyscrapers are the least of the cities' concerns. In Beijing, factories, buildings and underground pipelines have all been destroyed by the plundering of underground aquifers and the resultant land subsidence.

The environmental costs levied on China's 400 million urban residents pale in comparison, however, to those faced by the country's more than 800 million farmers and other rural residents.

Much of China's countryside suffers from severe land degradation, the result of centuries of deforestation and poor land management.

Today, China -- which is roughly the same size as the United States -- is almost one-quarter desert, and the desert is advancing at more than 1,300 square miles, approximately the size of the state of Rhode Island, each year.

Entire villages in China's north have been lost, submerged in sand by the encroaching desert. The country's State Forestry Administration estimates that desertification affects 400 million Chinese, many of whom lose the ability to farm their land or graze their animals and join the ranks of the tens of millions of internal environmental refugees, who often migrate to the big cities in search of new homes and jobs.

Rural Chinese must also contend with a dire water situation. The small-scale industries that have sprouted throughout the countryside pollute with impunity.

As Voss' photographs illustrate, pulp and paper, tanning, chemical and other factories set up shop along the banks of China's rivers and simply dump their waste into the water. Often the factories are protected by local officials who have a financial stake in their survival. More than a quarter of the water that flows through China's seven major river systems and their tributaries is unfit even for industry or agriculture, much less human consumption.

The Yellow River, one of the world's longest, supplies water to more than 150 million people and 15 percent of China's agricultural land. Yet two-thirds of its water is considered unsafe to drink, and 10 percent is classified as sewage. In 2007, Chinese officials announced that over one-third of the fish species native to the Yellow River had become extinct due to damming or pollution.

Such alarming statistics beget other even more alarming numbers. Nearly 700 million people drink water contaminated with animal and human waste, and according to the country's Ministry of Water Resources, 190 million Chinese drink water so contaminated that it makes them sick. It doesn't help that an estimated two-thirds of China's rural population lacks access to piped water -- a development failure that has become one of the leading causes of death among children under the age of five. Local economies also suffer when villagers can't sell their grain or eat the crops planted along the river because the water is so polluted. As much as 10 percent of China's farmland is believed to be polluted, and each year 12 million tons of grain are contaminated with heavy metals absorbed from the soil.

China's environmental challenge moves well beyond simply the problems faced by any society at the height of its industrialization.

The lack of transparency, official accountability and rule of law that defines China's authoritarian political system makes protecting the environment particularly difficult. Perhaps no project better exemplifies this challenge than the Three Gorges Dam.

After decades of promoting the virtues of the dam -- the largest in the world -- Chinese officials are only now beginning to acknowledge the dam's failures. The potentially negative consequences of the dam, including dramatically rising levels of water pollution, deadly landslides, loss of species and relocation of millions of Chinese, were all known to those involved in the planning of the dam for decades, yet open discussion was forbidden.

A journalist, Dai Qing, was imprisoned for 10 months for her efforts to air publicly the dam's likely costs and benefits. Now that the dam has contributed to the death or homelessness of thousands and there is talk of relocating three to four million more Chinese, the price of silence has become clear. Yet still, the Chinese government refuses a fully honest and open assessment of the situation.

The Chinese people increasingly have little patience for official obfuscation and corruption. Journalists push to report honestly on pollution disasters, and lawyers bravely take cases on behalf of pollution victims.

When confronted with poisoned water and air, sick children, and ruined crops, the Chinese people sometimes simply take to the streets. There are more than 50,000 environmental disputes in China every year. For example, in 2006, the residents of six neighboring villages in the poor interior province of Gansu held repeated protests over a six-month period against zinc and iron smelters that they believed were poisoning them. Fully half of the 4,000 to 5,000 villagers exhibited lead-related illnesses ranging from vitamin D deficiency to neurological problems. In 2007, when local officials in southern China illegally confiscated farmers' land to construct a power plant, there were violent demonstrations.

In the cities, where education levels are often higher and information flows more freely, Chinese citizens have even begun to protest in

advance of a potential environmental threat. In 2007, for example, Beijing residents protested a proposed waste incinerator, and the people of the coastal city of Xiamen marched by the thousands, successfully halting the planned construction of a petrochemical plant near the city center.

As pressure on China's leaders mounts from below, the rest of the world is also increasingly impatient with the country's failure to turn its environmental situation around. Pollutants that build up and threaten China's ecosystem and the health of its people also traverse the Pacific and affect the United States and other countries.

China's contribution to global climate change will soon dwarf that of the rest of the world. The country already ranks as the world's largest importer of illegally logged timber and the biggest polluter of the Pacific Ocean.

China's leaders are well aware of the crisis they confront. The environment has moved to the top of their political agenda, and they have promised increased environmental investment, set impressive targets for reducing pollution and launched grand-scale campaigns to address particularly challenging problems of environmental degradation.

International environmental nongovernmental organizations and their counterparts in China are working aggressively to provide grassroots support for environmental protection. A number of multinational corporations have even adopted environmental protection as an important and integral part of their business ethic in China.

Public pressure from around the world counts in Beijing. Yet the situation continues to deteriorate. Rapid growth remains the priority for many in Beijing, and certainly for most local officials. Hundreds of millions of Chinese still live in relative poverty; per-capita GDP amounts to less than \$2,000 annually.

In such an economic environment, the up-front costs of environmental protection can appear daunting, particularly for officials in the less-developed interior of the country with far fewer economic resources. And there are few incentives for local officials to put the environment first.

Moreover, opening the political space to allow for greater citizen involvement in environmental protection -- through a free media, unregulated nongovernmental organizations or an independent judiciary -- is seen as too politically risky by most Chinese Communist Party officials, whose primary concern is maintaining power.

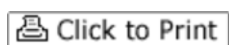
Yet only this type of fundamental reform of the country's political economy will yield the environmental improvements the Chinese leaders and people desire. In the meantime, local economies will suffer, people's health will deteriorate, social unrest will grow and the China story may, in the end, change from economic miracle to environmental collapse.

Stephen Voss is a Washington, D.C.-based photographer whose work has been featured in many international publications, including Time, The Atlantic, The New York Times, Newsweek, Forbes, Der Spiegel and Condé Nast Portfolio. He received a Creative Visions Foundation grant to document homelessness in Portland, Oregon, and photos from the project were featured in a national exhibit. Voss' recent work includes photo essays on U.S. Superfund sites and international adoption.

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