

LETTER FROM THE GUEST EDITOR

Letter from the Guest Editor

Over the last three decades, China's rapid economic expansion has lifted millions of people out of poverty and returned China to prominence on the international stage. At the same time, however, it has done tremendous damage to the natural environment. A quick look at the headlines in the first half 2013 indicate the extent of China's environmental challenge. In January, Beijing experienced an "airpocalypse" during which a thick smog enveloped the city and sent pollution readings quite literally off the charts. In the spring, thousands of dead pigs washed up on the shores of the Huangpu River in Shanghai. Shortly thereafter, authorities in China arrested more than 900 people for meat-related crimes. The arrests included merchants at local farmers markets who misleadingly sold rat meat tainted with unsafe chemicals as mutton. Others butchered and sold disease-ridden pork after they had been hired by the local agricultural ministry to dispose of the pig carcasses.

These were not isolated or unique events. Throughout the reform era, environmental damage has been a fundamental by-product of the China's phenomenal economic growth. In 2007, the World Bank estimated that 90% of the river sections around urban areas are considered seriously polluted. A 2011 report indicated that half the groundwater monitored in 182 Chinese cities is deemed undrinkable, largely due to the influence of untreated sewage, industrial pollution, and pesticides. Air and soil pollution numbers are also daunting. According to a 2013 report by Renmin University in Beijing, almost 90% of China's cities have "heavily" or "severely" polluted air. Some researchers estimate that as much as 70% of China's soil is affected by a combination of pesticide and fertilizer runoff, heavy-metal contamination, and air pollution (which ultimately ends up in the soil).

This environmental degradation has significant public policy implications. First and foremost, there is impact on the health of Chinese citizens. In 2007, the World Bank estimated that air pollution alone contributes to 750,000 premature deaths in China each year. In 2013, a new report by the British medical journal *Lancet* placed the figure closer to 1.2 million per year. Rising pollution levels also influence China's international relations. Now that China is the world's leading consumer of energy and emitter of greenhouse gases (as well as many other pollutants), few nations on earth are unaffected by China's environment and energy policies. Not surprisingly, China has been thrust to the center of global climate-change negotiations and often comes under significant pressure from the international community.

Finally, environmental degradation threatens domestic social stability, particularly in China's rapidly growing urban areas. In 2012, a series of successful protests in Chinese cities such as Ningbo, Shifang, and Qidong each targeted pollution-intensive investment projects. Coming on the heels of similar protests in other cities in previous years, the recent uprisings point to a rising NIMBY (not in my backyard) mentality among Chinese citizens. It is now clear that an increasingly large swath of China's middle class, which currently numbers approximately 300 million, is no longer willing to sacrifice the environment on the altar of economic growth.

Although events like Beijing's "airpocalypse" tend to grab the headlines, the news from China is not entirely bad. On the contrary, over the last two decades Beijing has rolled out a variety of well-intentioned laws and programs aimed at promoting environmental protection. The flurry of activity has been most prominent in the arenas of energy efficiency and climate change. In recent years, China has been the world's largest investor in green technologies. In

2012, it accounted for almost a quarter of the world's spending on green technology as it put more than US\$65 billion into wind farms, solar panels, and other clean-energy projects.

And despite the US Congress' reluctance to consider either a cap-and-trade program or a carbon tax, China is moving ahead with both. In early 2012, China officially announced it was setting up a carbon tax on big energy consumers. China is also working to launch a series of pilot carbon markets in five cities and two provinces. In October 2012, cement manufacturers in the province of Guangdong began buying permits to participate in the carbon-trading program. The companies included in Guangdong's trading program account for 63% of industrial power consumption in the province. Guangdong has a population as large as Mexico's and an economy that is roughly the size of Australia's. If it were a nation, Guangdong's economy would rank among the world's 20 largest. With California, itself with the world's eighth largest economy, having just launched its own carbon-trading plan, it may be that subnational initiatives are going to lay the foundation for future national emission reduction programs.

Pressure from Chinese citizens has also led to positive changes in the environmental protection policies. Early in 2012 the Beijing municipal government announced that it would include PM 2.5 data in its air pollution reporting. (PM 2.5 refers to air particulates below 2.5 micrometers, which are particularly hazardous to human health.) Over the year, several other cities followed suit. The move stemmed in part from a public outcry. During a period of particularly bad air quality early in 2012, Chinese netizens were up in arms over the discrepancies between the rosier reporting of the Chinese government and the information provided by the US Embassy, which tweets air-quality readings hourly. In response to

the growing wave of environmental protests, the central government also recently announced that all major industrial projects are required to perform a social risk assessment, presumably in addition to the environmental impact assessment that is already mandatory.

In sum, China is a country of black rivers and green ambitions. The amount of pollution in China's rivers, air, and soil is alarming, yet it is also clear that Chinese leaders seek to enhance environmental protection and to position China as a leader in green technology. These twin aims, combined with mounting pressure from Chinese citizens,

are driving a great deal of activity and experimentation with new environmental protection measures both in Beijing and at the local government level. Whether China will be able to fulfill its green ambitions is of fundamental importance to China's ecology, the well-being of its citizens, and the health of the global environment.

For this reason, this issue of *Environmental Practice* is dedicated to exploring the causes and consequences of China's environmental challenge. We have assembled a set of articles from authors based on several continents that explore China's environmental policies in a variety of issues, from water

scarcity to climate change to urbanization. Some focus on the local level, whereas others address national or global issues. Collectively, they present both the diversity of scholarship focusing on China's environmental protection as well as the range of pollution control challenges that Beijing faces. I expect that the many fine contributions in this issue of *Environmental Practice* will deepen our understanding of environmental protection in China, stimulate further debate, and promote new avenues of research. I hope you find them as interesting and informative as I do.

Phillip Stalley