

# The Economics of Pollution and Beijing's "Green Olympics"

ADDRESSING POLLUTION IN CHINA HAS A BILLION-DOLLAR PAYOFF

*Working together to study China's effort to cleanup Beijing in time for the 2008 Olympic Games, Robert Mead and Victor Brajer, both professors of economics in the College, have estimated and valued the health benefits of these cleanup efforts. Their findings are part of a successful research program combining Mead's specialization in China's economy with Brajer's focus on environmental economics and the health effects of pollution.*

*By Victor Brajer and Robert Mead*

Having earned a reputation as the world's most polluted capital, Beijing has been cleaning up the region to fulfill their promise for a 2008 "Green Olympics." Since being awarded the bid to host the Games in 2001, Beijing has undertaken a number of endeavors including the conversion of 1,400 coal boilers to cleaner fuels, implementation of new auto emission standards and the completion of several new wastewater treatment facilities. However, continued economic growth and a rapidly growing motor vehicle fleet have created new sources of regional pollution. Consequently, the overall impact of these projects is somewhat unclear. News stories on Beijing's pollution levels both trumpet successes as well as forecast bleak environmental outcomes.

Continued reports of poor environmental conditions have prompted some concern about the impact on athletic performances, and the Beijing organizers have proposed rescheduling certain events in case of adverse environmental conditions. Observers anticipate that Chinese authorities will temporarily shut down industrial and construction activity as well as severely restrict automobile usage for the duration of

the Olympics to ensure that promised air quality standards are met.

While temporary measures may allow for a "Blue Sky Olympics," sustained cleanup efforts are going to have a much longer impact upon the city's residents. Hence, on the eve of the 2008 Beijing Olympic Games, we ask what has been the overall environmental impact of these efforts, and what social benefits have been realized and are still yet to be realized?

Though the city has not achieved the promised reduction in pollution levels, Beijing's populace has benefited from the effort. From 1998 to 2008, this "Olympics-effect" resulted in more than 55,000 avoided deaths along with nearly 600,000 fewer emergency room visits and more than 5 million fewer outpatient visits. Using Chinese-based valuations, these represent social savings of approximately \$6.4 billion.

A successful water pollution cleanup would result in 6,791 fewer dysentery cases per year and 4,332 fewer cancer cases, of which 2,600 would be fatal. The valuation of these water-based benefits is approximately \$340 million annually.

In summary, we find that Olympic cleanup has generated an estimated health benefit in excess of \$6 billion with a potential for an additional annual gain of approximately \$800 million. Moreover, if the Beijing Olympics can serve as a springboard for additional, sustained cleanup nationwide, then the potential benefits increase dramatically. ■