



Policy Briefs

China's Pollution Challenge: Balancing the Carrots and Sticks

by Yun Ping

Pollution is recognized as one of the biggest environmental challenges facing China as the country pushes to modernize and develop its economy.

Many major waterways are in unhealthy condition and air pollution now affects almost all of the country's main cities. Some of this impacts on the rest of the world, through acid rain and emissions of greenhouse gases. Consequently there is much interest, both nationally and internationally, in improving the effectiveness of China's environmental protection policies.

Among the most important market-based anti-pollution policies in the country is the Pollution Charge System (PCS). Covering four types of pollution - water, air, solid waste and noise - it came into widespread use in 1982. The system combines deterrent fees for pollution offenders with a subsidy system to help polluting enterprises build waste treatment facilities. The efficient working of this system as an economic incentive has, however, been questioned and many reservations concerning its practical application remained unanswered.

To try and answer such questions, EEPSEA re-searcher, Yun Ping, from the Institute of Environmental Economics, Renmin University, Beijing, set out to find out whether the PCS really does encourage companies to clean up.

Spurred on by her first-hand working experience in a Chinese environmental protection authority, Yun Ping, began her research by conducting case studies in three cities - Anyang, Changzhou and Shunde - to see how commercial enterprises and the Environmental Protection Bureau (the enforcer of PCS) in each city worked with the system.

Under the PCS, fees are collected when discharge standards are exceeded. Eighty percent of the revenue from the fees is returned to the polluter to help them comply with pollution standards. The remaining 20% is designated for use by local EPBs for things such as the purchase of monitoring equipment.

Yun Ping found that the response to the PCS was complex. Her research showed that many economic factors were impeding its effectiveness. For example, she found that operating and

maintaining treatment facilities was often more costly than paying the pollution charges and that many enterprises preferred paying the fines rather than controlling pollution.

She also found that the EPBs' weak enforcement meant that many enterprises got away with using the rebate to pay for raw materials and salaries rather than pollution prevention. Furthermore many firms were content to pay the fines since the subsidies they then received allowed them to profitably exploit a loop-hole in the tax system.

To find out how wide-spread this type of behaviour was, Yun Ping then carried out a survey of 100 state and non-state owned enterprises in Changzhou City. These firms produced products such as textiles, chemicals, food and drugs.

The results confirmed the findings from the case studies: a large majority of enterprises reporting that they would control more pollution if the subsidy was removed - showing that the present subsidy system has a key role in encouraging enterprises to pay charges instead of helping them to control pollution.

Among her many re-commendations Yun Ping proposed that any rise in fees must be accompanied by a reform of the subsidy system. She also stressed that EPBs play a crucial role in setting and implementing the PCS and that this implicitly affects compliance rates.

"My study shows that distortions in the behaviors of both firms and the environmental authorities could eat away any positive effects a higher fee level could have," she says in summary.

Yun Ping's findings are now available to shape policy implementation and accelerate pollution clean-up.

September 1998

The full text of this study is available as an EEPSEA Research Report: The Pollution Charge System in China: An Economic Incentive? - Yun Ping

For further information contact:

*Yun Ping, Institute of Environmental Economics, Renmin University, Beijing
pyun@osfl.gmu.edu*

Copyright 1997 © International Development Research Centre, Ottawa, Canada
dglover@idrc.org.sg | 16 December 1997