



**Publishing Pollution Data in China:  
Ma Jun and the Institute of Public and Environmental Affairs  
Teaching Note**

**Case Summary**

In the 2000s and early 2010s, China's environmental movement made considerable advances while maneuvering in a tightly constrained system. Constraints included: weak, corrupt and underfunded enforcement agencies; a political structure that rewarded local officials for unsustainable development; a national leadership that viewed rapid GDP growth as essential to its political survival; environmental rules and a legal system that did little to deter violators; and a state-controlled press that avoided provocative issues.

For many years, the Chinese people had been complicit in the heedless exploitation of the country's natural resources. Most benefitted from the decades of economic expansion that followed Deng Xiaoping's rise to power in 1978. They saw pollution as an unpleasant but temporary byproduct of modernization. By the turn of the century, however, public opinion began to shift, as people learned about the alarming extent and consequences of pollution in China.

The case focuses on Ma Jun, a journalist-turned-environmentalist who did as much as anyone to train the public's attention on the issue, starting with his seminal book *China's Water Crisis*, published in 1999. Casting about for solutions, Ma studied environmental movements in developed countries and was intrigued by Pollutant Release and Transfer Registers (PRTs), which required polluting companies to disclose all toxic emissions to the public, even when they were within legal limits. In 2006, Ma founded the non-profit Institute of Public and Environmental Affairs (IPE) in Beijing, with the aim of bringing a similar mechanism to China.

Ma believed that the more people understood the problem of environmental degradation, the more adamantly they would demand action. For this reason, IPE focused, first and foremost, on gathering and disseminating information. Ma also believed that growing public awareness—and anger—would prod the government into taking environmental regulation and enforcement

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more seriously. In this way, Ma reasoned, the environmental movement in China could make significant progress, even without a free press or strong legal system (both of which were key elements to movements in the US, Europe and Japan).

Ma applied his thinking to a series of initiatives, led by IPE, targeting multinational corporations (MNCs) and their Chinese suppliers, city governments, institutional investors, and other constituents. Although small (IPE had a staff of 16 researchers by late-2013), the organization achieved outsized results by employing technology in innovative ways and capitalizing on the increasing availability of pollution records. There were other distinctive aspects to IPE's approach. It leveraged the power of the consumer, and the competitive nature of companies and government officials, to encourage better environmental performance. IPE extended its geographic reach by partnering with dozens of non-governmental organizations (NGOs) throughout the country. Favoring collaboration over confrontation, IPE earned the confidence of many companies, as well as government officials and regulators.

In December 2013, Ma and his team were working on IPE's latest initiative: to re-publish real-time emissions data generated by the country's 15,000 heaviest polluters, most of them state-owned enterprises (SOEs). New regulations required the SOEs to report air and water emissions on an hourly basis to provincial environmental protection bureaus (EPBs), and for EPBs to publicize the data online. IPE planned to aggregate and re-publish the information in a more user-friendly format, using interactive maps and a smart phone app. The build-out of the website and app would take some months. In the meantime, IPE would issue a report in January 2014, assessing the EPBs' progress in implementing the new system. The report, *Blue Sky Roadmap II*, would draw the media and public's attention to the real-time data streams—and to specific SOEs that could now be identified as emissions violators.

Ma had worked for years to bring a PRTR-like mechanism to China; the real-time data rules were very close to what he envisioned. But in aggregating and re-publishing the SOE data, and drawing attention to violators, IPE was likely to raise the ire of some powerful people. SOEs had strong backers within government, and NGOs, though gaining in legitimacy, were vulnerable. They could be harassed, sued or shut down—even when the law seemed to be on their side (and many Chinese environmental laws were notoriously opaque).

To further complicate matters, IPE recognized that errors in the data stream were likely as the new system was rolled out. SOEs might hold IPE accountable for these errors. A company might claim that IPE had re-published faulty data and demand that the information be retracted, or even threaten legal action. IPE would have trouble double-checking data, because once publicized, it vanished; EPBs had not made historical data available to the public. If an SOE questioned numbers, how should IPE respond? Were there any steps it could take to mitigate the risk? Should it delay its initiative until it could find a way to ensure the data's accuracy? These were some of the

questions Ma and his team pondered in December 2013 as they prepared to issue the *Roadmap II* report.

## Teaching Objectives

This case highlights ways an environmental NGO can work within a less-than-ideal system—for example, a developing economy or one that is hyper-growth-oriented, or a country without democratic process, a mature legal system, or effective environmental regulation. Environmentalists in such conditions may be unable to protest, engage in civil disobedience, or take their cause to court. But there may be other avenues for action. While lacking a free press, for instance, China in 2013 had high levels of Internet and smart phone usage, and social media and microblogs did much to fill the communication void. IPE leveraged the Internet in creative ways to present and disseminate information.

Deficiencies in China's regulatory regime led IPE to focus on transparency. Ma Jun believed that citizens and consumers could pressure the government into improving environmental enforcement, and companies into more responsible behavior. But for the public to act, it needed to be informed. IPE therefore worked to uncover and publish information that would motivate the public.

Use this case to discuss how IPE sought constructive relationships with China's environmental regulators and government officials. In what ways did collaboration help IPE meet its own goals? You might list student answers on the board as the beginning of a class effort to define IPE's strategy. For example, by bolstering the capabilities of EPBs (e.g., getting MNCs to reduce their own suppliers' emissions), IPE was able to reduce pollution *and* build trust with environmental regulators. This meant it could call on EPBs later to help resolve data disputes with SOEs. IPE also earned a voice within the Ministry of Environmental Protection (MEP), and its recommendations may even have helped shape environmental regulations released in 2012 and 2013.

Students can debate the relative merits of working “within the system” versus operating from the outside. Ask a few to describe environmental conditions in their own countries, and discuss whether IPE's approach is transferable. What methods might an NGO use to overcome private sector or governmental obstacles—or perhaps even turn them to advantage? For example, IPE benefitted from the fact that the Chinese government had a long tradition of collecting data. The technical know-how and monitoring resources were largely in place. IPE's challenge was to make the data public and useful. Can this be duplicated elsewhere?

IPE also benefitted from high smart-phone and Internet usage in China, and the explosion of demand for real-time data. Interestingly, China's July 2013 real-time data rules went *further* than PRTRs, at least in the frequency of the required reporting (PRTRs were generally updated

annually). How did IPE capitalize on these trends? What lessons might this hold for other activists, regardless of the policy area?

When Ma founded IPE in 2006, he had lofty ambitions (ultimately, to restore blue skies, clean water and healthy soil), but started small. IPE gathered and re-published information that was already public (e.g., environmental violation records). How did this minimize risks for the NGO? Ask students to discuss IPE's strategy of focusing first on MNCs, instead of going after the largest polluters (such as the 15,000 "key state-monitored enterprises"). What made "foreign" targets more acceptable? Encourage the class to consider ways in which MNCs were more susceptible to consumer pressure; and could be persuaded to take action without the involvement of regulators or courts. IPE, unable to influence polluting factories directly, was able to hold MNCs publically accountable for the pollution violations of their first- and second-tier suppliers in China. Was this effective? How might it have backfired?

Between 2006 and 2013, IPE went after increasingly difficult targets—city governments, institutional investors and, in the last part of the case, the country's largest SOEs. How did this evolution build capability and credibility? Students can discuss what developments, both within and outside the organization, led to the dramatic expansion of IPE's scope. Among the external factors were trends toward greater transparency (e.g. the Open Government Information rules announced in 2007), the central government's desire to be seen cracking down on local government corruption and improving the environment, and recognition that NGOs could play a role in this effort.

How dependent are activists on such external developments? Could Ma have been successful 10 years earlier? Ma had predicted that an informed public would be a motivated public—but what are the risks in an authoritarian society of energizing the public? Was Ma a radical, or an incrementalist? How might his journalistic background have contributed to the way he built and expanded IPE?

## **Class plan**

Use this case in a class/course on sustainable development, environmental studies or non-profit management. It can also be used as a history of China's environmental movement or in studying dynamics within China's political system.

*Pre-class: Help students prepare for class by assigning the following question:*

1) Should IPE publish the *Blue Sky II* report, despite questions about data accuracy and the risk of provoking SOEs?

Instructors may find it useful to engage students ahead of class by asking them to post brief responses (no more than 250 words) to questions in an online forum. Writing short comments

challenges students to distill their thoughts and express them succinctly. The instructor can use the students' work both to craft talking points ahead of class, and to identify particular students to call upon during the discussion.

*In-class questions:* The homework assignment is a useful starting point for preliminary discussion, after which the instructor could pose any of the following questions to promote an 80- to 90-minute discussion. The choice of questions will be determined by what the instructor would like the students to learn from the class discussion. In general, choosing to discuss three or four questions in some depth is preferable to trying to cover them all.

a) What is China's capacity to respond to environmental crises? How does it differ from more developed countries?

b) How do central/local government dynamics affect China's environment? How did they affect IPE?

c) What lessons can environmentalists in your country draw from the experience of Ma Jun and IPE? Would IPE's methods work in your country?

d) In 2013, IPE had a staff of just 16 researchers. Yet it was able to influence dozens of MNCs, hundreds of Chinese manufacturers, and local and national government officials. It may even have helped shape environmental policy, including the real-time data rules. What allowed this small organization to achieve outsized results?

e) Ma Jun focused on *transparency* as the foundation for environmental action in China. Do you agree with this approach?

f) What factors made it challenging for environmental NGOs to work effectively in China? How did IPE overcome these obstacles?

g) Why did IPE focus on MNCs before state-owned companies? Are foreign companies easier targets?

h) Why did IPE partner with local NGOs, as well as with public universities and other institutions? What are the benefits and drawbacks of partnership?

i) What do you think was the Chinese government view of IPE? What, if anything, did it want from the organization? Contrast the viewpoint of local/central officials.

j) IPE created several online tools (pollution maps, a citation database, a real-time data app) and published a series of rankings and reports. Who were the intended users/audience for these products? Why did IPE seek to address varied constituencies?

k) How did IPE leverage technology? Can this be duplicated elsewhere?

l) Under PRTRs, companies report toxic emissions annually. Why did IPE and the Chinese public demand real-time reporting? Are there drawbacks to monitoring and publishing industrial pollution data in real time?

m) What risks did IPE face in re-publishing real-time emissions data from SOEs? How could it mitigate those risks?

n) Ma Jun and his colleagues believed flawed data was better than no data. Do you agree? Why or why not?

### Suggested Readings

Judith Shapiro, *China's Environmental Challenges* (Cambridge, UK: Polity Press, 2012).

SYNOPSIS: This book is a succinct but comprehensive primer on environmental issues in modern China, from Mao's time to 2012. Judith Shapiro investigates the problem within political, cultural and economic contexts unique to China, and describes the evolution of its green movement. The book provides discussion questions for students of sustainable development and environmental justice.

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Judith Shapiro, "The Evolving Tactics of China's Green Movement," *Current History*, September 2013.

SYNOPSIS: In this article, Shapiro describes the main tactics of China's environmental NGOs: *information politics* (sharing information), *networking* (combining the forces of multiple groups in a single campaign), *bearing witness* (bringing remote environmental conflicts to the public's attention through film and other media), *accountability politics* (holding companies and local governments accountable to existing laws), *naming and shaming* (embarrassing violators through social media and marketing techniques), *undercover investigations* by intrepid journalists, *transparency politics* (uncovering suppressed data and using the Internet to empower the public with information), *supply-chain analysis* (demanding that multinationals take responsibility for suppliers), *Internet activism* such as online petitions, and the increasing use of environmental *lawsuits*. She focuses on Ma Jun as a pioneer of many of these tactics, particularly transparency politics and supply-chain analysis.

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Ma Jun, *China's Water Crisis* (Norwalk, CT: Eastbridge, 2004).

SYNOPSIS: In this landmark work first published in Chinese in 1999, Ma Jun investigates the degradation of China's water resources, including historical causes (dating to dynastic times) as well as modern-day sources and causes of pollution. He focuses on the Yellow and Yangtze rivers, and then moves through the major regions of China examining smaller rivers, lakes and aquifers. The book opened the public's eyes to the extent of the problem and helped mobilize China's green movement.

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Ruby Yang, Thomas Lennon, and Brian Keane, *The Warriors of Qiugang* [New York: Cinema Guild, 2010] View online:

[http://e360.yale.edu/feature/the\\_warriors\\_of\\_qiugang\\_a\\_chinese\\_village\\_fights\\_back/2358/](http://e360.yale.edu/feature/the_warriors_of_qiugang_a_chinese_village_fights_back/2358/)

SYNOPSIS: This 39-minute documentary follows the travails of a farming village in Anhui Province, where new factories spewed chemicals into the river and air, killing wildlife and sickening residents. Residents teamed up with an environmental NGO, Green Anhui, to try to hold the factory's owners and local government accountable. The film offers a vivid picture of the impact of pollution on the daily lives of the Chinese, particularly poor, rural and uneducated citizens who are nearly powerless. It also provides a first-hand account of how NGOs operate, maneuvering within political constraints to make existing laws work for citizens.

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Ian Johnson, "In the Air: Discontent Grows in China's Most Polluted Cities," *The New Yorker*, December 2, 2013.

SYNOPSIS: This article provides another account of a rural community, staggering under extraordinary levels of pollution produced by a large steelmaker. It explores the relationships among government, industry and citizens, as well as the role of local environmental groups. It also documents the public's growing awareness of pollution and use of real-time air quality monitoring data.

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Jonathan Watts, *When a Billion Chinese Jump: Voices from the Frontline of Climate Change* [London: Faber & Faber Ltd., 2010].

SYNOPSIS: Jonathan Watts, a journalist for the *Guardian*, travels China and interviews ordinary people, capturing stories of hardship and perseverance in the face of environmental

catastrophe—deforestation, erosion, pollution and more. He writes with journalistic objectivity, moving region by region, and exploring the causes and consequences of China's environmental degradation.

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IPE, *A Roadmap to Blue Skies: China's Atmospheric Pollution Source Positioning Report*, December 2011.

SYNOPSIS: About a year and a half before the MEP announced the new rules on real-time point-of-source emissions data, IPE published this report, which called for just such a mechanism. In the report, IPE argued that in order for the government to reduce pollution levels, it would have to identify the sources (mainly state-owned enterprises) that were responsible for most of the discharge—and in order to hold these SOEs accountable, the information would have to be made public.

<http://www.ipe.org.cn/Upload/Report-Positioning-EN.pdf>

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IPE et al., *Blue Sky Roadmap II: Real-Time Disclosure Begins*, January 2014.

SYNOPSIS: The decision point of the case focuses on the risks for IPE in publishing this report in January 2014, which would mark the official launch of the organization's real-time data initiative. The report assesses the efforts of provincial EPBs in rolling out new real-time emissions data requirements. It also showcases how people can use the data to look at pollution from a regional or industry level, or to track the performance of individual SOEs.

<http://www.ipe.org.cn/Upload/IPE-Reports/Report-Blue-Sky-Roadmap-II-EN.pdf>

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IPE and Renmin University of China Law School, *A Threat To Public Health: China's Urban Air Quality Disclosure Needs Urgent Improvement: 2010 Annual Urban Air Quality Transparency Index (AQTI) Results and Comparative Study of 20 Domestic and 10 International Cities*, January 19, 2011.

SYNOPSIS: As the case describes, IPE conducted a comparison of air quality monitoring in Chinese cities versus several international cities. The results were presented in this report, as were recommendations to the government for improving the transparency and usefulness of information on urban air pollution. Among the demands: monitor air quality in real-time, include PM2.5 readings, and make the data available to the public online. Many of IPE's recommendations



found their way into official policy. Follow-up AQTI reports can be found on IPE's website:

<http://www.ipe.org.cn/en/about/report.aspx>.

<http://www.ipe.org.cn/Upload/Report-AQTI-EN.pdf>

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IPE and NRDC, *Breaking the ice on environmental open information: The 2008 Pollution Information Transparency Index (PITI): First Annual Assessment of Environmental Transparency in 113 Chinese Cities*, September 17, 2010.

SYNOPSIS: In the case, IPE and the Natural Resources Defense Council (NRDC) create the Pollution Information Transparency Index to spur competition between local governments to implement open government information reforms. Notably, PITI ranked city governments by their openness, rather than by the level of pollution in their jurisdictions. Annual PITI reports can be found on IPE's website: <http://www.ipe.org.cn/en/about/report.aspx>.

<http://www.ipe.org.cn/Upload/Report-PITI-2008-EN.pdf>

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Other IPE reports are mentioned in the case, such as investigative reports on Apple, Inc., and reports focused on the IT, textile and cement industries. All can be downloaded in Chinese or English from IPE's website: <http://www.ipe.org.cn/en/about/report.aspx>.

To explore IPE's online maps and interactive tools, visit:

<http://www.ipe.org.cn/En/pollution/sources.aspx?mode=0>.