Pollution
Information
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Index

Breaking the Ice on Environmental Open Information

The 2008 Pollution Information Transparency Index (PITI)
First Annual Assessment of Environmental Transparency in 113 Chinese Cities

P I T I

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Institute of Public & Environmental Affairs

The Institute of Public & Environmental Affairs (IPE) is a registered non-profit organization based in Beijing. Since its establishment in May 2006, IPE has developed two pollution databases, the China Water Pollution Map (www.ipe.org.cn) and the China Air Pollution Map (air.ipe.org.cn), to monitor corporate environmental performance and to facilitate public participation in environmental governance.

Natural Resources Defense Council

The Natural Resources Defense Council (NRDC) is a non-profit environmental organization with more than 1.3 million members and online activists. Since 1970, NRDC lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing.

NRDC was the first international environmental organization to establish a clean energy program in China. Over the last 15 years, its team of experts has helped China develop clean, efficient, and affordable energy and environmental policies, strategies, and techniques for reducing pollution. In recent years, NRDC has expanded the scope of its work to capitalize on new opportunities in environmental governance and law, health, and the promotion of green supply chains.

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Executive Summary

On May 1, 2008, the Regulations of the People's Republic of China on Open Government Information and the Ministry of Environmental Protection Measures on Open Environmental Information (trial) entered into effect. These regulations stand as major milestones for Chinese environmental governance. In order to systematically evaluate the first year of implementation for these regulations, the Institute of Public & Environmental Affairs (IPE) and the Natural Resources Defense Council (NRDC) developed the Pollution Information Transparency Index (PITI). The PITI methodology assesses the degree of pollution information transparency at the municipal level through a review of eight metrics, including records of facility violations, results of environmental petition and complaint cases, and responses to public requests for information. The evaluation establishes a quantitative score for each city that allows for ranking of performance.

IPE and NRDC utilized the PITI methodology to complete an initial evaluation of pollution information disclosure in 2008 for 113 Chinese cities.

Nearly all of the cities evaluated (110 of 113) are designated by the Ministry of Environmental Protection as key state environmental protection cities, including Harbin, Jinan, Shijiazhuang, Changsha, Guangzhou, Chengdu, and Urumqi.[1] These cities are distributed throughout eastern, central, and western China.

[1] The key state environmental protection cities are designated in China's 11th Five-Year Plan for Environmental Protection. The three cities in the PITI evaluation that are not key state environmental protection cities are Dongguan, Yancheng, and Ordos.

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Part 1

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

KEY FINDINGS

The key findings of the 2008 PITI assessment are listed below:

KEY FINDING 1: The PITI evaluation revealed that many cities have already made significant strides in the implementation of environmental information disclosure.

The inaugural PITI assessment reveals that many cities in China have made significant strides in environmental information transparency. In the area of proactive information disclosure, **Shanghai**, **Ningbo**, **Taiyuan**, and **Wuhan** have begun to carry out relatively systematic disclosure of facility violations. Cities such as **Beijing**, **Chongqing**, **Fuzhou**, and **Jiaozuo** showed good performance in the disclosure of information on the handling of public petitions and complaint cases. **Hefei**, **Qingdao**, **Kunming**, and **Zhengzhou** have been the most responsive to requests for information disclosure.

KEY FINDING 2: Overall, the implementation of environmental information disclosure is still at a relatively low level.

2008 was the first year of implementation for China's national open government information regulations, and the overall level of government pollution information disclosure was still relatively low. Out of a possible 100 points, slightly more than 60 points represent requirements under Chinese law. Additional "bonus" points were allocated for various information disclosure practices deemed to facilitate the public's convenience and right-to-know. Of the 113 cities evaluated, only four received more than 60 points; 32 cities received fewer than 20 points; the average score of all 113 cities was just over 31 points.[2]

KEY FINDING 3: There is a relationship between the level of transparency, on one hand, and geographic location and level of economic development, on the other. However, this relationship is not absolute.

The initial results reveal significant regional differences in the degree of disclosure. In general, the eastern provinces outperform the central provinces, while the central provinces outperform the western provinces of China.

However, the relationship between information disclosure and geographic location is not absolute. **Wuhan**, **Chongqing**, and **Taiyuan**, for example, are cities located in central and western China that have distinguished themselves with higher levels of information disclosure compared with peer cities in the same regions. In the eastern part of China, where in general the disclosure level is higher, there are nonetheless several underperformers, such as **Zhanjiang**, **Benxi**, and **Tai'an.**

Levels of information disclosure in central, eastern, and western regions also exhibit some correlation with the levels of economic development. However, this relationship is also not absolute. For instance, we can see that the nine cities evaluated in Jiangsu province have a higher score on average than the nine cities evaluated in Guangdong province, although the Guangdong cities had a higher average per capita GDP.

[2] A Chinese-language version of the PITI methodology can be found at http://china.nrdc.org/zh-hans/library/PITI An English version of the methodology is currently being developed.

KEY FINDING 4: Heavy pollution and a low degree of pollution information disclosure go hand-in-hand in many cases.

A number of cities with high levels of pollution also had relatively low levels of transparency. This was the case regardless of whether the metric for pollution was pollution discharged per 10,000 RMB of industrial output (in the year 2007) or concentration levels of sulfur dioxide and particulate matter (PM10).

KEY FINDING 5: Disclosure upon request has had a difficult start, with claims of "commercial secrets" a common justification for non-disclosure.

The evaluation of government responsiveness to public information requests, as required by the Measures on Open Environmental Information (trial) involved the filing of actual requests in September 2008 in all of the 113 assessed cities. Requests were made in each city for two types of information required by regulations to be proactively disclosed: the list of polluters that had received administrative punishment, as well as a list of local complaints and how they were handled by the relevant government bureaus. Of the 113 cities, only 27 provided the information, while the remaining 86 cities did not disclose the requested information. The reasons for non-disclosure ranged widely, including claims that the information was not subject to disclosure or was covered by the commercial secrets exemption, disclosure would require an official letter from higher level agencies, or non-disclosure was needed to protect economic development.

KEY FINDING 6: Information disclosure was often incomplete and lacked an appropriate level of detail.

Of the four PITI evaluation metrics – systematic disclosure, timeliness, comprehensiveness, and user-friendliness – we found that overall performance on comprehensiveness (i.e., the extent to which information disclosed was complete) was the lowest. On average, cities received more than 30 percent of total possible points for systematic disclosure, timeliness, and user-friendliness. Cities received fewer than 25 percent of total points available for comprehensiveness. In other words, information disclosure was often not at an appropriate level of detail.

KEY FINDING 7: A large number of cities have "best practices" worthy of examination. These cases demonstrate that effective pollution information disclosure is already possible in China.

The inaugural PITI analysis identified many "best practices" in cities throughout China. By taking the top-scoring city in each of the eight evaluation metrics, we assembled an "all-star team" that received a score of 89.5 out of 100, suggesting that effective environmental information disclosure is possible in China at its current stage of economic development.

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

RECOMMENDATIONS

Based on the 2008 PITI assessment results, we propose the following four recommendations:

RECOMMENDATION 1: China already has an impressive number of best practices in information disclosure, and should consider the creation of platforms to enable cities nationwide to learn from the best practices of all-star and other high-performing cities. Information-sharing workshops and best practices guides are possible channels for distributing best practices.

RECOMMENDATION 2: Incomplete information disclosure greatly limits the usefulness of environmental information disclosure. The need to constantly improve the quality of information disclosed will present the biggest challenge to environmental authorities. IPE and NRDC therefore recommend that State Council, Ministry of Environmental Protection (MEP), and the Supreme People's Court (SPC) clarify the rules on information disclosure to improve the comprehensiveness of disclosure and establish clear channels for dispute resolution to resolve problems of insufficient data quality and disclosure.

RECOMMENDATION 3: Lack of specificity in the open information regulations has led to varying interpretations in implementation. This has led to problems in both proactive government information disclosure and response to public information requests. For example, there has been great variation in the interpretation of MEP regulations regarding "information collected by the government in the course of fulfilling its duties." Some bureaus have interpreted these narrowly to exclude, for example, enterprise emissions data, which is also held by enterprises themselves. MEP should issue further guidance and clarification regarding the Measures on Open Environmental Information (trial) to clarify the scope of environmental information disclosure. The SPC should issue a judicial interpretation or other guidance to clarify areas of environmental information disclosure that are prone to differing interpretations, such as the scope of "commercial secrets" and other exemptions. MEP and the SPC should issue guidance to clarify that information disclosed to the public after an information request is public information that can be utilized by any member of the public.

RECOMMENDATION 4: Pollutant Release and Transfer Registers (PRTR) involving comprehensive databases of facility-level pollutant releases would be a valuable supplement to the information already disclosed in China, and would serve to strengthen environmental protection. Through its clean production audit rules, China already discloses the type of information set forth in a PRTR for a limited range of enterprises. In principle, there is no reason that China cannot take the further step to a broad-based PRTR. Experience in the U.S. with the Toxics Release Inventory, and experience with PRTRs in a number of other countries, demonstrate the usefulness of such systems in improving environmental protection, strengthening public supervision of polluters, and encouraging competition among local governments and enterprises to improve environmental performance.

This is the first in a series of annual PITI evaluations. We recognize the potential limitations of this initial attempt at evaluation, and hope to make continuous improvements in the years ahead. We welcome any feedback and suggestions for improving the quality of this evaluation. Please send any feedback or suggestions by email to: **piticomments@gmail.com**

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Part 1

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

Introduction

Over the last few decades, environmental information disclosure has come to be considered an indispensible tool for environmental regulation worldwide. Environmental information disclosure has gained such widespread acceptance because of its effectiveness in reducing pollution and improving the efficiency of enforcement and compliance efforts. Information disclosure has spurred companies to take proactive measures to reduce pollution in their own facilities. It can raise public awareness of environmental issues, and give the public the tools it needs to identify and handle environmental risks. Information disclosure can empower other stakeholders, such as banks, shareholders, consumers and others, to monitor the environmental performance of companies, and work to reduce pollution. Furthermore, it can help governments to clarify enforcement priorities.

Today, over 90 countries around the world have laws on open government information,[3] and more than 20 countries have established public registries of pollution data known as Pollutant Release and Transfer Registers (PRTR).[4] Experience in these countries indicates that information disclosure has played a positive role in promoting pollution reduction. For example, in 1986 the United States established the Toxics Release Inventory (TRI), a public database disclosing emissions of hundreds of different pollutants. After the first 10 years of TRI implementation, the emissions of 340 different chemicals listed in the TRI were reduced by 45.5 percent.[5] Similar successes can be found in developing countries, such as in Indonesia where the Program for Pollution Control Evaluation and Rating (PROPER), initiated in 1995, is believed to have made an important contribution to pollution reduction.[6]

These experiences with environmental information disclosure from other countries around the world also apply to China. China has begun to embrace environmental information disclosure as a tool for environmental protection, recognizing that the country's rapid economic and social development has made information disclosure more important than ever. Since 2003, China has passed a series of environmental laws, regulations, and policies that incorporate a variety of environmental information disclosure requirements.

[3] For reference please see http://right2info.org/resources/publications/Fringe%20Special%20-%2090%20FOIAs%20-%20sep%207%202009.pdf/view, last visited on June 3, 2010.

[4] See http://www.epa.gov/TRI/programs/international/#h1, last visited on June 3, 2010.

[5] Please see http://www.pewclimate.org/policy_center/policy_reports_and_analysis/brief_ghg_reporting_disclosure/ghg_model.cfm, last visited on June 3, 2010.

[6] Please see http://siteresources.worldbank.org/INTEMPOWERMENT/Resources/14825_Indonesia_Proper-web.pdf, last visited on December 14, 2009.

- One of the earliest was the 2003 Clean Production Promotion Law (and the related 2004 Interim Measures on Clean Production Audits), which require key polluting enterprises to disclose information about emissions and other environmental data.[7]
- The 2003 Environmental Impact Assessment Law (and the related 2006 Measures on Public Participation in Environmental Impact Assessment) required partial public disclosure of environmental impact assessment documents.
- In 2005, a key State Council document, which set forth guiding principles on environmental protection, stressed the importance of environmental information disclosure, public supervisory mechanisms, and disclosure of enterprise violations of environmental standards, among other things.[8]
- The broadest effort to use environmental information disclosure came with the passage of China's first national regulations on open government information (effective as of May 1, 2008). China's Ministry of Environmental Protection was the first ministry to embrace these regulations by passing the Measures on Open Environmental Information (trial), which set forth detailed provisions regarding the environmental information disclosure obligations of environmental protection bureaus and enterprises.

The progress China has made in passing these laws and policies on environmental transparency is important. Even more important is how well these environmental information disclosure requirements are implemented in practice. In order to objectively answer this question, the Institute of Public & Environmental Affairs (IPE) and the Natural Resources Defense Council (NRDC) developed the Pollution Information Transparency Index (PITI),[9] a tool for evaluating the level of pollution information disclosure in 113 Chinese cities. The intention of PITI is not only to provide the public and government with a better sense of the state of environmental transparency implementation in China, but also to identify the best practices on environmental information disclosure in China, so that cities around the country can benefit. Furthermore, a goal of PITI is to help make interpretation of information disclosure rules more consistent around the country. This will allow for an objective evaluation of whether this first year of implementation of open information disclosure in China is meeting the needs of the public, companies, government, and other stakeholders, and adequately supporting the involvement of the public in China's environmental governance. The 2008 PITI evaluation will be the first of a series of annual evaluations that will enable an assessment of environmental transparency in China over time.

An analysis of the 2008 PITI evaluation results revealed a number of overall trends: First, the Chinese government's legal obligations to proactively disclose information are similar to what is required in other countries; however, implementation of these obligations is still inadequate. Second, in its response to public information requests, China is still in its infancy. Finally, China still displays a low level of openness with certain kinds of important environmental information, especially facility-level emissions data and environmental impact assessment (EIA) information. Taking into account these characteristics, this report hopes to promote best practices through the dissemination of model case studies from around China, and the use of environmental information disclosure to strengthen supervision of China's environmental protection work.

[7] "Key enterprises" refers to those that shall implement clean production audit as required by Article 28 of the PRC Law on Clean Production Promotion, including: heavily polluting enterprises that violate pollutant emission standards or violate the quota of total emission of pollutants ("Type I Key Enterprises"), and enterprises that use or emit toxic and hazardous substances during production ("Type II Key Enterprises").

[8] See "Decision on Implementing the Outlook on Scientific Development and Strengthening Environmental Protection" Guofa (2005) No. 39, December 3, 2005 (http://www.gov.cn/zwgk/2005-12/13/content_125680.htm)

[9] Green Longjiang, an NGO from Heilongjiang province, also contributed to this assessment.

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

Methodology

I. Evaluating Pollution Information Transparency in 113 Cities

The PITI evaluation assesses the level of disclosure of pollution information in 113 cities located throughout China. 110 of these are "key state environmental protection cities," including **Harbin**, **Jinan**, **Shijiazhuang**, **Changsha**, **Guangzhou**, **Chengdu**, and **Urumqi**.[10]

Figure 1: Distribution of PITI Evaluation Cities

[10] The key state environmental protection cities are designated in China's 11th Five-Year Plan for Environmental Protection. Three cities in the PITI evaluation - Dongguan, Yancheng and Ordos - are not key state environmental protection cities.

II. PITI Evaluation Criteria

Each city was evaluated on disclosure performance for eight metrics, which all directly or indirectly relate to the environmental performance of polluting enterprises:

- **Records of Enterprise Violations (28 pts):** As required by the Ministry of Environmental Protection (MEP) Measures on Open Environmental Information (MEP Measures), disclosure of records for various types of facility violations, including administrative penalties and enforcement actions taken.
- **Results of "Enforcement Campaigns" Against Polluting Facilities (8 pts):** Disclosure of the results of environmental protection bureau enforcement campaigns, such as campaigns targeting specific sectors, regions, or facilities, or ordering cessation of violations by designated deadlines.
- **Clean Production Audit Information (8 pts):** As required by the MEP Measures, disclosure of two types of information: (i) lists of enterprises for which the government has enforced clean production audits; (ii) emissions data from enterprises selected to undergo clean production audits, which by law must be released one month after the clean production audit. This is China's only legal requirement for disclosure of facility-level pollutant emissions/discharge data.
- **Enterprise Environmental Performance Ratings (8 pts):** Disclosure of enterprise environmental performance ratings in accordance with MEP guidelines, which set forth a color-coded system representing levels of environmental performance: very good (green), good (blue), average (yellow), poor (red), and very poor (black). This system does not require disclosure of factory-level emissions data.
- **Disposition of Verified Petitions and Complaints (18 pts):** As required by the MEP Measures, disclosure of information on petitions and complaints, as well as their handling, including the content, target, and result of complaints and petitions, as well as general statistics on petition acceptances, investigations, and handling results.
- **Environmental Impact Assessment (EIA) Reports and Project Completion Approvals (8 pts):** As required by the MEP Measures, disclosure of: (i) the public comment draft of EIA reports; (ii) project completion reports, which typically include useful information about allowable enterprise emission levels.
- **Discharge Fee Data (4 pts):** Disclosure of discharge fee data, including the basis for such fees, standards and procedures for fees levied, fees owed compared with actual fees collected, and any waivers or discounts granted to facilities.
- **Response to Public Information Requests (18 pts):** Response to public information requests and whether the local environmental protection bureau has established a standard and comprehensive system for responding to public information requests, including disclosure of information regarding request procedures, provision of accurate contact information, the establishment of special offices or personnel for handling public information requests, standard and timely response to requests, and efforts to improve public convenience in making information requests

TOTAL: 100 pts

Each of the eight metrics is scored according to four evaluation criteria:

- **Systematic Disclosure:** Rating the comprehensiveness and continuity of disclosure (e.g., gaps in disclosure – a missed quarter of disclosure – or low numbers of records/information will result in lower scores here).
- **Timeliness:** Rating whether disclosure is timely and in accordance with legal requirements regarding the timing of disclosure.
- **Comprehensiveness:** Evaluating the level of detail, or completeness, of data disclosed (e.g., whether particular records disclosed include required information – such as names of enterprises, types of pollutants, etc.).
- **User-Friendliness:** Rating whether the manner in which information is presented or provided is convenient for the public.

☆ A detailed description of the evaluation criteria can be found online at:

http://china.nrdc.org/zh-hans/library/PITI
http://www.ipe.org.cn/uploadFiles/2009-07/1248835436668.pdf

An English language version of the evaluation methodology is being prepared at the time of this writing.

III. PITI Evaluation Process

Stage One: Development of the Evaluation Methodology

The development of the evaluation methodology involved two steps. First, based on legal requirements and experience in environmental regulation, the research team selected the most important types of information related to the regulation of pollution sources. Each category of information was assigned evaluation criteria and allocated points to reflect the relative importance of each category. In order to ensure quality and fairness of the evaluation, the research team solicited the opinions of a panel of experts in environmental protection, law, statistics, and other fields. This feedback was incorporated into the evaluation methodology where appropriate.

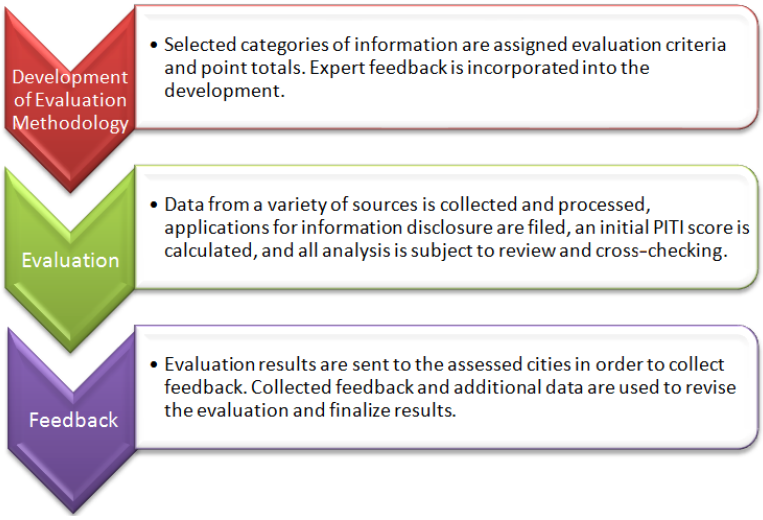
Stage Two: Evaluation

A team of researchers implemented the evaluation methodology by collecting official data from the Internet and other sources and through applications for information disclosure. The evaluation stage included several steps, such as data collection and processing, applications for information disclosure and follow-up with relevant government bureaus, the initial assessment and calculation of PITI score, and evaluation review and cross-check.

Stage Three: Feedback

In order to ensure the transparency of the evaluation process and avoid overlooking any data, the research team sought feedback from local EPBs in all 113 cities featured in the PITI evaluation after the release of the assessment data. Feedback from this process was used to once again revise the data and evaluation results.

The PITI Evaluation Process



Note:
The PITI evaluation uses data from public sources on the Internet, and information from inquiries to local environmental protection bureaus. The evaluation results have also benefited from consultation with the local EPBs. All suggestions regarding missing or insufficient data are welcome. However, the authors of the PITI evaluation do not make any representations and bear no responsibility for the accuracy of data and information obtained from these sources.

IV. Testing the PITI Methodology

To ensure the robustness of the evaluation methodology, IPE and NRDC held several workshops and meetings with leading experts in law, policy, statistics, and governance from China's top universities and research institutes to test and refine the methodology. In addition, a team of statisticians from Renmin University carried out a sensitivity analysis to assess how the scores and rankings would be affected by different score weightings and point criteria. This sensitivity analysis indicated a low level of sensitivity – that is, the adjustment of score weighting does not significantly impact the overall order of the ranking.

The 2008 Pollution Information Transparency Index (PITI):
Evaluation Results and Case Studies

2008 PITI Assessment Results and Analysis

The 2008 PITI assessment is the first national evaluation of pollution information disclosure in 113 Chinese cities. On a 100 point scale, the top scoring city was Ningbo with a total of 72.9 points. The mean score was 31.06 points.

Figure 2: 2008 PITI Index Scores and Rankings for 113 Cities[11]

No.	City	PITI Score	No.	City	PITI Score	No.	City	PITI Score
1	Ningbo	72.9	39	Ma'anshan	37.9	77	Qinhuangdao	21.2
2	Hefei	66.6	40	Jinan	36.2	77	Yueyang	21.2
3	Fuzhou	63.7	41	Jiaozuo	36.1	79	Anyang	21
4	Wuhan	61.2	42	Dongguan	34.3	79	Beihai	21
5	Changzhou	56.8	43	Chengdu	34.2	81	Jinzhou	20.4
6	Chongqing	56.7	44	Yichang	33.7	82	Hohhot	19.4
7	Shanghai	56.5	45	Zhuhai	33.4	83	Luzhou	19.2
8	Nantong	56.2	46	Yancheng	33	84	Yangquan	19
9	Taiyuan	55.4	47	Urumqi	32.7	85	Yan'an	18.8
10	Wenzhou	53.3	48	Xuzhou	32.6	86	Zaozhuang	18.6
11	Shaoxing	52.6	48	Zhengzhou	32.6	87	Shaoguan	18.4
12	Dalian	51.7	50	Daqing	30	88	Ordos	18.2
13	Wuxi	51.6	51	Shijiazhuang	29.5	89	Panzhihua	18
14	Shenzhen	51.1	51	Handan	29.5	90	Jining	17.8
15	Quanzhou	50.6	53	Yinchuan	28.9	91	Qiqihar	17.2
16	Kunming	49.4	54	Luoyang	27	92	Lanzhou	16.6
17	Beijing	49.1	54	Lianyungang	27	93	Jiujiang	16.2
18	Taizhou	48.4	56	Changsha	26.8	93	Kaifeng	16.2
19	Hangzhou	48	57	Tangshan	26.6	93	Anshan	16.2
20	Nanjing	47.2	57	Xiamen	26.6	96	Liuzhou	15.8
21	Suzhou	47	59	Guilin	26.1	97	Tai'an	15.6
22	Zibo	46	60	Jiaxing	25.7	98	Yibin	14.4
23	Weihai	45.4	61	Xi'an	25.4	98	Jinchang	14.4
24	Yantai	44.5	61	Tongchuan	25.4	98	Shizuishan	14.4
25	Guangzhou	44.4	63	Zhuzhou	25.2	101	Baotou	14
25	Foshan	44.4	63	Tianjin	25.2	101	Linfen	14
27	Yanzhou	44.3	63	Pingdingshan	25.2	101	Xiangtan	14
28	Changzhi	42.9	66	Guiyang	24.9	101	Baoji	14
28	Zhongshan	42.9	67	Qujing	24.8	105	Zhangjiajie	12.8
30	Shantou	42.6	68	Wuhu	24.6	106	Datong	12.6
31	Huzhou	40.4	69	Changde	24.4	107	Zunyi	12.4
32	Jingzhou	40	70	Chifeng	24.1	107	Mianyang	12.4
33	Baoding	39.7	71	Xianyang	23.3	109	Benxi	12
34	Nanning	39.2	72	Nanchang	23.2	110	Karamay	11.2
35	Shenyang	38.8	73	Rizhao	22.3	111	Zhanjiang	10.6
35	Mudanjiang	38.8	74	Weifang	22.2	112	Jilin	10.2
37	Qingdao	38.4	75	Changchun	21.7	112	Xining	10.2
38	Harbin	38.1	76	Fushun	21.6			

[11] Shaoxing municipality had several records of environmental complaints posted to a section of the Shaoxing EPB website. Please note that these were discovered on February 22, 2010, and this information was not incorporated into the 2008 PITI evaluation.

The key findings of the 2008 PITI assessment are listed below:

1 The PITI evaluation revealed that many cities have already made significant strides in the implementation of environmental information disclosure.

The inaugural PITI assessment reveals that many cities in China have made significant strides in environmental information transparency. In the area of proactive information disclosure, **Shanghai**, **Ningbo**, **Taiyuan**, and **Wuhan** have begun to carry out relatively systematic disclosure of corporate violations. Cities such as **Beijing**, **Chongqing**, **Fuzhou**, and **Jiaozuo** exhibited good performance in the disclosure of information on the handling of public petitions and complaint cases. **Hefei**, **Qingdao**, **Kunming**, and **Zhengzhou** have been the most responsive to requests for information disclosure.

Figure 3: The Top 20 Cities in the PITI Ranking and Their Scores for Each of the Eight Evaluation Metrics

2008 PITI Scoring Results – Top 20 Cities Ranking										
NO.	City	PITI Score	Records of Enterprise Violations	Results of "Enforcement Campaigns" against Polluting Enterprises	Clean Production Audit Information	Enterprise Evaluation Performance Ratings	Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Public Information Requests
1	Ningbo	72.9	23.1	4.2	3.2	4.2	16.2	7.2	2	12.8
2	Hefei	66.6	21.4	5.2	3.2	0	14	2.8	2	18
3	Fuzhou	63.7	18.6	4.6	3.2	0	16.9	0	3.6	16.8
4	Wuhan	61.2	16.8	3.2	6	0	16.2	4	2.2	12.8
5	Changzhou	56.8	18.6	4.6	6.4	4	3.6	6.8	0	12.8
6	Chongqing	56.7	5.6	5.8	5.6	0	16.9	6.8	2	14
7	Shanghai	56.5	23.2	4.8	4	2.2	5.3	2.8	1.4	12.8
8	Nantong	56.2	14.9	6.4	3.2	4.6	14.7	7.2	0	5.2
9	Taiyuan	55.4	22.4	5.4	3.6	1.6	14.4	2.4	3.2	2.4
10	Wenzhou	53.3	19.9	5.6	3.2	5.2	11.4	2.8	0.2	5
11	Shaoxing	52.6	5.6	1.6	3.6	3.6	16.2	7.6	2.8	11.6
12	Dalian	51.7	11.2	6	3.6	0	14.7	1.6	0.2	14.4
13	Wuxi	51.6	14.5	4.6	3.2	3.4	16.9	5.6	0.2	3.2
14	Shenzhen	51.1	19.9	1.6	7.2	1.6	3.6	5.6	0	11.6
15	Quanzhou	50.6	5.6	5.8	3.2	0	15.4	3.2	1.2	16.2
16	Kunming	49.4	5.6	1.6	3.6	0	14.4	3.2	3.8	17.2
17	Beijing	49.1	5.6	6.4	0	0	16.9	2.8	0.2	17.2
18	Taizhou	48.4	19	7.4	3.2	4.8	3.6	1.6	0	8.8
19	Hangzhou	48	11.2	4.6	3.2	3.6	7.2	3.2	2.2	12.8
20	Nanjing	47.2	5.6	6.2	3.2	4.2	15.8	5.6	2.6	4

Best Practices in Four Cities

NINGBO, Zhejiang Province

Ningbo surpassed all other cities in the evaluation with a balanced performance resulting in a total score of 72.9 points.

Ningbo demonstrated good performance in the three most important categories of information disclosure: disclosure of violation records, disposition of verified petitions and complaints, and response to public information requests.

Figure 4: Detail of 2008 PITI Scores for Ningbo

Item[12]	Records of Enterprise Violations	Disposition of Verified Petitions and Complaints	Response to Public Information Requests
Description	During 2008, Ningbo disclosed more than 600 pieces of routine supervision information in a timely manner	All of the complaint cases disclosed include the date and content of the complaints and replies, and all the replies directly state the status of the cases and their handling results	The Ningbo Environmental Protection Bureau (EPB) replied to IPE's September 2008 request for disclosure of information concerning administrative penalty cases
PITI Score	23.1 of 28 points	16.2 of 18 points	12.8 of 18 points

Figure 5: The homepage of the Ningbo EPB website prominently features environmental information disclosure, providing updates on EIA approvals, open information resources, and a way to submit complaints online
(Source: Ningbo EPB website, http://www.nbepb.cnnb.net/Index.aspx, as of July 14, 2009)

[12] Ningbo's 2008 performance in three major PITI categories.

SHANGHAI

Shanghai disclosed records of enterprise violations in a user-friendly and comprehensive manner.

The Shanghai Environmental Protection Bureau (EPB) disclosed records of enterprise violations of rules and standards through a special web-based environmental enforcement information database. This disclosure scored particularly high on PITI's systematic disclosure and user-friendliness metrics. In 2008, the Shanghai EPB disclosed the violations of 1,088 enterprises. The online database has a search function that enables easier public access to the information. Cities can score a maximum possible 28 points for disclosure of enterprise environmental violation records. Shanghai scored the highest of all cities evaluated in this category, with 23.2 out of 28 possible points.

Figure 6: The Shanghai EPB website features an updated list of all daily violations of rules and standards by enterprises

(Source: Shanghai EPB website, http://www.sepb.gov.cn/zhifa/subsearch.jsp?stype=082, as of January 12, 2010)

Note: This website provides (i) the name of the facility, (ii) the nature of the violation, (iii) the regulations or rules violated, and (iv) the date of the announcement.

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

BEIJING

Beijing has a special website to disclose the content and handling of public complaints.

The Beijing Environmental Protection Bureau (EPB) has a special website[13] for environmental complaints that discloses citizen petitions for the entire year. The website has a system for online submission of complaints, response, and timely public disclosure of petitions and complaints. This disclosure scored high on PITI's timeliness criteria. Moreover, disclosure of this information was relatively comprehensive, including disclosure of information regarding the nature, status, and ultimate disposition of the petitions or complaints by the government agency.

Figure 7: The Beijing EPB features the disclosure of environmental complaints and petitions on its special 12369 hotline portal

(Source: Beijing EPB website, http://12369.bjepb.gov.cn/12369web/content.asp?Class=信访处理情况回复&Page=9, as of September 10, 2009)

Note: This table sets forth government responses regarding the status of public petitions.

FUZHOU, Fujian Province

Fuzhou succeeded in user-friendly disclosure of petitions and complaints.

The Fuzhou municipal government website established an online channel for Fuzhou citizens known as the Call Center 12345. The website displays information regarding citizen appeals to government from 14 districts and counties within Fuzhou, submitted via web, email, text messages, telephone, fax, the "Mayor's Suggestion Box," and audio recording, as well as the suggestions and actions taken by the relevant government departments. The public can search this information by time of complaint, type of complaint, and status of handling. The website has many features that enhance public convenience in seeking information.

[13] See http://12369.bjepb.gov.cn.

Figure 8: Environmental complaints are disclosed on Fuzhou Call Center 12345 website
(Source: Fuzhou municipal government website, http://12345.fuzhou.gov.cn/callcenter/callSearchDo.do Call Center 12345 for Fuzhou Citizens, as of January 12, 2010)

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The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

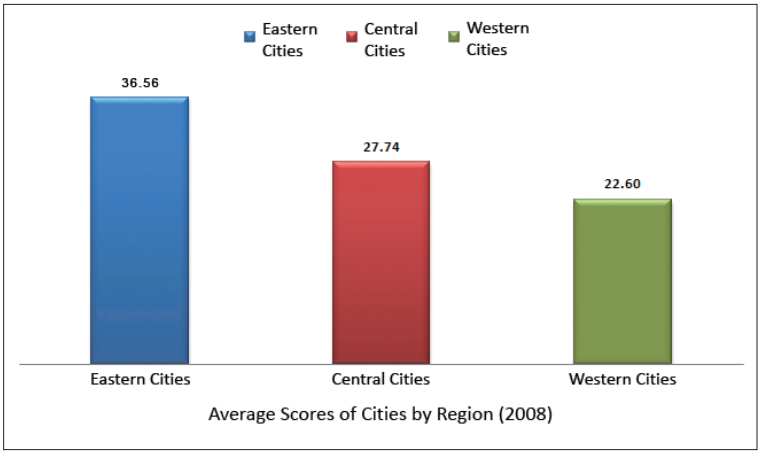
2 Overall, the implementation of environmental information disclosure is still at a relatively low level.

2008 was the first year of implementation for China's national open government information regulations, and the overall level of government pollution information disclosure was still relatively low. Out of a possible 100 points, slightly more than 60 points represent requirements under Chinese law. Additional "bonus" points were allocated for various information disclosure practices deemed to facilitate the public's convenience and right-to-know. Of the 113 cities evaluated, only four received more than 60 points; 32 cities received fewer than 20 points; and the average score of all 113 cities was just over 31 points.[14]

3 There is a relationship between the level of transparency, on one hand, and geographic location and level of economic development, on the other. However, this relationship is not absolute.

The 2008 PITI assessment results show broad regional differences in open environmental information correlated loosely with level of economic development. On average, the cities in eastern China scored higher than cities in central China, which in turn scored higher than cities in western China. The average score of the 56 cities in eastern China evaluated was 36.56 points. The average of the 34 cities in central China evaluated was 27.74. The average of the 23 western cities evaluated was 22.60.

Figure 9: Comparison of the average PITI scores for the eastern, central, and western regions in 2008



China's eastern, central, and western regions differ greatly in economic development level, with economic development level generally decreasing moving east to west. The differences among the three regions suggest a correlation between level of information disclosure and level of economic development.

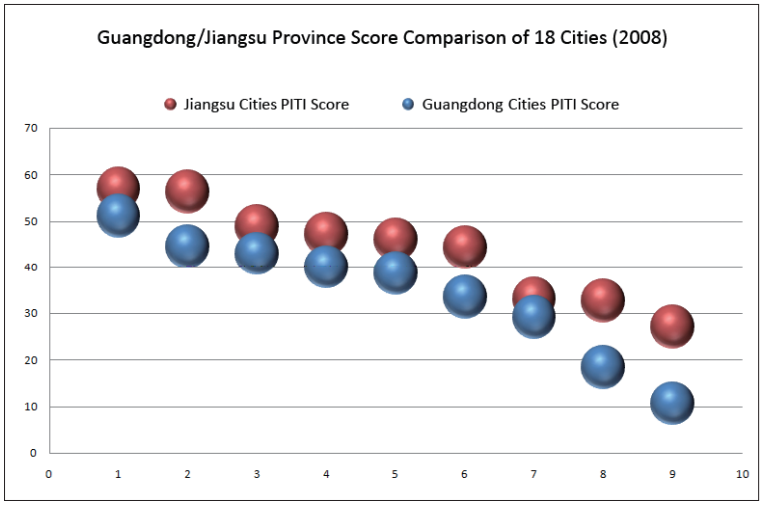
Further analysis shows, however, that this correlation is not absolute. Guangdong and Jiangsu provinces are both economically advanced and export-oriented. The 9 Jiangsu cities[15] assessed had an average per capita GDP of RMB 39,846 in 2007, and the average PITI score was 43.97 points. The 9 Guangdong cities[16] assessed had a higher average per capita GDP of RMB 45,590 in 2007, but an average PITI score of only 35.79

[14] For assessment rules, please see http://www.ipe.org.cn/news/news_view.jsp?BH=97 and www.greenlaw.org.cn/blog/?p=1191

[15] Changzhou, Nantong, Wuxi, Nanjing, Suzhou, Yangzhou, Yancheng, Xuzhou, Lianyungang. Jiangsu province's per capita GDP, source: www.tjcn.org, last visited on March 8, 2009.

[16] Shenzhen, Foshan, Zhongsha, Guangzhou, Shandong, Zhuhai, Dongguan, Shaoguan, Zhenjiang. Guangdong province's per capita GDP, source: www.tjcn.org, last visited on March 8, 2009.

Figure 10: Comparison of PITI scores in 18 cities from Guangdong and Jiangsu provinces



Another example of non-absolute correlation between information disclosure and the region where a city is located is that in the middle and western regions of China, where disclosure of water quality information was relatively poor, **Wuhan**, **Chongqing**, and **Taiyuan** exhibited relatively strong performance, while in eastern China, where the average disclosure performance was high, cities like **Zhanjiang**, **Benxi**, and **Tai'an** received a very low score.

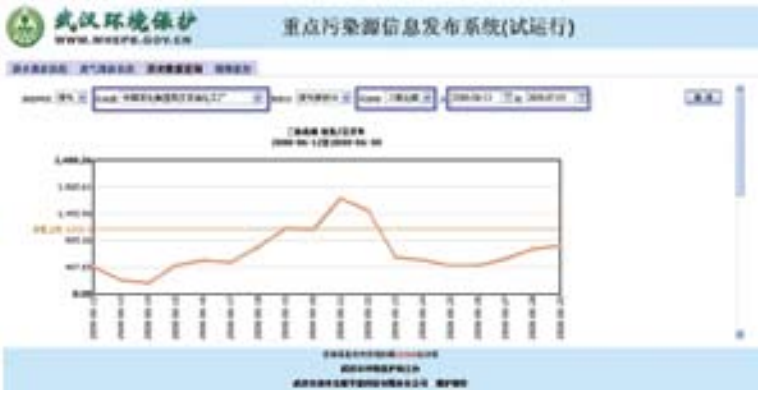
Strong Performers in China's Developing Regions

WUHAN, Hubei Province

Wuhan performed well on disclosure of online monitoring data on the EPB website.

The Wuhan Environmental Protection Bureau (EPB) has instituted an innovative system for routine monitoring of enterprise emissions. Since June 2008, the system has provided the public with 24-hour online monitoring data and video of key emissions sources of wastewater and waste gas, as well as the ability to search historical data. One can select a key pollution source, relevant pollutants, and time period to determine whether an enterprise has violated emissions standards during that time period, track trends in emissions and discharges, and view real-time monitoring video of enterprise emissions.

Figure 11: The Wuhan Environmental Protection Bureau (EPB) site allows visitors to view daily emissions monitoring data of key sources
(Source: Wuhan EPB website, http://www.whepb.gov.cn/publish/whhbj/2009-01/23/1200901211054340014.html, as of December 29, 2009)



Note: The title of this page reads: "Key Pollution Sources Information Disclosure System (trial operation)." The boxes (from left to right) highlight pull-down menus for selecting "key pollution sources," "type of pollutant," and "time period." The graph shows emission over a given time period.

Figure 12: Daily emissions monitoring data disclosed on the Wuhan EPB website includes video feeds
(Source: Wuhan EPB website, http://www.whepb.gov.cn/publish/whhbj/2009-01/23/1200901211054340014.html, as of May 21, 2009)

Note: The above is a video feed of the wastewater treatment pool at the Wuhan Budweiser plant.

TAIYUAN, Shanxi Province

Taiyuan disclosed detailed emissions data for key sources.

The Taiyuan EPB has set up a special section on its website regarding environmental monitoring and data disclosure for the industrial wastewater discharge of 10 key sources and industrial air emissions for 17 key sources. For each type of pollution, three categories of information are disclosed:

- Wastewater discharge: (i) volume of wastewater discharge, (ii) volume of major pollutants in the wastewater, and (iii) violations of concentration levels for major pollutants in wastewater.
- Air emissions: (i) air pollutant monitoring data, (ii) monitoring results of fugitive gas from coke ovens, and (iii) process emissions.[17]

Figure 13: Industrial wastewater emissions data from key sources in the third quarter of 2008, Taiyuan
(Source: Taiyuan EPB website, http://www.tyshbj.com.cn/web/huanjingjiance/wenjian/2008115994664089.doc, as of December 2008)

表2　　2008年3季度重点源工业废水排放量情况统计

企业名称	排放总量（万吨）	达标水量（万吨）	达标率（%）	各企业排放量占总排放量的百分比（%）	主要超标污染物（指口）
全市重点源（10家企业）	249.03	207.56	83.33	/	/
太原钢铁（集团）有限公司	99.15	99.15	100	39.81	/
太化股份有限公司合成氨分公司	55.00	33.00	57.14	22.01	COD（总排）
太原煤气化（集团）有限责任公司	14.70	11.18	75.61	5.90	COD、氨氮（总排）
晋西机器厂	25.75	25.75	100	10.34	/
太原重型机械集团有限公司	28.32	28.32	100	11.37	/
太化股份有限公司氯碱分公司	7.18	0.00	0.00	2.88	COD（总排）
太化股份有限公司焦化分公司	6.64	4.14	62.35	2.67	挥发酚（总排）
太化集团公司造纸厂	4.24	3.89	88.36	1.70	pH（末排）
盖里化工有限责任公司	3.10	1.66	53.55	1.24	汞
山西晋能集生方信息有限公司	1.09	1.09	100	0.44	/
太化集团公司南郊污水处理厂（未参加全市工业废水排量统计）	331.56	331.56	100	/	/

Note: "Table 2: 2008 Third Quarter Statistics on the Status of Industrial Wastewater Discharge Volume from Key Sources." The headings on the table read (from left to right): "Enterprise Name," "Total Discharge Volume (10,000 tons)," "Compliant Water Volume (10,000 tons)," "Rate of Compliance (%)," "Individual Enterprises Discharge Volume as a Percentage of Total Discharge Volume (%)," "Primary Pollutant Exceeding Standards (discharge pipe)."

Poor Performers in China's Developed East

JINING, Shandong Province

No disclosure of records of enterprise violations of rules and standards.

Jining did not disclose any information for four of the eight PITI evaluation metrics. Jining's 2008 disclosure of environmental violations was limited to a few records related to local (small) enterprises about to be shut down. The local EPB and government websites contained an area through which public information requests could be made online, and provided telephone and fax numbers. However, researchers' calls to the phone number provided to make an information request received no answer.

[17] As of the writing of this report, we note that Taiyuan has not continued disclosure of key source monitoring in 2009.

Figure 14: 2008 PITI score for Jining

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Jining	5.6	5.8	3.2	0	0	0	0	3.2	17.8

TAI'AN, Shandong Province

One of 10 cities in Shandong that scored near the bottom of the PITI ranking.

Tai'an provided no information for four of the eight PITI metrics. Tai'an disclosed records of enterprise violation for a mere 16 facilities and scored only 5.6 points. The websites of the Environmental Protection Bureau (EPB) and the city government contained no information regarding how the public could request environmental information. We obtained the telephone and fax numbers of the EPB through 114 (China's telephone information directory number) and submitted the request by fax. One day after the fax submission, the EPB promised that it would fulfill the request. As of this writing, the EPB has not provided the requested information.

Figure 15: 2008 PITI score for Tai'an

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Tai'an	5.6	4.8	3.2	0	0	0	0	2	15.6

BENXI, Liaoning Province

The lowest score in Northeast China.

Benxi scored just 12 points, the lowest score in Northeast China and third to lowest in eastern China. The average score for all cities in eastern China, in contrast, was 36.56 points.

Benxi received no points for five of eight evaluation metrics. It disclosed no information regarding public complaints and disclosed no environmental impact assessment (EIA) information. While Benxi provided information about public disclosure requests, researchers submitted a request according to the information provided, no reply was given.

Figure 16: 2008 PITI score for Benxi

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Benxi	5.6	2.4	4	0	0	0	0	0	12

4 Heavy pollution and a low degree of pollution information disclosure go hand-in-hand in many cases.

PITI analysis showed that a number of cities with high levels of industrial emissions intensity in 2007 (sulfur dioxide (SO_2) and chemical oxygen demand (COD) emissions per RMB 10,000 of industrial output value)[18] scored poorly in the PITI evaluation. Cities with relatively high emission intensity in all regions of China - **Shizuishan**, **Baoji**, **Xiangtan**, **Yibing**, **Luzhou**, **Benxi**, **Kaifeng**, and **Zaozhuang** - also had low levels of environmental information disclosure.

PITI analysis also showed that a number of cities with high concentrations of ambient air pollution had low PITI scores. Using the average daily value of air pollutants[19] in 2005 as the variable for analysis, cities with high concentration of SO_2 and/or inhalable particles, such as **Lanzhou**, **Zhuzhou**, **Datong**, **Linfen**, **Yangquan**, **Baotou**, **Yueyang**, and **Panzhihua**, all had very limited disclosure of environmental information (see the two tables on the following page).

High Levels of Pollution and Low Levels of Transparency

The following cases highlight a number of cities with high levels of pollution and emissions intensity and their performance in pollution source information disclosure:

BAOJI, Shaanxi Province

The lowest scoring among the five cities assessed in Shaanxi province.

The average score of cities in western China was 22.6 points. Baoji received a score of just 14 points. According to the 2007 China Environment Statistics, Baoji ranked highest in discharge intensity of COD (tons/RMB 10,000 of total industrial output) in the five cities assessed in Shaanxi province, and its PITI score is the lowest of the five cities.

Figure 17: 2008 PITI score for Baoji

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Baoji	5.6	1.6	3.2	0	3.6	0	0	0	14

[18] Industrial emissions intensity of COD and sulfur dioxide for 2007 is drawn from the 2007 China Environmental Statistics Annual Report, China Environmental Sciences Press, December 2008.

[19] The annual average daily values of SO_2 and inhalable particles for 2005 are drawn from the Environmental Quality Report 2005

Figure 18: Relation between PITI scores in cities assessed in 2008 and average daily value of PM10 concentrations in 2005

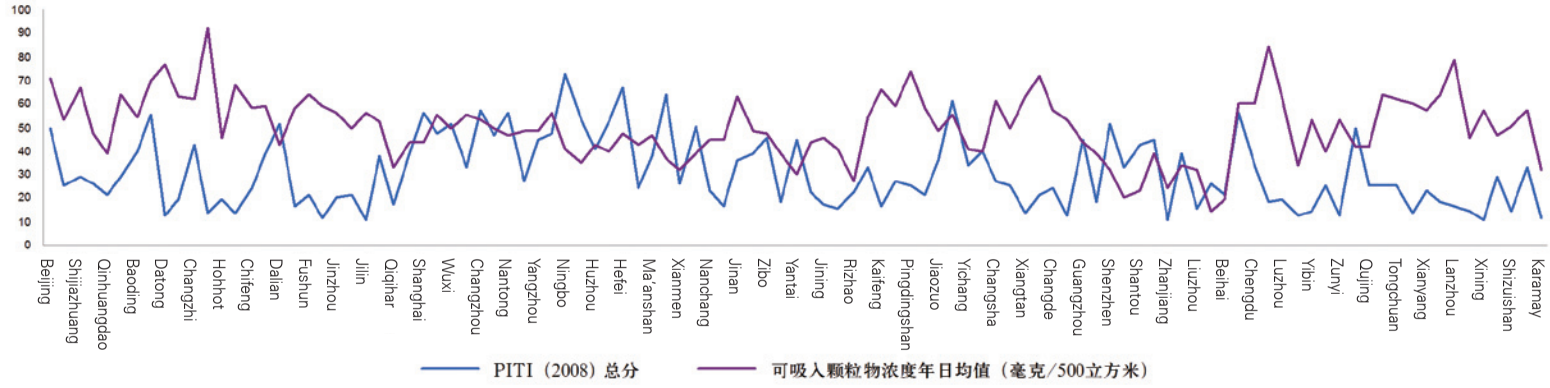
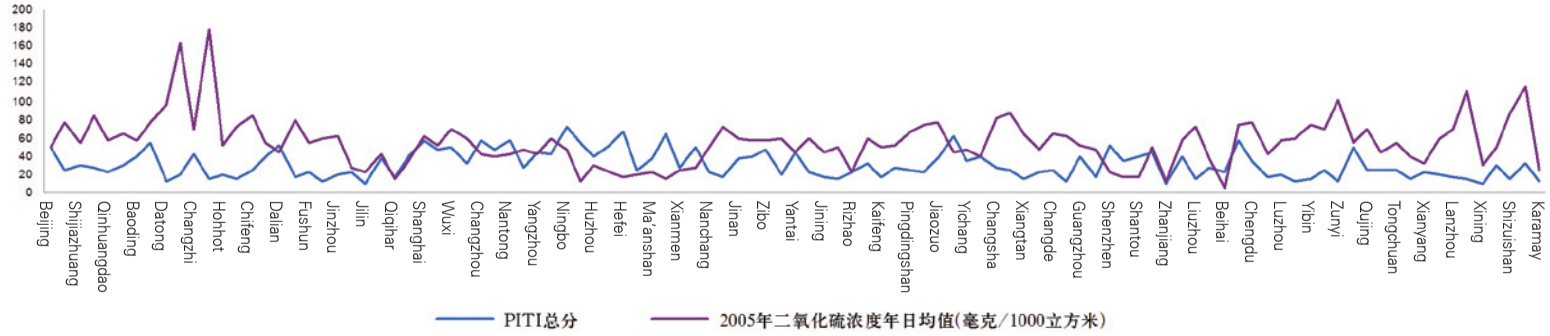


Figure 19: Relation between PITI scores of cities assessed in 2008 and average daily value of SO_2 in 2005



YIBIN, Sichuan Province

Only received points in three of eight metrics evaluated.

The average score of cities in western China was 22.6 points. Yibin scored only 14.4. According to the 2007 China Environmental Statistics report, Yibin's COD and SO_2 emission intensity both rank in the top 10 in China.[20] According to a Sichuan Environmental Protection Bureau (EPB) report, the city is located in a region of heavy acid rain, and the annual average value of SO_2 in Yibin is higher than the national ambient standard.[21] Yibin scored only a few points in three categories: disclosure of enterprise violation records, enforcement campaigns against polluting enterprises, and disclosure of environmental impact assessment (EIA) reports and project completion approvals. Yibin received no points for the five other metrics.

Figure 20: 2008 PITI score for Yibin

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Yibin	8.2	5.8	0	0	0	0.4	0	0	14.4

LANZHOU, Gansu Province

Sporadic disclosure of records of enterprise violations of rules and standards.

Lanzhou scored 16.6 points in the 2008 PITI survey, lower than the average score for cities in western China of 22.6 points. Lanzhou has some of the most serious air pollution problems in China. According to a comparative analysis of environmental reports from Lanzhou and other cities between 2005 and 2008, Lanzhou ranked in the top five among prefecture-level cities in the annual average concentration of inhalable particles and topped the ranking in many years.[22] Yet, in 2008, Lanzhou only disclosed 19 records of enterprise violations of rules and standards, and overall information disclosure was sporadic. Lanzhou received a low score for its response to public information requests. Lanzhou's websites provide no information concerning public information requests. When contacted, relevant departments in the EPB said that they would not handle the requests.

Figure 21: 2008 PITI score for Lanzhou

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Lanzhou	5.6	3.6	6.4	0	0	0	0	1	16.6

[20] According to the 2007 China Environmental Statistics report, for the emission intensities of per unit total industrial output of major industrial pollutants, COD is 0.0093, ranking tenth, and SO_2 is 0.0308, ranking eighth.

[21] News Release Office of Sichuan Provincial Government held a press conference on Sichuan Environmental Quality Announcement for 2008 Sichuan People's Government http://www.sc.gov.cn/zwgk/zwdt/bmdt/200903/t20090325_648671.shtml

[22] According to the Lanzhou report on environmental quality from 2005 to 2008, in 2005, the annual average concentration of Lanzhou's inhalable particles was 0.157mg/m^3, higher than the secondary standard of national ambient air quality; in 2006, it was 0.193mg/m^3, an increase of 22.9% compared with 2005 and higher than the third-level standard; in 2007 it was 0.129mg/m^3; and in 2008 it was 0.132mg/m^3.

The 2008 Pollution Information Transparency Index (PITI): Evaluation Results and Case Studies

LINFEN, Shanxi Province

Environmental Protection Bureau (EPB) website inaccessible for a long period of time.

Linfen[23] scored 14 points in the 2008 PITI survey, lower than the average 28.78 points for Shanxi province. From March to May 2008, the website of the Linfen EPB was only occasionally accessible, and when the site was available researchers were unable to find any of the pollution information sought.

In 2008, Linfen only disclosed 40 records of enterprise violations of rules and standards, with most of the information coming from the Shanxi provincial EPB. Linfen had yet to set up a section of its website concerning public information requests. Researchers obtained at the time of investigation Linfen EPB's telephone number from the 114 telephone information directory and called to inquire about public information requests. The person who answered the phone call said that he was unaware of the procedure. Not surprisingly, as of this writing, Linfen EPB has provided no response the information request submitted.

Figure 22: 2008 PITI score for Linfen

City	Records of Enterprise Violations	Results of "Enforcement Campaigns" Against Polluting Enterprises	Clean Production Audit Information	Enterprise Environmental Performance Ratings	Disposition of Verified Petitions and Complaints	EIA Reports and Project Completion Approvals	Discharge Fee Data	Response to Public Information Requests	PITI Score
Linfen	5.6	5.2	0	1.6	0	1.6	0	0	14

Note that higher PITI information disclosure scores do not appear to be correlated with better environmental quality. While there are many reasons for this, it is clear that the value of environmental information is still underappreciated in Chinese society, and that information has not yet become a tool for active public participation in China. This will need to change before environmental information can become an effective driving force for Chinese environmental protection. We hope that PITI can contribute to greater awareness of the importance of environmental information and drive greater public involvement in environmental protection.

5 Disclosure upon request has had a difficult start, with claims of "commercial secrets" a common justification for non-disclosure.

In order to evaluate how well cities responded to public requests for environmental information (a right set forth in the Measures on Open Environmental Information), PITI researchers submitted requests to the 113 cities, seeking disclosure of two pieces of information:

- Lists of heavily polluting enterprises subject to administrative penalty and petitions, and
- Petitions and public complaints verified by environmental officials.

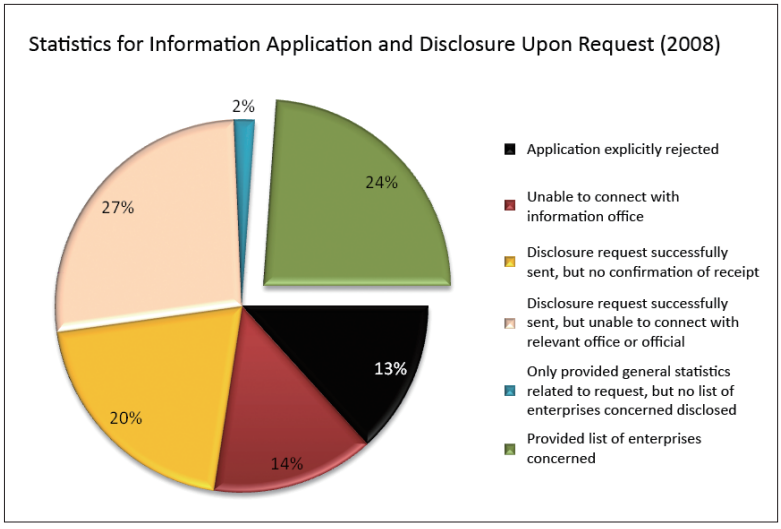
[23] According to the "2004 Assessment Results in Environmental Quality, Management, and Construction of 66 Newly Added Key State Environmental Protection Cities" released by the State Environmental Protection Administration (SEPA), Linfen's annual average daily value of inhalable particles is 0.219mg/m^3, much higher than the secondary standard of air quality. Additionally, a report of environmental quality in Shanxi province 2007 also shows that Linfen's air quality failed to reach the secondary standard.

Both are categories of information that regulations explicitly state should be actively disclosed by governments, so there should in theory be no objection or legal basis for denial of the request (other than that the information is already publicly available). Nonetheless, only 27 cities provided complete or partial lists as requested, 86 failed to provide any lists. Researchers received a wide range of rationale for refusals to disclose, including:

- The information is not within the scope of disclosure;
- The records contain commercial secrets;
- The information request needs to be accompanied by an official letter issued by the higher government department;
- Disclosure is withheld to "ensure development."

The staff in some cities abruptly hung up the phone upon being asked about disclosure requests, and specific departments in charge of information disclosure could not be found at all in some cities.

Figure 23: Statistics for information application and disclosure upon request, 2008



HEFEI, Anhui Province

A role model for responding to public information requests.

Hefei received a total PITI score of 66.6 points, scoring well for disclosure of records of enterprise violations, disposition of verified petitions and complaints, and response to public information requests. Hefei is one of only two cities to receive a full score for response to public information requests (along with Qingdao).

On April 1, 2009, IPE submitted an online request for information disclosure through the Hefei open government information website. On April 14, the Hefei Environmental Protection Bureau (EPB) faxed IPE a notice that the request had been received and publicized on the information website of the relevant municipal department. In this way, the environmental information requested became directly accessible to the public.

Figure 24: Open environmental information notice from the Hefei EPB
(Source: Hefei EPB; faxed to IPE staff member Ruan Qingyuan on April 14, 2009)

政府信息公开告知书

（2009）第2号-告

阮清源：

本机关于2009年4月1日受理了你提出的政府信息公开申请，具体见《受理政府信息公开申请告知书》（2009）第1号。

经查，你申请获取的信息属于公开范围。根据《中华人民共和国政府信息公开条例》第二十一条第一款，本机关已在合肥市环保局门户网站（http://www.hfhph.gov.cn/）或者合肥市政府信息公开网环保栏目（http://zwgk.hefei.gov.cn/catalog/public.xp）查阅所申请的政府信息。

特此告知。

Note: "We received your government information request on April 1, 2009… After investigation, we have determined that the information you requested is within the scope of information for disclosure. In accordance with Article 21, Clause 1 of the PRC Regulations on Open Government Information, we have already posted this information to the Hefei Environmental Protection Bureau website… or the Hefei Municipal Open Government Information website, environmental protection section. This is to notify you."

Figure 25: Hefei's open government information website features a list of enterprises subject to environmental administrative penalties

(Source: Hefei open government information portal, http://zwgk.hefei.gov.cn/catalog/public/gkfb/zwsearch.xp?doAction=show1&indexno=AA028003401200904006, as of April 14, 2009)

Note: "September 2008 Hefei Municipality List of Enterprises Receiving Environmental Administrative Punishment"

XIANYANG, Shaanxi Province

No reply to public information requests.

On April 1, 2009, IPE staff submitted a request for environmental information disclosure to the Xianyang Environmental Protection Bureau (EPB) via fax. However, there was no reply within the prescribed time limit. As of August 8, 2010, the Xianyang EPB website showed that the request status was still listed as "not yet handled."

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Figure 26: A special webpage for displaying pending public information requests on the Xianyang government website

(Source: Xianyang government website, http://www.xianyang.gov.cn/sqgk/show.php?askid=38, as of January 7, 2010)

Note: As of January 7, 2010, IPE's information request is still listed as "not yet handled," despite having been submitted on April 1, 2009. This was still the case as of August 8, 2010.

The 2008 PITI assessment has revealed gaps in China's environmental information disclosure. One purpose of highlighting these gaps is to facilitate the search for solutions through the identification of best practices and dissemination of these practices among cities. The best practices identified by the PITI assessment are examples of how Chinese cities are already implementing open government information in China and should be readily transferable to other Chinese cities.

6 Information disclosure was often incomplete and lacked an appropriate level of detail.

Of the four PITI evaluation metrics – systematic disclosure, timeliness, comprehensiveness, and user-friendliness – we found that overall performance on comprehensiveness was the lowest. On average, cities received more than 30 percent of total possible points for systematic disclosure, timeliness, and user-friendliness. Cities received fewer than 25 percent of total points available for comprehensiveness. In other words, information disclosure in China is often lacking an appropriate level of detail.

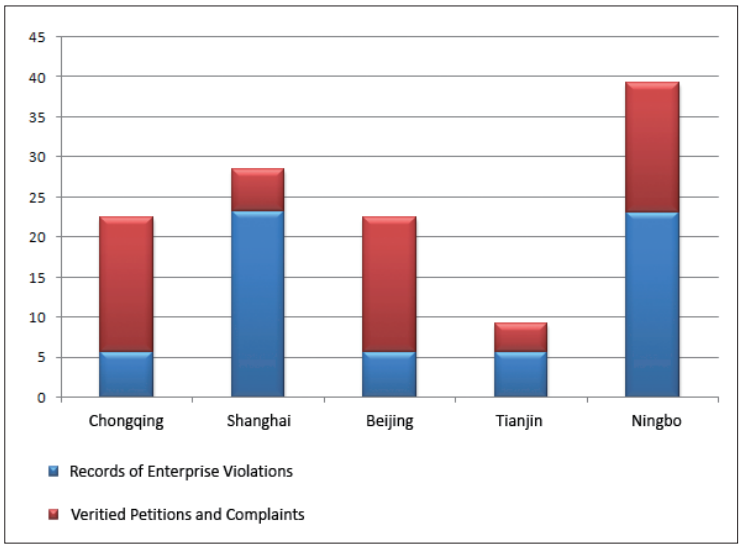
For example, in the disclosure of records of violations of rules and standards, we see that some cities only disclose the names of enterprises. Information regarding the nature of the violation, specific rules or regulations violated, and how such violations were handled by enforcement officials are often not disclosed. Likewise, information on types and amounts of pollutants emitted, frequency of violations, and related information are often not disclosed. Similar lack of comprehensiveness can be found in the disclosure of overall enterprise environmental performance, clean production audit information, EIA reports and project completion approvals, discharge fee data, and responses to public information requests.

7 A large number of cities have "best practices" worth examining. These cases demonstrate that effective pollution information disclosure is already possible in China.

a. The four province-level municipalities in China (Beijing, Shanghai, Tianjin, and Chongqing) should share their best practices and learn from each others' mistakes.

Among the four province-level municipalities in China - **Beijing**, **Shanghai**, **Tianjin**, and **Chongqing** - Shanghai, Chongqing, and Beijing have far outperformed Tianjin in environmental pollution information disclosure. Shanghai was a pioneer in the disclosure of daily environmental violation records, beginning such disclosure in 2003. Chongqing, and Beijing enjoy their own comparative advantages in information disclosure of the results of the handling of petitions and complaints. These three cities all actively responded to public requests for information disclosure. To improve its performance in these three key areas of information disclosure, Tianjin can learn from the practices in the other three province-level cities.

Figure 27: The performance of the four province-level municipalities varies and falls short of top performers like Ningbo



However, Shanghai, Chongqing, and Beijing are far from perfect in their environmental information disclosure performance. Looking at the individual evaluation metrics, there are some obvious shortcomings in the information disclosure performance of these three cities. They do not have the balanced performance of the higher-scoring cities of **Ningbo**, **Hefei**, **Fuzhou**, and **Wuhan**. Shanghai lags significantly behind in the disposition of verified petitions and complaints. In a city of 18 million people, Shanghai only disclosed seven pieces of such information in a year. For disclosure of violation records of rules and standards, Chongqing and Beijing both scored poorly on systematic disclosure and comprehensiveness. These three cities have complementary strengths and weaknesses, and could learn a great deal from each others' best practices.

A Tale of Two Cities: Chongqing and Tianjin

CHONGQING

The highest score among province-level municipalities and in western China.

Chongqing received 56.7 points in the PITI evaluation, the highest score among province-level municipalities and in western China. Chongqing received 16.9 points for the disposition of verified petitions and complaints, tying for first place with several other cities. A noteworthy feature is the linking of the municipal Environmental Protection Bureau (EPB) and government petition systems, creating a unified petition system.

Figure 28: The Chongqing government site features a "disclosure mailbox" for viewing environmental complaints
(Source: Chongqing government website, http://www.cq.gov.cn/publicmail/citizen/ReleaseMailListDistrict.aspx, as of January 12, 2010)

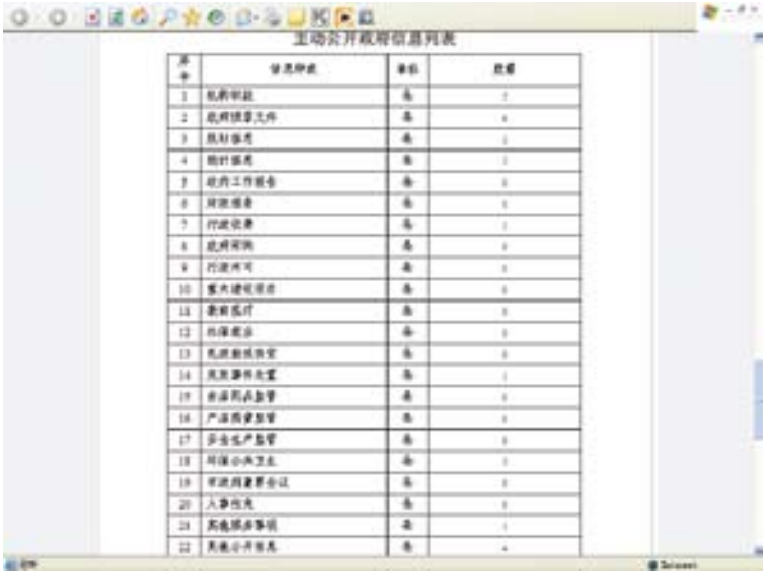
Note: The highlighted pull-down menus are labeled (from left to right): "document type - suggestions, request for help, complaint, request for advice, other," "year," and "issuing work unit: municipal EPB."

TIANJIN

No public disclosure of records of administrative penalties imposed on enterprises.

In the 2008 PITI survey, Tianjin scored 25.2 points, not only lower than the other three province-level municipalities,[25] but well below the national average of 30.81. Tianjin only made 58 records of enterprise violations of rules and standards public in 2008, and this information came mostly from one sub-district office. The Tianjin EPB itself made almost no disclosure. In response to a public information request, the Tianjin EPB only provided macro-level statistics on petitions and complaints, and told researchers that the list of enterprises subject to administrative penalty was beyond the scope of disclosure due to trade secret concerns. Note also that the Tianjin government's list of information that should be actively disclosed (according to the Tianjin EPB's 2008 annual report of open government information) did not include records of enterprise violations of rules and standards and other pollution information within the scope of environmental information disclosure in Tianjin.[26]

Figure 29: The Tianjin EPB's annual report on open government information for 2008 is available online
(Source: Tianjin EPB website, http://www.tjzfxxgk.gov.cn/tjep/ConInfoParticular.jsp?id=14578, visited in 2009 during the evaluation period)



Note: "List of Government Information for Active Disclosure."

[25] PITI scores for the four municipalities under the State Council are: Chongqing 56.7, Shanghai 56.5, Beijing 49.1, and Tianjin 25.2.

[26] Annual Report of Open Government Information in 2008, Tianjin EPB.

b. Innovative practices are not only found in China's most developed megacities.

Innovative practices in pollution information disclosure are not only found in China's most developed megacities. For example, **Weihai** in Shandong province discloses online monitoring data for key pollution sources on an hourly basis. **Changzhou** in Jiangsu province releases records of violations of rules and standards by enterprises through its major local media outlets. **Taizhou** in Zhejiang province is the leader in disclosure of daily violation records. **Huzhou** in Zhejiang province releases data on pollutant discharge fees and the volume of pollutant discharges on which fees were based, including highlighting cases of violations. In a number of cities in **Liaoning province**, the municipal Environmental Protection Bureau (EPB) websites are equipped with robust and user-friendly search functions. **Hefei** posted online a list of enterprises in violation of rules and standards in response to our September 2008 information request, and informed us of the URL to the information online.

Innovation in Unexpected Places

WEIHAI, Shandong Province

Online posting of hourly pollution monitoring information.

Weihai releases daily reports of hourly pollution monitoring data for key enterprises and sewage water treatment plants to a special section of the local EPB's website. No other Chinese city discloses enterprise-level monitoring data so frequently.

Figure 30: Real-time monitoring data on excessive discharges by key enterprises on Weihai EPB website
(Source: Weihai EPB, http://www.whep.gov.cn/text.php?artid=1329, as of January 16, 2010)

Note: "Daily Report on Violations of Standards in Key Regulated Enterprises." The column headings read (from left to right): "District," "Enterprise Name," "Time of Violation," "Type of Pollution Monitored," "Measurement," "Standard," "Violation as a Multiple of Standard Levels," "Degree of Violation."

CHANGZHOU, Jiangsu Province

Disclosing the list of enterprises in violation of rules and standards through major local media outlets.

In 2008, Changzhou disclosed lists of enterprises in violation of rules and standards through major local media outlets, including a special feature in the *Changzhou Daily* called "Citizen's Voice Investigation." These reports were released at the beginning of each month. These disclosures included names of violators and details concerning the violations, such as specific pollutants and concentration values in excess of standards. This regular disclosure of information regarding enterprise violations has increased the accessibility of local pollution information.

Figure 31: A list of enterprises in violation of environmental laws from June and July 2008 is featured on the website of the *Changzhou Daily*
(Source: *Changzhou Daily* website, http://epaper.loone.cn/site1/czrb/html/2008-07/18/content_104608.ht, as of July 18, 2008)

Note: "June-July – Investigated and Prosecuted Environmental Violators"

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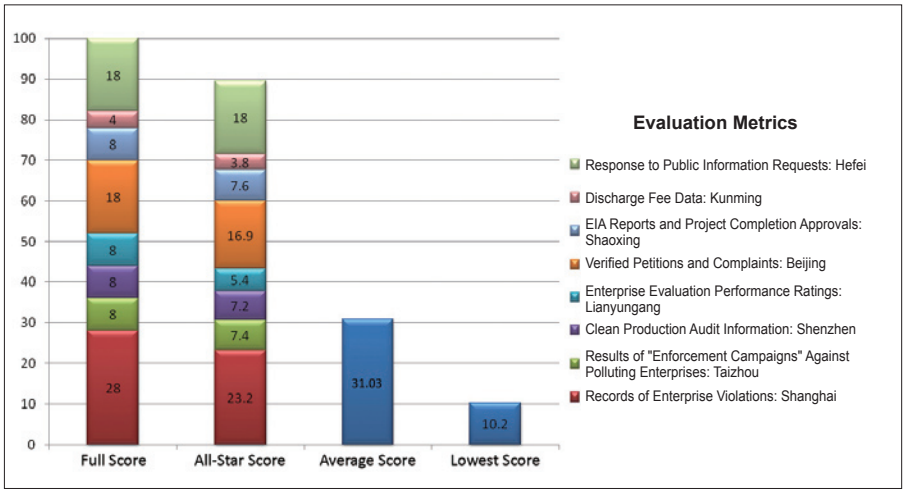
c. The PITI "All-Star" Team demonstrates that strong information disclosure is already possible in China.

The top-scoring cities in each of the eight metrics measured in our PITI evaluation constitute an "all-star" team of Chinese environmental information disclosure. This all-star team scored a total of 89.5 points. This reflects the fact that there are excellent performers among Chinese cities in each of the eight metrics evaluated, and that strong environmental information disclosure is possible right now under China's current social and economic circumstances. The all-star team also shows that there are best practices in information disclosure in many cities around China that can help to strengthen information disclosure in the lower-performing cities in China. These best practices are significant because they are not just theories or examples from other countries. They are already being implemented in China.

Figure 32: The 2008 PITI All-Star Team



Pollution Control Information Disclosure Best Practices of Chinese Cities

Ningbo	Demonstrating good performance in disclosure of violation records, disposition of verified petitions and complaints, and response to public information requests, Ningbo topped all other cities with the highest overall PITI score of 72.9 points. http://www.nbepb.gov.cn/Punish.aspx?ClassID=22 http://www.nbepb.gov.cn/QuickButton_1_4.aspx
Shanghai	Disclosing records of enterprise violations in a user-friendly manner, Shanghai's performance was second to none in this category. http://www.sepb.gov.cn/
Taizhou	Since 2008, officials in Taizhou's Yuhan County have carried out wastewater treatment correction campaigns against 775 industrial enterprises, targeting a number of surprisingly detailed problems and catapulting the city to the top of the rankings for this metric. http://www.yhepb.gov.cn/Item/166.aspx
Shenzhen	Of the 113 evaluated cities, Shenzhen has announced the most comprehensive clean production audit program targeting emissions of major pollutants, making it the highest-ranked city for the "Clean Production Audit Information" metric. http://www.szepb.gov.cn/gzcy/gsgg/tzgg/200809/t20080919_58056.html
Lianyungang	The city's published numbers of yellow-, red-, and black-label enterprises most closely matched the number of illegal businesses, a sign of the city's chart-topping performance in the "Enterprise Evaluation Performance Ratings" metric. http://www.dhhb.gov.cn/Article_Show.asp?ArticleID=1231
Beijing	Beijing serves as a model city for "Disposition of Verified Petitions and Complaints," providing a complaints website that offers timely and comprehensive publication of cases and processing status. http://219.237.206.84/12369web/Index.asp
Shaoxing	Shaoxing's comprehensive disclosure of "EIA Reports and Project Completion Approvals" allowed it to top the list in this metric. http://www.sxepb.gov.cn/qtgg/default.asp
Kunming	Kunming beat the pack with its disclosure of corporate discharge fee data in its public pollution discharge documents, placing it first for the metric "Discharge Fee Data." http://www.kmepb.gov.cn/kmhbj/72902018968059904/index.html
Hefei	Hefei was the only city that provided all the information requested by PITI researchers, cementing its position as the highest scorer for "Response to Public Information Requests."

The Outlook for Environmental Information Disclosure in China

The 2008 PITI evaluation is the first systematic assessment of government pollution information disclosure in China. Although the average score of the 113 cities under assessment is low, a few cities stood out as "champions" of information disclosure. The presence of these strong performers is reason to believe that environmental information disclosure can improve in China. However, the PITI review has also exposed a number of challenges, such as inconsistent understanding of information disclosure laws and policies, and tremendous variance in the implementation of information disclosure. The analysis provides the following assessment of the most important issues facing environmental information disclosure in China and offer a set of recommendations for meeting these critical challenges.

- **The PITI All-Star Team highlights the best performers in pollution information disclosure in China and provides a basis upon which Chinese cities can learn from the best practices in Chinese environmental information disclosure.**

The 2008 PITI All-Star Team earned a total of 89.5 out of 100 possible points. The all-star cities in each of the eight metrics evaluated were:

All-Star City	Evaluation Metric
Shanghai	Disclosure of records of enterprise violations
Taizhou	Disclosure of results of "enforcement campaigns" against polluting enterprises
Shenzhen	Disclosure of clean production audit information
Lianyungang	Disclosure of enterprise evaluation performance ratings
Beijing	Disposition of verified petitions and complaints
Shaoxing	Disclosure of EIA reports and project completion approvals
Kunming	Disclosure of discharge fee data
Hefei	Response to public information requests

Chinese cities that did not score as well in each of these areas can learn from the best practices in each of these all-star cities.

After the initial disclosure of the PITI results in 2008, many of the low-scoring cities expressed a desire to learn how other cities are able to score higher on the PITI scale. They are interested in learning about the best practices in information disclosure around China. If all cities take this sort of constructive, practical attitude toward identifying gaps in performance and learning from other cities, we should see a great deal of progress on pollution information disclosure in China.

RECOMMENDATION: Create platforms for cities around China to learn from the best practices in the all-star cities, including information-sharing workshops and best practices guides.

- **PITI review highlights that performance on comprehensiveness of information disclosure was the weakest of all metrics evaluated.**

Of the four PITI evaluation metrics – systematic disclosure, timeliness, comprehensiveness, and user-friendliness – we found that overall performance on comprehensiveness was the lowest. On average, cities received more than 30 percent of total possible points for systematic disclosure, timeliness, and user-friendliness. Cities received fewer than 25 percent of total points available for comprehensiveness. In other words, pollution information disclosure in China is often lacking the appropriate level of detail.

The comprehensiveness of information disclosed is critical if the public is to obtain a complete and accurate picture of the environmental performance of local enterprises. For example, in the disclosure of records of violations of rules and standards, we see that some cities only disclose the names of enterprises. Information regarding the nature of the violation, specific rules or regulations violated, and how such violations were handled by enforcement officials are often not disclosed. Likewise, information on types and amounts of pollutants emitted, frequency of violations, and related information are often not disclosed. Similar lack of comprehensiveness can be found in the disclosure of overall enterprise environmental performance, clean production audit information, environmental impact assessment (EIA) and project approval before acceptance, discharge fee data, and responses to public information requests.

Lack of comprehensiveness greatly limits the benefits of environmental information disclosure to society, and the need to constantly improve the quality of information disclosed will present the biggest challenge to environmental authorities.

RECOMMENDATION: Clarify the rules on information disclosure to improve the comprehensiveness of disclosure and establish clear channels for dispute resolution to resolve problems of insufficient data quality and disclosure.

- **Cities around China had dramatically differing interpretations of the scope of active environmental information disclosure.**

The PITI review demonstrated that in many cases cities did not disclose information specifically designated by regulations as requiring active disclosure (i.e., without need for a request from the public).[27]

For instance, the 2008 PITI evaluation shows that Tianjin Environmental Protection Bureau (EPB) ranks last compared with the other three province-level municipalities in the disclosure of administrative penalties for enterprises in violation of rules and standards. Part of the reason for this can be found in Tianjin's 2008 annual report on open government information.[28] This annual report lists other types of environmental information actively disclosed by the Tianjin

[27] MEP Measures on Open Environmental Information (trial) and MEP Catalog of Information Disclosure (First Batch). Article 11 of Measures on Open Environmental Information (trial) provides that environmental departments shall actively disclose 17 types of environmental information.

[28] For detailed information, please see http://www.tjzfxxgk.gov.cn/tjep/ConInfoParticular.jsp?id=14578.

Environmental Protection Bureau (EPB), but does not list "environmental administrative penalties, administrative review, administrative litigation, and mandatory administrative measures," although such information is required to be actively disclosed under Ministry of Environmental Protection (MEP) regulations.[29]

The 2008 PITI evaluation shows that Tianjin is not alone in failing to disclose information explicitly required to be disclosed in applicable regulations. MEP regulations also require the active disclosure of information regarding "public petitions and complaints regarding environmental problems or enterprise pollution, which have been verified upon investigation, and their disposition" and "pollutant discharge fees." Nonetheless, we found that cities such as **Jining** and **Tai'an** of Shandong province and **Benxi** of Liaoning province did not actively disclose this information.

Some of the discrepancies in implementation described above may be driven by local environmental authorities' lack of familiarity or misinterpretation of regulations on government information disclosure. Understanding the scope of disclosure under MEP regulations will be an important area for improvement. Work to enhance the clarity and implementability of rules on open government information will be imperative. China's Supreme People's Court has been working on guidance regarding China's information disclosure rules since 2009.[30] This is an important step in the effort to improve rule of law in open government information and create a channel for resolving disputes regarding environmental information disclosure through the judiciary.

RECOMMENDATIONS:

- MEP should issue further guidance regarding the MEP Measures on Open Environmental Information (trial) to clarify the scope of environmental information disclosure in a way that supports the goals of open information.
- The Supreme People's Court should issue a judicial interpretation to clarify areas of environmental information disclosure that are prone to different interpretations. For example, there has been great variation in the interpretation of the legal language in MEP regulations regarding "information collected by the government in the course of fulfilling its duties."

• China's system for public information requests is moving forward with great difficulty.

China's Regulations on Open Government Information set forth explicit rules governing the right of citizens, legal persons, or other groups to request information disclosure from the government.[31]

In practice, however, there has been wide variation in the way these provisions on public information requests have been implemented. The PITI evaluation has highlighted significant uncertainty over the scope of disclosure, interpretations of the exceptions to disclosure (e.g., commercial secret exemptions) and other aspects of disclosure. The response to public information requests during our PITI evaluation illustrates a number of these issues:

1. What is the scope of information disclosure?

The PITI evaluation found that many cities have interpreted the scope of information disclosure in a narrow way that does not accord with the aims of open government information in China. In principle, information should be disclosed except where disclosure is explicitly exempt (such

[29] Item 12, clause 1, article 11 of "Measures on Open Environmental Information (trial)" is incorporated in the first batch of information disclosure catalog of MEP.

[30] Rules Regarding Several Issues in the Handling of Administrative Cases on Open Government Information

[31] Article 13 of "Regulations on Open Government Information": "in addition to the government information that administrative organs shall disclose proactively as stipulated in article 9, 10, 11 and 12 of these Regulations, citizens, legal persons or other organizations may also request relevant government information from departments in State Council, local governments of all levels and local government departments above county level."

as in the case of state secrets, commercial secrets, and privacy). This is widely recognized as central to achieving the benefits of open government information disclosure. The PITI evaluation found that even where information was explicitly listed as requiring active disclosure, some cities interpreted this narrowly and withheld disclosure of information requested.

For example, although PITI researchers made public information requests for information clearly listed in MEP regulations as required active disclosure - i.e., "environmental administrative penalties, administrative review, administrative litigation, and mandatory administrative measures," some local environmental authorities did not believe that administrative penalty information fell within the scope of disclosure. Rather than disclose records of administrative penalties - as is regularly done in other countries - these departments were only willing to disclose macro-level statistical information about local administrative penalties. This cuts against the legislative purpose of the open environmental regulations, which is to enable information to enhance supervision of polluting enterprises and government enforcement. General statistics about administrative penalties fail to fulfill this purpose, and the absence of facility-level data makes it impossible for the public and government to know which factories have poor environmental performance.

2. What are "commercial secrets"?

China's regulations, like the open information rules in many countries, provide for exemptions to disclosure where state secrets, commercial secrets, or personal privacy are implicated. However, the PITI analysis shows that the interpretation of these exemptions is inconsistent and overly broad across the 113 cities evaluated.

The "commercial secrets" exemption was often used as the basis for non-disclosure in a way that contravenes the purpose of China's open information regulations and differs significantly from international practice. Some cities disclosed records of environmental violations and administrative penalties. Other cities classified this information as covered by the "commercial secrets" exemption and either did not disclose it or would disclose it only with approval from the companies. For example, the PEBs in Tangshan, Guiyang and other cities declined to disclose this information because it "touched upon commercial secrets."

3. Can the environmental information acquired through information disclosure requests be further publicized?

The PITI evaluation found that some local EPBs attempted to place arbitrary conditions or restrictions on the use of disclosed information with no basis in the law. Some EPBs have argued, for example, that information disclosed in response to a public information request cannot be further publicized. Such a position has no legal or other basis, and stands in stark contrast to international practice. Information that has been disclosed is public information and should be available to any member of the public who wants access. This is just one example of how some cities established arbitrary rules that did not accord with Chinese law.

In the PITI evaluation, researchers intentionally requested information required by law to be actively disclosed, so as to avoid any disputes over whether exemptions or other reasons for nondisclosure applied. Researchers found that some cities attempted to restrict further public disclosure of this information, in clear contravention of the open information regulations. The right to make public information requests should serve as a supplement to active information disclosure, not as a way to restrict information disclosure, as some cities attempted to do.

Hefei, **Zhuhai**, and a number of other cities demonstrated best practices in this regard by actively posting the information requested as part of the PITI evaluation to the Internet, making information requested accessible not only to PITI researchers, but to the general public. This is a practice that should be emulated by other cities.

RECOMMENDATIONS:

- Clarify that open information regulations should be interpreted broadly, and specifically clarify misinterpretations of the regulations, such as the refusal to disclose facility-level penalty information.
- The Supreme People's Court should clarify the scope of "commercial secrets" and other exemptions in a way that prevents abuse of the exemptions and supports the goals of open information. Channels to resolve overbroad interpretations of these exemptions should be strengthened to improve implementation of open information disclosure in China.
- Ministry of Environmental Protection (MEP) and the SPC should issue guidance to clarify that information disclosed to the public after an information request is public information that can be utilized by any member of the public.

• Domestic Chinese innovations and international best practices on environmental information disclosure can offer guidance to make China's information disclosure framework more effective.

The PITI evaluation system includes information disclosure required by current laws and regulations, as well as innovative practices that are not mandated, but are already being implemented in certain places around China. Slightly more than 60 of 100 points in the PITI framework are required by Chinese laws and regulations. Nearly 40 points represent best practices around China not yet mandated by law. The inclusion in the evaluation system of these best practices that are not yet required by law is an effort to highlight ways to create a better environmental disclosure system in China that allows the public and other stakeholders to easily obtain important environmental information.

For example, "enforcement campaigns" to target specific environmental problems are a governance tool with "Chinese characteristics" that has proved to be an effective measure in daily pollution regulation. These campaigns typically focus on the key polluting enterprises or industrial sectors within a region, and the results of these campaigns can provide the public and governments with critical information about key pollution sources and enforcement against these sources. However, information regarding "enforcement campaigns" is not listed as required disclosure in the MEP Measures on Open Environmental Information (trial) or related implementation documents, so the extent of disclosure varies from locality to locality.

Another example is State Environmental Protection Administration's (SEPA) efforts to promote "enterprise environmental performance evaluations" nationwide since 2005. In this program, "MEP gives an overall environmental performance grade… The result of the evaluation is usually divided into excellent, good, average, bad, and very bad. These grades are labeled as green, blue, yellow, red, and black, respectively, for easier understanding and recognition, and are released publicly."[33] The advantage of such a program is that it adopts an easy-to-understand way for the public to access environmental information needed to help supervise polluting enterprises. However, this program is not mandated by MEP rules, so implementation around the country is limited and inconsistent. Note also that the failure of local governments to disclose the criteria for these evaluations limits the usefulness and verifiability of this method of disclosure.

[33] See SEPA's "Comments on Accelerating Assessment of Enterprise Environmental Performance," Huanfa (2005) No. 125, November 21, 2005.

Much can also be learned from international best practices in information disclosure. Environmental information disclosure is widely accepted around the world as an effective and indispensible tool for strengthening and streamlining environmental protection. One of the most important forms of environmental information disclosure is disclosure of enterprise-level pollution information. This type of information provides the public, government, and other stakeholders with the raw materials to understand the pollution in local communities, and to identify risks to health and property. This is one reason that Pollutant Release And Transfer Register (PRTRs) have gained favor in many countries around the world.

China already has rules regarding the disclosure of many types of environmental information, but facility-level disclosure of pollution information is still limited to certain heavily-polluting enterprises pursuant to clean production audit rules. The eight metrics in the PITI evaluation were selected because they are types of information that, for the most part, allow the public to indirectly determine the environmental performance of facilities. Discharge fee data, records of violations, records of "enforcement campaigns," and petition and complaint records all help to identify the bad environmental polluters. A PRTR system in China would be a valuable supplement to the information already disclosed in China and would serve to strengthen environmental protection. Through its clean production audit rules, China already discloses the type of information set forth in a PRTR for certain seriously polluting enterprises. In principle, there is no reason that China cannot take the further step to a broad-based PRTR including all major facilities. Capacity and resources may be the main limitations, and these can be overcome if leaders recognize, as a policy matter, the importance of a PRTR-like system for disclosing facility-level pollution information. Experience in the U.S. with the Toxics Release Inventory and experience with PRTRs in a number of other countries demonstrate the usefulness of such systems in improving environmental protection.

RECOMMENDATION: China should implement a PRTR involving comprehensive databases of facility-level pollutant releases to supplement information already disclosed in China.

Conclusion

The importance of environmental information disclosure in improving China's environmental management is now well-accepted in some circles in China. This is seen as an important tool for overcoming barriers such as local protectionism, weak enforcement, and lack of costs and consequences for noncompliance.

In recent years, China has already made important strides in environmental information disclosure, including:

- Disclosure of some information in the EIA process;
- Disclosure of the list of certain heavily polluting enterprises;
- A mechanism for making public information requests to the government; and
- Disclosure of assessments of enterprise environmental performance.

The PITI evaluation shows that environmental information disclosure had a difficult journey in 2008, and that local environmental disclosure has tremendous room for improvement. However, a few cities have shown that good environmental information disclosure is already possible in China. It will be important for the entire country to learn from these best practices.

We have begun the 2009 PITI evaluation to assess progress in each city. Through greater communication and coordination, we can tap into the best practices around the country and spread them to government departments around China. Together we can elevate environmental information disclosure and give a much needed boost to China's sustainable development.

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Part 2

International Experience in Environmental Transparency

The Pollution Information Transparency Index (PITI) is focused on the evaluation of government disclosure of information related to the environmental performance of enterprises. Public disclosure of such information has become an important part of environmental regulatory systems around the world. This section is intended to introduce international experience in environmental transparency to a Chinese audience.

The widespread interest in environmental information as a regulatory tool stems from evidence that information disclosure can lead to significant and cost-effective reductions in pollution, while at the same time alleviating the enforcement burden on government regulatory entities. Environmental information works in a variety of ways to reduce pollution, including by enabling enterprise self-improvement and heightening supervision and scrutiny from other stakeholders, such as local communities, civil society, investors, purchasers, and consumers. Some have called regulation by environmental information a "third wave" in environmental regulation, after command-and-control regulation (such as ambient standards, emissions/effluent standards), and market-based environmental regulation (such as financial incentives, taxes, and cap-and-trade regimes).[34]

Open environmental information can:
• reduce pollution in a cost-effective way
• reduce enforcement burden on government regulatory entities
• facilitate media coverage of problems and put pressure on environmental laggards
• trigger a healthy competition among governments or polluting facilities over who is leading and who is lagging
• improve public participation and supervision of polluters and government agencies

[34] Tietenberg, T., 1998, "Disclosure Strategies for Pollution Control," *Environmental and Resource Economics,* 11, 587-602.

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Informational Approaches to Environmental Regulation Around the Globe

Over the last few decades, environmental information disclosure has become an integral part of the environmental regulatory regimes of many countries, and a tool frequently utilized in international environmental agreements as well. Environmental information disclosure comes in a number of forms. These include:

- databases of enterprise pollutant emissions data, known as Pollutant Release And Transfer Registers (PRTR);
- public disclosure of environmental impact assessment (EIA) reports;
- open government information laws and regulations;
- records of environmental violations and enforcement actions; and
- product labeling.

Internationally, there have been a number of agreements and declarations that have emphasized the important role of environmental information in sustainable development and environmental protection, such as the:

- 1991 Espoo Convention on Environmental Impact Assessment in a Transboundary Context;
- Principle 10 of the 1992 Rio Declaration, which set forth access to information concerning the environment as one of three key pillars of public involvement in environmental protection;
- 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention), which set forth best practices in environmental open information, including rules for open government information systems and the active provision of information regarding environmental quality, government environmental laws and policies, industrial emissions, and other environmental information; and
- 2003 Kiev Protocol on PRTR.

The World Bank, Organization for Economic Co-operation and Development (OECD) and various United Nations bodies such as UNEP, UNIDO, and UNITAR have strongly supported information as an environmental regulatory tool in developed and developing countries.

Selected milestones in open environmental information regulation	
1966	U.S. Freedom of Information Act (FOIA)
1970	U.S. National Environmental Policy Act (NEPA)
1986	U.S. Toxics Release Inventory (TRI)
1990	European Union Directive 90/313/EECof 7 June 1990 on the freedom of access to information on the environment
1991	UN/ECE Espoo Convention on Environmental Impact Assessment in a Transboundary Context
1992	Rio Declaration
1995	Indonesia PROPER
1995	Sofia Guidelines: The UN/ECE Guidelines on Access to Environmental Information and Public Participation in Environmental Decision-making
1998	Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters
1999	Canadian National Pollutant Release Inventory18
2000	Australian National Pollutant Inventory
2001	Japan Pollutant Release and Transfer Register (PRTR)
2001	Mexico Registro de Emisiones y Transferencias de Contaminantes19
2002	People's Republic of China (PRC) Environmental Impact Assessment Law
2002	PRC Cleaner Production Promotion Law
2003	Kiev Protocol on PRTR
2005	PRC Decision on Implementing the Outlook on Scientific Development and Strengthening Environmental Protection
2005	Chilean PRTR: RETC – Registro de Emisiones y Transferencia de Contaminantes
2005	PRC State Environmental Protection Administration (SEPA) Comments on Accelerating the Enterprise Environmental Performance Evaluation Work
2006	PRC SEPA Measures on Public Participation in Environmental Impact Assessment
2008	PRC Regulations on Open Government Information
2008	PRC SEPA Measures on Open Environmental Information

How Does Environmental Information Disclosure Work?

Environmental information disclosure works in a variety of ways. In the best cases, it encourages benchmarking and monitoring of enterprise performance and creates a platform for continuous improvement. It can facilitate self-improvement for willing enterprises and strengthen the ability of government regulators, local communities, and other stakeholders to play a greater role in pollution reduction. The following is a discussion of four particularly important information disclosure tools: Pollution Release and Transfer Register (PRTR), environmental impact assessment (EIA), open government laws and regulations, and product labeling.

1 Pollutant Release and Transfer Registers

The broadest of these approaches is the PRTR, which is "a national or regional environmental database or inventory of potentially hazardous chemical substances and/or pollutants released to air, water and soil and transferred off-site for treatment or disposal." The 1986 Toxics Release Inventory (TRI) in the U.S. was the first such register to be created. Since that time more than 20 countries have established PRTRs.[35] Indonesia and China have instituted a variation on PRTR that does not disclose raw emissions data, but rather discloses an aggregate environmental performance rating.

[35] See http://www.epa.gov/TRI/programs/international/#h1

The North American Commission for Economic Cooperation (CEC) North American PRTR Map

The CEC PRTR website offers an example of how data from PRTRs can be made more readily accessible to the public. The CEC has included factory-level emissions data from the PRTRs in three countries - Canada, Mexico, and the United States - in a Google Earth layer that allows easy access to data and satellite images of facilities.

Figure 1: CEC North America PRTR map (Google Earth layer)
(Source: North American Commission for Economic Cooperation, http://www.cec.org/naatlas/prtr/NA_PRTR_2004en.kml/, as of January 20, 2010)

The European Pollutant Emission Register

The European Pollutant Emission Register has developed a Google Earth layer that allows access to factory-level emissions data of about 9,200 industrial facilities in the 15 Member States of the European Union (EU), Norway, and Hungary for the year 2001. For the year 2004, the Register contains data for approximately 12,000 facilities in the 25 Member States of the EU and Norway.

Figure 2: European PRTR map (Google Earth layer)
(Source: European Pollutant Emission Register, http://eper.ec.europa.eu/eper/files/EPER.kmz, as of January 26, 2010)

International Experience in Environmental Transparency

The Institute of Public & Environmental Affairs (IPE) Water and Air Pollution Maps

The IPE water and air pollution maps (http://www.ipe.org.cn) have included publicly available facility-level environmental information in China. However, some types of information, such as factory-level emissions data, are not generally disclosed because the information is not available.

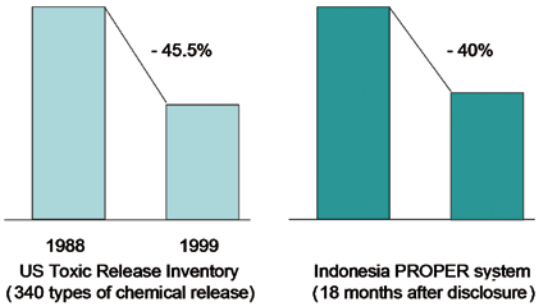
Figure 3: China water pollution map
(Source: Institute of Public & Environmental Affairs, http://en.ipe.org.cn/mapapi.jsp?qybh=0, as of January 26, 2010)

PRTRs have led to dramatic and demonstrable pollution reduction. From 1988 to 1998, emissions of 340 chemicals reported on TRI dropped by 45.5 percent.[36] Some of this is due to amendments to the Clean Air Act, changes in reporting, and other reasons, but TRI disclosure is believed to have been an additional major contributor to this reduction. Indonesia's Program for Pollution Control Evaluation and Rating (PROPER) system, which rates enterprise environmental performance on a five-level color-coded scale, has contributed to emissions reduction at the local level as well.[37]

[36] EPA, 1998 PUBLIC DATA RELEASE, supra note 4 (reporting a 46 percent reduction in releases and transfers of "core" chemicals required to be reported in all years, 1988-1998)

[37] http://siteresources.worldbank.org/INTEMPOWERMENT/Resources/14825_Indonesia_Proper-web.pdf

Environmental information can lead to pollution reduction



Sources: http://siteresources.worldbank.org/INTEMPOWERMENT/Resources/14825_Indonesia_Proper-web.pdf; http://www.pewclimate.org/policy_center/policy_reports_and_analysis/brief_ghg_reporting_disclosure/ghg_model.cfm.

The disclosure of pollution emission information through PRTRs drives reductions in pollution for a number of different reasons:

How pollution information disclosure can facilitate environmental protection

Enterprises	Public	Government	Other Stakeholders
• polluters' self-correction to avoid negative public image • may not be aware of their environmental performance • the public and other stakeholders can use the data to exert pressure on enterprises to stop their illegal actions	• public education on community pollution and health risks • a tool for public to negotiate with enterprises and assist government • authorize public to analyze data, monitor local pollution and enforcement	• get public assistance in monitoring polluters • inform the public of government enforcement levels • polluters respond more actively to regulators' work	• banks can modify loan policy • purchasers can "green" their supply chain • consumers can avoid products made by heavy polluters • investors can avoid heavily polluting projects • securities regulators can limit IPOs of heavy polluters

Enterprise Self-Improvement

Transparency of pollution information in many cases leads to enterprise self-improvement to reduce pollution. This occurs in some cases because enterprises were not previously aware of their pollution levels and are only alerted to the problem through the reporting requirements of a PRTR. Many enterprise leaders rightly recognize pollution as a form of waste and a cost to the enterprise. The ability to benchmark performance against competitors also drives pollution reduction. Enterprises do not like to be publicly known as greater polluters than their peers. Publication of a firm's pollution can lead to public embarrassment and damage to reputation and corporate brand. For example, after the initial release of toxic emissions data in the U.S., Monsanto pledged to reduce emissions of toxic chemicals by 90 percent, and many other corporations in the U.S. made pledges to reduce toxic emissions by anywhere from 50 to 90 percent of initial TRI-reported levels.

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Empowering the Public and Strengthening Government Regulation

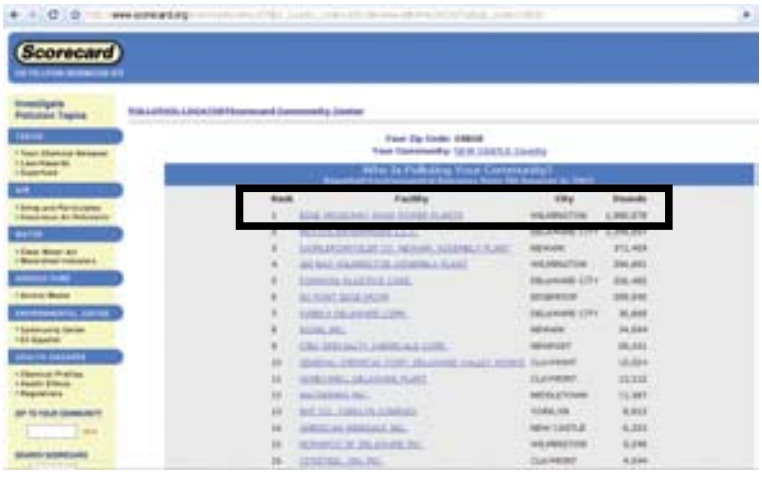
Pollution information from PRTRs empowers local communities, environmental groups, and media to identify and take actions against risks caused by polluters. Local communities are often the most vigilant monitors of enterprise behavior, and this can be a powerful supplement to the work of often understaffed, resource-stretched environmental regulators. The knowledge that the public has access to pollution information can drive enterprises to modify their polluting behavior even before the public takes action.

Environmental information disclosure provides environmental regulators with the ability to better identify and prioritize the most serious environmental problems. Information disclosure can also change the dynamic between regulators and enterprises because enterprises are more likely to feel that any illegal pollution will lead to regulatory action. This can strengthen the regulators' hand, as well as lead to self-regulation by enterprises to head off what might be viewed by companies as inefficient and more costly government regulatory action.

CASE STUDY: Utilizing the U.S. Toxics Release Inventory Data to Identify Local Environmental Health Risks.

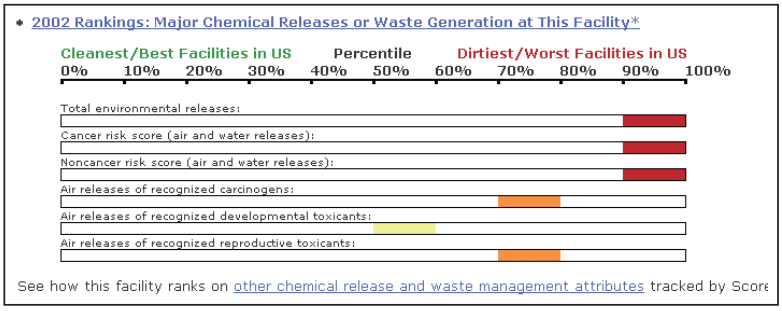
Step #1: Various groups have organized U.S. Toxics Release Inventory (TRI) data in ways that facilitate public access. Here, the scorecard.org website provides the ability to search for polluting enterprises by company name, location, chemical, and through various ranking tables. A search of the 19810 zip code, for example, shows that the Edge Moor/Hay Road Power Plant is the top emitter in Wilmington, Delaware.

Figure 4: Scorecard polluting enterprises search
(Source: Scorecard, www.scorecard.org, as of January 27, 2010)



Step #2: Scorecard.org also provides information on how facilities rank among other reporting facilities in a number of categories, including total environmental releases, cancer risk score, noncancer risk score, and air releases of recognized carcinogens, developmental toxicants, and reproductive toxicants.

Figure 5: Scorecard.org facility information
(Source: Scorecard, http://www.scorecard.org, as of January 26, 2010)



Step #3: Online satellite imaging tools provide the public with the ability to quickly visualize the facility in question.

Figure 6: Google Earth view of polluting facility
(Source: Google Earth, http://earth.google.com, as of January 27, 2010)

Step #4: On-line mapping tools allow the public to easily identify the proximity of local communities to polluting facilities. Here, point A is the Edge Moor/Hay Road Power Plant; point B is a local community.

Figure 7: Google Earth view of polluting facility and local community
(Source: Google Earth, http://earth.google.com, as of January 27, 2010)

PRTR Incorporates Markets and Other Stakeholders

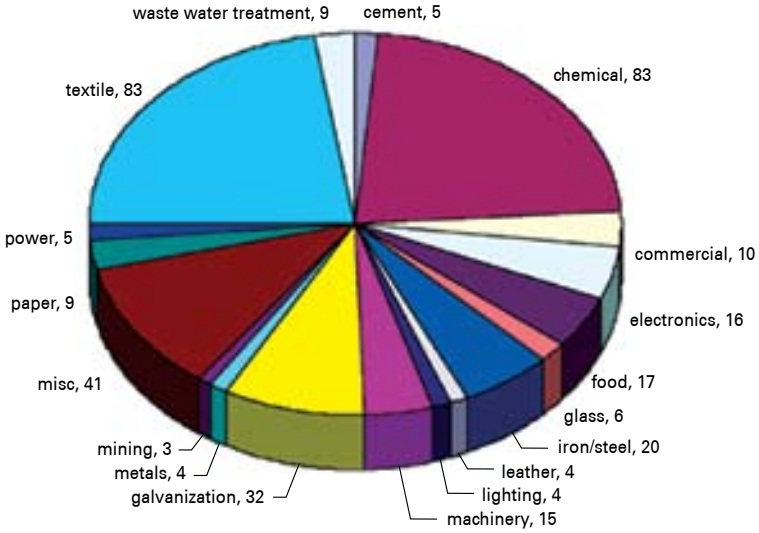
Environmental information disclosure and PRTRs can bring into play a wide variety of other stakeholders to help in the effort to reduce pollution. These include: capital markets, banks, corporate purchasers, and consumers.

- **Capital Markets.** Capital markets can influence enterprise behavior when disclosure of pollution data negatively affects stock price.
- **Banks.** Banks have in some cases limited access to loans for companies with poor environmental records. In July 2007, SEPA, the People's Bank of China, and China Banking Regulatory Commission (CBRC) jointly issued the Opinions on Implementing Environmental Protection Policies and Rules and Preventing Credit Risk, which officially established green credit policy as a means to reduce pollution.
- **Consumers.** Consumers may be inclined to boycott products from polluting companies. An environmental group in China has led a "Green Choice" program to educate the public about producers of consumer products that are violating environmental laws.
- **Corporate Purchasers.** In a world where global supply chains are the norm and awareness has been raised about global transfer of pollution to developing countries, "green supply chain" efforts can be quite powerful. Open information disclosure enables companies to identify suppliers in their supply chains that may be violating environmental laws and to take action.

Jiangsu GreenWatch (Responsible Sourcing)

In 1998, China began to pilot a government program to disclose corporate environmental performance. The program borrowed the five-color coding of Indonesia's PROPER program (green, blue, yellow, red, and black) for rating enterprises on environmental performance across a variety of media and pollutants, and the color-coded ratings were made available to the public and the press. In Zhenjiang, one of the pilot cities, the percent of enterprises with a "Blue" or "Green" rating (good or very good) doubled from 31 to 62 in the one-year grace period following disclosure of enterprises' environmental performance.

The environmental information disclosure provided by the GreenWatch program has enabled other stakeholders to play a constructive role in reducing pollution and increasing manufacturing efficiency in China. NRDC and the Jiangsu Academy of Environmental Sciences used GreenWatch data to identify major polluters within Jiangsu Province. Research showed that the textiles and chemicals industries were the largest polluters.



NRDC has since worked with multinational corporations, such as Wal-Mart and Levi's, to identify typical cost effective opportunities for textile enterprises within their China supply chains for pursuing a better environmental performance. NRDC has worked with several of these companies to determine ways to improve their material and energy efficiency and reduce pollution. Through this process NRDC and partners have discovered a wide range of low-cost solutions that reduce production costs and limit pollution. GreenWatch provided a crucial starting point for this initiative in that it provided NRDC with the information necessary to properly target its initiative at a highly polluting sector. It also demonstrated to multinational corporations that the environmental performance of factories in their supply chains was a matter of public record in Jiangsu Province.

Of course, the GreenWatch program has room for improvement. In particular, the system does not disclose the pollution data used to determine each enterprise's color-coded rating, making it difficult to interpret or verify the environmental ratings. Such a system coupled with full disclosure of factory-level pollution data would be much more effective and more likely to earn the trust of the public and enterprises.

2 Environmental impact assessment reports

One of the earliest uses of informational approaches for environmental regulation was the 1970 National Environmental Policy Act (NEPA), which established the system for federal-level environmental impact assessment (EIA) in the U.S. Since that time, EIA systems have been established in dozens of countries. NEPA set forth a mandatory procedure designed to ensure that federal agencies fully considered the environmental impacts of their activities. Public disclosure of the required environmental impact statement (EIS) and public opportunity to review and comment on the EIS are fundamental to the way that EIA works. The opportunity for public review and comment would enhance supervision from various stakeholders in society; and actions taken in the "light of day" under public scrutiny would lead to more careful consideration and mitigation of environmental impacts.

In countries around the world, EIA has been considered a success, contributing directly to environmental protection by deterring environmentally unsound projects, as well as mitigating environmental impacts and increasing public buy-in of projects or actions that go forward.

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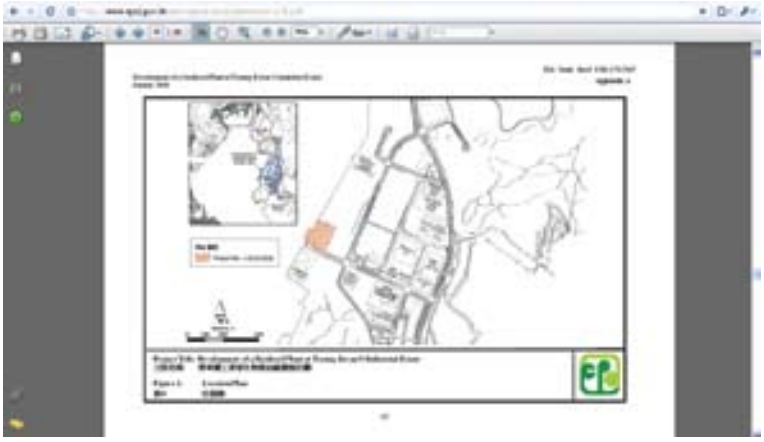
CASE STUDY: Hong Kong's Environmental Impact Assessment Report Disclosure

Hong Kong's Environmental Protection Department provides public access to EIA reports online at its website and has an extensive procedure for public comment on EIA reports.

Figure 8: EIA report listing, Hong Kong Environmental Protection Department
(Source: Hong Kong Environmental Protection Department, http://www.epd.gov.hk/eia/tc_chi/register/index4/all_2009.html, as of January 26, 2010)

Figure 9: Project notification document, Hong Kong Environmental Protection Department (Content: Development of a Biodiesel Plant at Tseung Kwan O Industrial Estate)
(Source: Hong Kong Environmental Protection Department, http://www.epd.gov.hk/eia/register/study/latest/esb-178.pdf, as of January 26, 2010)



International Experience in Environmental Transparency

3 Open government information laws and regulations

"Sunshine is said to be the best of disinfectants." This deceptively simple premise is the idea behind government information transparency, which has become a powerful tool in countless countries around the world to promote government accountability and, in the environmental context, the accountability of regulated enterprises. Open government information (sometimes called "freedom of information" or "sunshine") laws first emerged in 1966 with the U.S. Freedom of Information Act (FOIA). Since then, open government information regimes have been established in more than 90 countries,[38] including China.

In the best cases, countries will have ample proactive disclosure of the environmental information of greatest interest to the public and other stakeholders. For example, robust disclosure of PRTR and EIA data can give the public much of what it needs to identify sources of heavy pollution. Open government information laws, in such cases, serve more as a back-up option to obtain information that may not otherwise be disclosed publicly.

CASE STUDY: The U.S. Freedom of Information Act (FOIA)

FOIA has been utilized by citizens and the media to uncover environmental problems in areas such as food safety and clean water, bolster enforcement of environmental violations, and hold environmental regulators accountable for their performance. For example, in August 2002, the U.S. Public Interest Research Group used FOIA to obtain documents from the EPA's permit compliance database. Analyzing these reports, the group found that nearly one-third of all major industrial facilities and government-operated sewer plants had violated pollution discharge limits in the past two years but were seldom prosecuted.

[38] See http://right2info.org/resources/publications/Fringe%20Special%20-%2090%20FOIAs%20-%20sep%207%202009.pdf/view

CASE STUDY: Hungary's Green-Point service

Green-Point is a service of the public relations offices of the Ministry for Environment and Water of Hungary, operating since June 1997. The service includes 43 field offices that provide free information to the public about environmental regulations, legal issues related to environment protection, data, and publications.

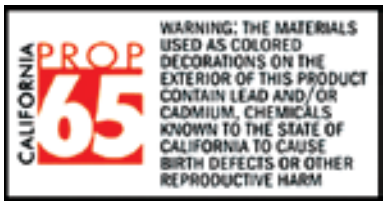
Figure 10: Green-Point Service of Hungary
(Source: Hungary Ministry of Environment and Water, http://www.kvvm.hu/index.php?pid=106, as of January 26, 2010)

Citizens can make inquiries or complaints on the phone, by email, or by visiting a Green-Point office in person. If the data requested is unavailable at the particular Green-Point office, staff will contact the competent ministry department or the competent authorities, forwarding if necessary the case to them. However, the Green-Point office maintains contact with the requester, and provides the requested data on the basis of the information received.

4 Product labeling programs

Product labeling regimes have been used to effectively reduce pollution. One of the best examples of this is California's Safe Drinking Water and Toxic Enforcement Act of 1986, also commonly known as Proposition 65. The Act requires the governor of California to annually publish a list of carcinogens and toxicants to be regulated.

Figure 11: Sample Proposition 65 Warning Label
(Source: Bryan China Co., www.customchinaware.com/Prop%2065.jpg, as of February 4, 2010)



One of the key mechanisms is the requirement that no business or industry shall knowingly and intentionally expose any individual to an identified carcinogen or reproductive toxicant "without first giving clear and reasonable warning." The warnings and labels that are used to fulfill these obligations reflect the exposure types (consumer, occupational, environmental) addressed, and have compelled industries to reduce, replace, and eliminate hazardous substances from their products. Proposition 65 also contains a powerful citizen suit enforcement mechanism that has helped to supplement enforcement. There are a number of examples of products that have been reformulated as a result of Proposition 65 label requirements. In many cases, companies would rather take the toxic ingredients out of their products than label them as containing toxic constituents.

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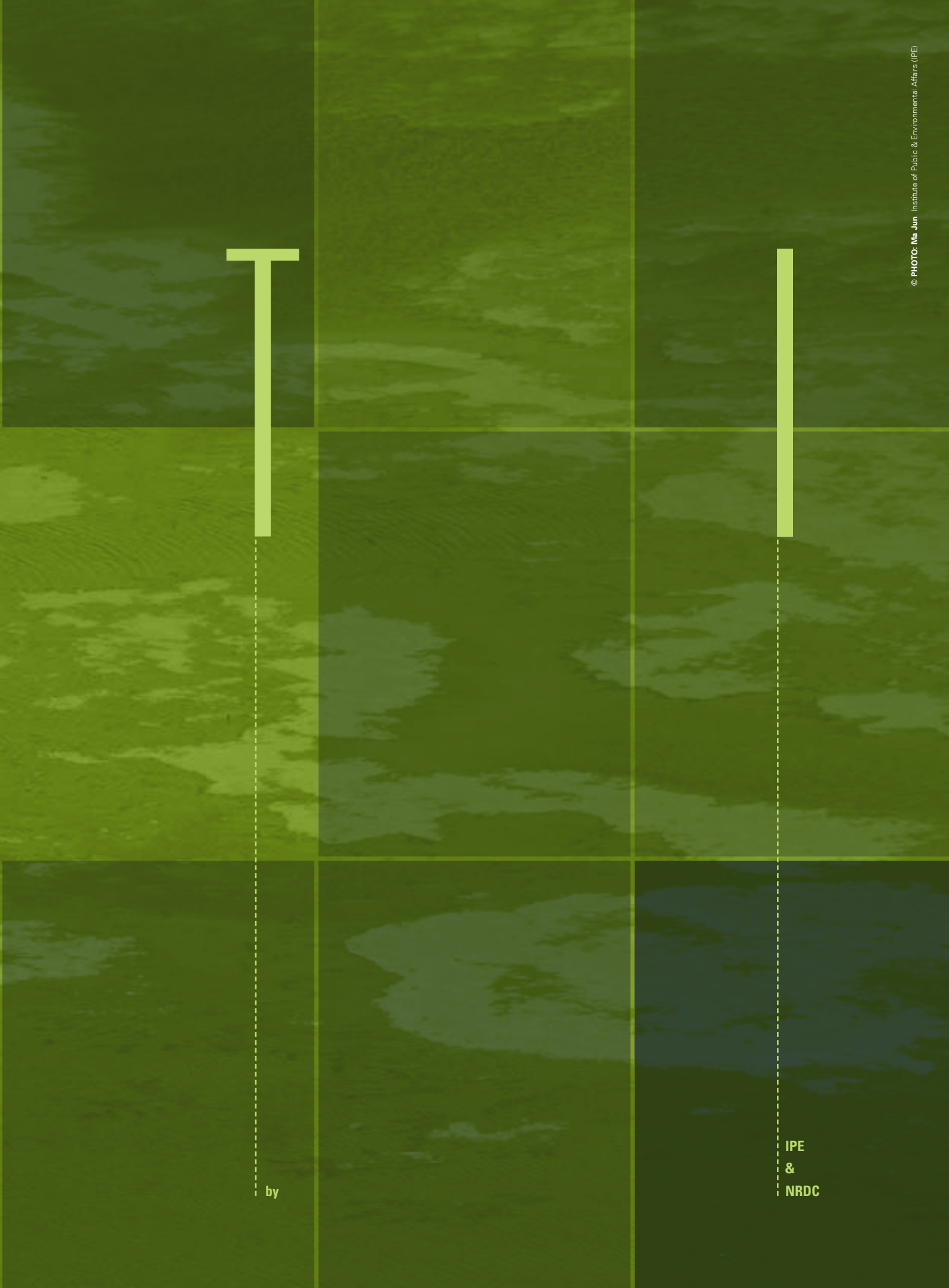

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