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# Information Disclosure in Environmental Risk Management: Developments in China

Arthur P. J. MOL, Guizhen HE, and Lei ZHANG

**Abstract:** Entering the twenty-first century, China has been the site of many serious environmental disasters and accidents. These have strengthened the call for the establishment of an environmental risk management system and for the development of new policies to effectively manage risk. Among the new policies in China's environmental risk management strategy are pollution insurance and information disclosure. This paper explores information disclosure policies through the implementation of the Environmental Information Disclosure Decree by governmental authorities and companies. In both 2008 and 2010, we reviewed the websites of the Ministry of Environmental Protection and all 31 provincial Environmental Protection Bureaus, conducted experiments in requesting information disclosure, and held interviews with all provincial Environmental Protection Bureaus. We conclude that the implementation of the Environmental Information Disclosure Decree is improving but still far from widespread, full and effective. The lack of enforcement and the ambiguity of some clauses in the decree give provincial environmental agencies great discretion to avoid disclosure and discourages enforcement of company environmental information disclosure. Implementation shortcomings of the decree are also related to the longstanding closeness, secrecy and monopoly of information in China's political system.

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**Keywords:** China, environmental risk management, environmental information disclosure

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## Environmental Risk Management in China

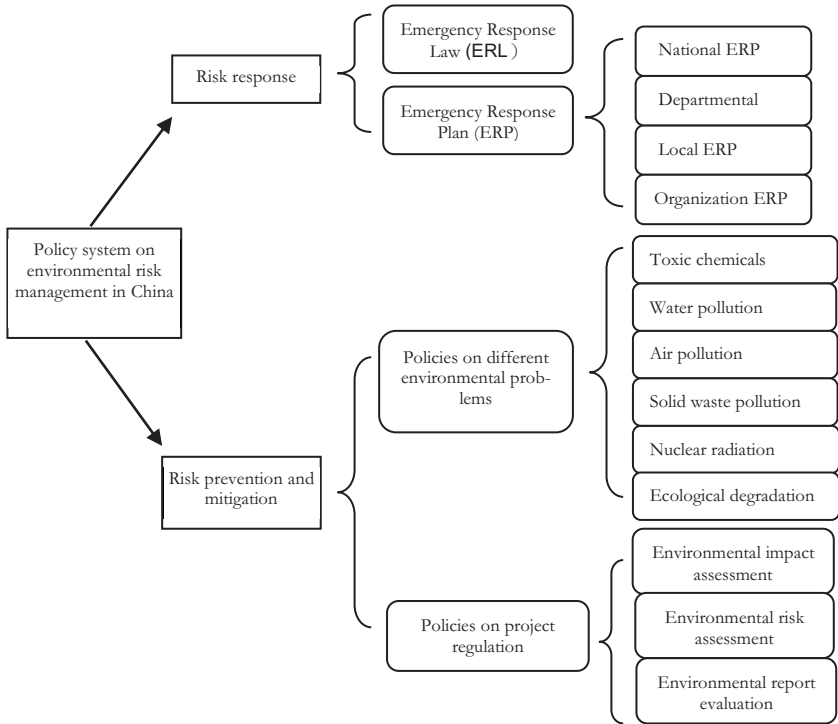
China started to work more systematically on managing environmental risks in the 1990s. Since then, different policies and regulations have been issued and implemented at different governmental levels to control environmental risks, such as the “Technical Guidelines for Environmental Impact Assessment, General Programme” (1993, HJ/T2.1-93), “Pesticide Management Regulations” (1997, updated in 2001) and “Audit Standard for Occupational Safety and Health Management System” (2001). Most of the twentieth-century environmental policies in China have focused on common pollution control problems, and very few have been effective in environmental risk management.

Entering the twenty-first century, China has been the site of a series of serious environmental disasters and accidents, which promoted the awareness and understanding of both the Chinese government and the Chinese public about environmental risks. The chemical spill in the Songhuajiang River in 2005 was notorious, but it is certainly not unique; 135 cases of emergent environmental incidents were reported directly to the Ministry of Environmental Protection (MEP) in 2008 alone. The Chinese government accelerated the development of environmental risk management policies and established a sound environmental risk management system. Such an environmental risk management system in China consists of two parts: 1) The environmental risk response system focuses on how to act upon and cope with environmental accidents. 2) Environmental risk prevention and mitigation focuses on preventing such risks from emerging and thus harming humans and the environment (see Figure 1).

The environmental risk response system is formed by the Emergency Response Law (ERL, 2007) and Emergency Response Plans (ERPs), which prepare governments and industries for coping with risks by outlining how to act in the face of different kinds of accidents. ERPs are classified into four levels: national, departmental, local (provincial, municipal and county) and organizational. Although ERPs are not specifically made for environmental disasters, environmental pollution accidents are usually one of the most important categories in those plans. When applying emergency response plans, environmental accidents are graded with four scales according to casualties, economic damage, social impacts, etc., with Grade I being the most severe. Although the environmental risk response system is more or less systematically built and looks comprehensive, the policies and systems working on environmen-

tal risk precaution and mitigation are still limited and fragmented. Those policies come from different governmental departments and focus on various kinds of environmental risks.

Figure 1: Policy System on Environmental Risk Management in China



Source: Authors' own compilation.

Recently, some innovative policies have been added to China's environmental risk management system, focusing both on emergency response and prevention and mitigation. These innovations aim to strengthen environmental risk management by involving and empowering non-state actors in risk governance. Pollution insurance and information disclosure are two recent examples of such innovations.

Environmental pollution liability insurance (or, "pollution insurance") is a newly proposed market-based approach to controlling environmental risks in China. The MEP initiated the idea of imposing manda-

tory pollution insurance on polluting industries, a practice also undertaken in other countries. Pollution insurance had already been introduced in some Chinese cities at the beginning of the 1990s, but it failed at that time and was abandoned in China just a few years later, in the the mid-1990s. Pollution insurance policy was again put into trial use in 2006 in the coal industry. The policy is still under discussion, and there are far-reaching plans to further test and introduce it in different industries and provinces in order to gain further experience with it, improve the system, and fully implement it in 2015 (Tremblay 2008). Pollution insurance is a type of insurance that covers costs related to pollution, which may include the costs of brownfield restoration and cleanup, and liability for injuries and deaths caused by pollution. One of the purposes of this insurance policy is that when companies that cause environmental disasters go bankrupt, the victims can still be compensated. The major national insurance company Pin An, which formally launched its environmental pollution liability insurance in 2009, has already compensated victims of environmental pollution from this insurance arrangement. But arguably more important will be the preventive nature of such insurance arrangements for environmental risks, as the private insurance sector will become a co-governor of hazardous industries and will enforce implementation of risk prevention and mitigation policies and measures (Balmer and Hendry 2009).

Information disclosure forms a second innovation in environmental risk management. As we will elaborate on in the next section, information disclosure calls upon new actors and new steering mechanisms in managing environmental risks. Mandatory disclosure of information on environmental risks will further trigger polluters and environmental authorities to reduce risks through public pressure. In China, the important role of information, information availability and information disclosure in managing environmental risks has been increasingly recognized in a variety of recent legislations and policies, such as the Work Safety Law of the People's Republic of China (2002), the Regulations on the Control over Safety of Dangerous Chemicals (2011), and the National Catalogue of Dangerous Substances (GB12268). Also in the Opinion on Strengthening Environmental Emergency Response Management (No. 130 of 2009), the MEP recognized the large gap between the demand for effective risk management and the actual capacity of government and industry to meet that demand. Hence, the MEP has set targets for 2015 to, among other things, establish a database of sources of environmental

risk of major economic sectors and create an information-based professional environmental risk management system (He et al. 2011a, 2011b). But the relevance of public availability and disclosure of information on environmental risks in managing these risks has been especially emphasized as part of the wider Open Government Information Regulation (OGIR), which was issued in 2007 by the State Council in order to open up access to government information and ensure greater official transparency nationwide. As the MEP had experimented before 2007 with disclosure of company environmental information to reduce environmental risks, the MEP was the first ministry to operationalize these general regulations into the Environmental Information Disclosure Decree (EIDD). The EIDD has been in effect since 1 May 2008. It forces lower-level governmental authorities and serious industrial polluters to disclose environmental information to the public, making the public a more active actor in managing environmental risks. The implementation of this decree is expected to speed up the transition from conventional government-dominated environmental regulation to a more transparent and “modern” environmental governance system in China.

This paper will explore in particular the implementation of environmental information disclosure by governmental authorities and companies following the EIDD. The next section provides some background on what has become known as informational regulation or informational governance (see Mol 2006), where information disclosure is understood as a new mode of governing industries to prevent environmental risks. The subsequent section reports on the information disclosure policies and institutions in China. The sections thereafter provide an assessment of recent practices and performance of environmental information disclosure policies in China.

## Information Disclosure as Environmental Governance

Initiatives on right-to-know and mandatory disclosure of environmental information have been growing since the early days of modern environmentalism. Because of the specificities of its political system, information disclosure programmes and right-to-know legislation emerged first – and are arguably still most advanced – in the United States (Graham and Miller 2001; Guttman 2008; Jobe 1999). There, most current environmental laws include right-to-know provisions – most notably, of course,

the Emergency Planning and Community Right-to-Know Act of 1986. This federal law was a congressional reaction to a number of incidents, most notably the 1984 Union Carbide incident in Bhopal, India, in which 2,000 people were killed. But this law has become part of a much broader set of right-to-know activities, protests, pressures and legal codes in many countries. In general, European countries followed the US; within Europe, the Nordic countries and the Netherlands in particular were clearly ahead of countries such as the United Kingdom, Germany, France, other Mediterranean countries, and Central and Eastern European states in this regard (Chen 2008; Mol 2008).

The call for further public access to environmental information collected by polluters and state agencies got a new – now international – impetus following Principle 10 of the Rio Declaration, agreed upon at the United Nations Conference on Environment and Development (UNCED) in 1992. On the European continent, this resulted in the Århus Convention in 1997, whereas globally the Access Initiative and the Partnership for Principle 10 continuously kept access to and disclosure of information on the global political agenda. The 2003 Kiev Protocol under the Århus Convention further enhanced public access to information in Europe through promoting the establishment of coherent, nationwide Pollutant Release and Transfer Registers (PRTRs). By 2000, 44 countries had passed access-to-information legislation (World Bank 2002), and by 2006, almost 70 countries had done so (Banisar 2006). According to a World Resource Institute Report (Petkova, Maurer, and Henninger 2002), three main forces have triggered the growing worldwide demand for public access to environmental information: (1) the urgency and scope of environmental problems, which caused wide support for information-sharing; (2) the increase in activism in civil society, not limited to the OECD countries; and (3) the developments in (and spread of) information technology and means of communication.

Initially, these right-to-know and mandatory disclosure legislations and ideas were not related to environmental improvements and reform. The basic motive was simply related to ideas of democracy and transparency: Citizens have a democratic right to access information, and for that, information needs to be disclosed publicly. It was only in the mid-1990s that information disclosure, right-to-know, and environmental reporting obligations were interpreted as having positive environmental governance effects (Kakkainen 2001; Stewart 2001; Mol 2006). In the legal, economic and sociological literature, the influence of the wider

availability of environmental information on environmental regulation, policy-making and management has been referred to as informational regulation or informational governance (Konar and Cohen 1997; Tietenberg 1998; Kleindorfer and Orts 1999; Case 2001; Mol 2006, 2008). With informational regulation or governance, conventional regulatory practices of states such as standard-setting, licensing and enforcement are complemented or partly replaced by new informational dynamics in which state as well as non-state actors play a significant role: “regulation by revelation” (Tietenberg and Wheeler 1998; Florini 2003; van den Burg 2006).

Under conditions of informational regulation/ governance, new monitoring systems and mechanisms along with mandatory disclosure trigger new enforcement dynamics (Wheeler 1997; Kakkainen 2001). Information disclosure to the public is then seen as an effective enforcement mechanism that complements and supports classical enforcement via the state. Widely publicized environmental information assists conventional enforcement activities, as polluters attempt to prevent receiving such negative publicity to ward off consequences for their reputation and markets. According to Graham (2002), mandatory disclosure strategies differ in three ways from conventional governmental policies on the environment: First, these strategies influence environmental risk levels not through legislative or regulatory processes by the state but through non-state public and market pressure, or the mere threat of such pressure. Second, the “regulators” are not only governments but also the countless actions of numerous non-state actors that are empowered by knowledge and information to change purchasing, investments, voting, collective actions, and so on. Third, these systems extend beyond the reach of the government and even beyond national boundaries.

Although in most OECD countries access to environmental information has been institutionally safeguarded and is increasingly widely available, the debate on its necessity and prospects has not lost its urgency, for three reasons. First, many of the non-OECD countries have still not (fully) installed legal provisions and institutionalized practices for freedom of information and information disclosure. Only recently have Asian countries started to develop and implement right-to-know and information disclosure laws and provisions in environmental policies and governance (Afsah, Laplante, and Wheeler 1997; Guo 2008). Transitional economies in Asia such as those of Vietnam, China and Laos have been notably slow in setting up advanced systems of information disclosure



(Mol 2009a). Second, the implementation of access to environmental information and the ease of access to environmental information still seriously lags behind the legal codification (Petkova, Maurer, and Henninger 2002; Stephan 2002; Kerret and Gray 2007). Third, the possible side effects of these environmental disclosure systems have started to emerge on the research agenda (Mol 2010).

## China's Environmental Information Disclosure Decree

China's efforts to legislate information disclosure date back to 1999, when a specific research institute was established within the Chinese Academy of Social Sciences to carry out research on the legislation of making government information open to the public. In May 2002, the State Council entrusted this institute to draft the information disclosure regulations, and a first draft was made in July 2002. But it took till 2006 before the draft regulations and the explanations were submitted to the State Council and were listed in their legislation planning. The Opening Governmental Information Regulation (OGIR) was approved in January 2007 and came into effect on 1 May 2008. The main motivations behind the OGIR are to alleviate the information asymmetry between actors; to gain political credit by "improving the transparency of governmental work"; and to improve administrative performance (Wang, Greer, and Lin 2008; Zheng 2007). The regulations also stipulate exemptions for disclosure: Article 14 reads "No administrative organ may disclose any government information involving state secrets, commercial secrets or individual privacy" and is in line with most exemptions in other countries; but Article 8 adds that government information disclosure should not endanger the "national security, public security, economic security or social stability", a much wider interpretation.

The EIDD is the first sectoral system to operationalize the general OGIR regulations. The EIDD should be understood within the context of a wider system of information disclosure that has been developing in China. Since the turn of the millennium, China has witnessed increasing openness of, publication of, and public access to environmental information (Li and Xiong 2005; Yue, Chen, and Lu 2007). The 2004 Cleaner Production Promotion Law has been instrumental in informational governance, as it enables the MEP and local Environmental Protection Bureaus (EPBs) to publish environmental data of non-complying compa-

nies in newspapers or on websites (Mol and Liu 2005). Many provinces use the 2004 Cleaner Production Promotion Law to force non-complying companies to publish emissions data (using Article 31), and EPBs have publicly criticized poorly performing enterprises (based on Article 17) (Guo 2005: 7-8). The predecessor of the MEP also issued regulations in 2003 on environmental inspection and public disclosure of environmental performance for companies accessing – or refinancing on – the stock market. But we can also witness increasing public access to environmental information on a larger scale – for instance, in growing newspaper reporting and publication of environmental quality data and risks; increasing quantities and qualities of environmental websites (e.g. in all major cities and also on the websites of NGOs); information disclosure experiments with industries such as the GreenWatch programme and a nation- and province-wide company rating programme (Cao et al. 2010; Dong et al. 2010; Shang, Liu, and Geng 2007; Wang, Bi, and Wheeler 2002; Wang et al. 2002); the development of an environmental auditing system; and the start of a web-based pollutant emission and transfer register (by the Institute of Public & Environmental Affairs; see Mol 2009b: 98). The EIDD strengthens and institutionalizes these various efforts of both environmental authorities and various non-governmental actors to promote information disclosure and public participation.

This decree requires not only environmental authorities but also industries to disclose environmental information. In the decree, environmental information is clustered into four major categories: environmental laws and regulations; environmental quality; environmental management and supervision; and environmental accidents and emergency responses. These four categories are again broken down into 17 items (Table 1). For example, the first category covers items such as environmental laws, regulations, standards, administrative permits and approval. For provincial EPBs, it is compulsory to disclose information on all 17 items. Those industries that discharge above emission standards (labelled “serious polluting enterprises”) must publish without any exemption information on four categories: the company’s name and address and the name of its legal representative; the concentration and volume of each pollutant and its discharge mode; the environmental facilities in operation; and the company’s emergency response plan. Other industries are encouraged to report this environmental information on a voluntary basis. The decree also specifies how and within what time frame envir-

onmental information should be provided to the public: Environmental authorities must make information available to the public within 20 working days; responses to requests for information from the public should be answered within 15 working days; and major industrial polluters (as registered by EPBs) must disclose and report emissions data within 30 days. In addition, the decree requires the establishment of monitoring, evaluation and supervision systems. Those organizations violating the rules of information disclosure will be held responsible and accountable by their higher-level supervisors; industries violating the rules will face penalties. Citizens can sue public authorities and industries that violate the decree. Yan Yiming, a lawyer from Shanghai, was the first to make use of the EIDD by requesting the EPBs of Anhui and Henan provinces to disclose environmental information on 4 and 5 May 2008, respectively (*East Today* 2008).

Table 1: Environmental Information for Mandatory Disclosure as Specified in EIDD

Category	Items
Category I Environmental laws and regulations	Environmental laws, regulations, standards and policy papers
	The items, legal basis, standards and procedures of environmental administrative fees
	The items, legal basis, standards and procedures of pollution discharge fees
	The structures, function and contact information of environmental agencies
	Other environmental information for mandatory disclosure according to other laws and regulations
Category II Environmental quality	Environmental quality statement
	Environmental statistics and survey data
	The types, volumes and disposal of solid waste in large and medium-sized cities

Category	Items
Category II Environmental quality	List of key polluters whose pollution emissions are above the national or local discharge standards, or above total pollution volume control quota
Category III Environmental management and supervision	<p>Environmental protection planning</p> <p>The Environmental Impact Assessment documents for construction projects and their results; the items, legal basis, requirements, procedures and results of other environmental administrative permits</p> <p>Responses to and decisions on complaints about industrial pollution cases</p> <p>The breakdown of the total pollution volume of major pollutants and their enforcement; the issuing of emissions permits; the results of quantitative examination of urban environment.</p> <p>The enforcement and result of environmental administrative penalties, administrative reviews and administrative measures</p> <p>Approval of environmental protection pilot projects</p>
Category IV Environmental accidents and emergency response	<p>The emergency response plan; alarms on and response to environmental accidents</p> <p>List of industries that have caused major environmental pollution accidents; list of industries that refuse to execute administrative penalty decisions</p>

Source: Authors' own compilation.

The exemptions formulated in the general OGIR also apply to this environmental decree (Wang and Cui 2008). This opens the possibility for strategic use of the category “sensitive information”, by incorrectly refusing to answer public information requests. In general, governmental officials are still used to working behind closed doors and – according to one commentator – this decree might change doors into “transparent doors”, but may not open them (Renmin Ribao 2008).

## Assessing Information Disclosure: Methodology

In assessing the implementation of the new environmental information disclosure system, we focused on the role of provincial Environmental Protection Bureaus and on major corporations. Provincial EPBs play a key role in implementing this decree; they are under the direct supervision of the MEP and are responsible for supervising lower-level EPBs. In our assessment, we included all 31 provincial-level EPBs, as well as the MEP. We assessed the information disclosure performance of EPBs and the MEP in November 2008 (six months after the EIDD came into effect) and again in June 2010 (two years after the EIDD came into effect), using the same methodology. Provincial EPBs should provide environmental information on major industrial polluters, but we also assessed company environmental information disclosures separately.

To assess to what extent these EPBs had implemented the EIDD, three different methods were applied in 2008 (see also Zhang et al. 2010) and were repeated in 2010. Firstly, a standardized analysis was performed on the websites of the MEP and all 31 provincial EPBs regarding the requirements set out in the decree. As specified in the MEP Guidelines on Environmental Information Disclosure (Article 1.2), mandatory disclosed environmental information must be made available on the EPB website, and the website should also provide information on the procedure and requirements for information requests. These websites were assessed simultaneously but independently by ten academic experts in environmental information handling (all frequent users of governmental websites) in 2008 and again in 2010. The experts were given standardized instructions on scoring the websites on a five-point Likert scale, from “1” (insufficient/ none) to “5” (complete), regarding the following three aspects:

- User friendliness of the website interface: (i) Is there a direct and easy-to-find clickable link on the EPB website for environmental information that has to be disclosed? (ii) If not, are environmental information and the forms and procedures to ask for additional environmental information reachable via the provincial governmental website on general information disclosure (indirect link)? (iii) Are the items for environmental information disclosure directly linked to full texts, data archives, etc.?

- Convenience of information disclosure for society: How convenient is it for individuals or organizations to request environmental information from EPBs?
- Coverage of mandatory information: What percentage of the 4 categories and 17 items (see Table 1) of environmental information, as specified in the MEP Guidelines on Environmental Information Disclosure, is actually included in the EPB websites? (Note: The accuracy of the provided information goes beyond the scope of this study.)

Secondly, we carried out an experiment on how provincial EPBs reacted to requests for environmental information. As a research centre of the Chinese Academy of Sciences, we formally submitted a request to all EPBs for a list of key chemical industrial polluters (including their locations, sizes and emission discharges) and for the 2005–2007 records (2008 survey) or the 2005–2009 records (2010 survey) of major environmental accidents in the province. According to the guidelines, this information falls under mandatory disclosure but does not have to be presented directly on websites. Applications for these information requests were submitted using the provincial contact information provided on the websites, or via a telephone call in case no information was available on the websites. After 15 working days, we re-contacted those EPBs that did not respond in order to resubmit our request and to explore reasons for their initial failure.

Thirdly, the officers responsible for environmental information disclosure of the MEP and all 31 provincial EPBs were interviewed on the implementation of actual requests for environmental information disclosure using a semi-open, standardized questionnaire. Questions related to

- reasons for (not) providing requested environmental information;
- preparatory work done before 1 May 2008, and difficulties encountered in these preparations;
- the number of requests for environmental information disclosure received since 1 May 2008, and the kind of applicants; and
- reasons for failure(s) to disclose environmental information.

In addition to this assessment of EPBs, we also analysed how companies reacted to ongoing calls for information disclosure and the EIDD. Here we used a review of existing studies, data and media reporting to gain an overview of company environmental information disclosure.

## Implementing Information Disclosure Requirements by EPBs

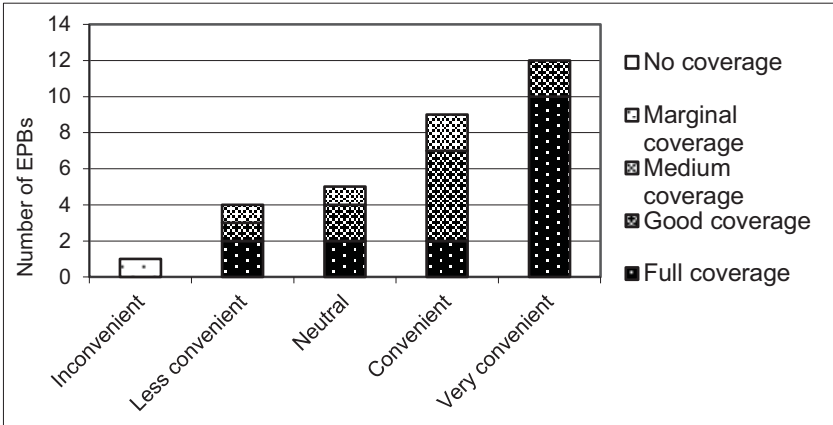
In preparing for the implementation of the national EIDD and following the requirements of the MEP, the number of provincial EPBs that formulated their own specific guidelines for information disclosure increased from 21 in 2008 to 30 by June 2010, with Tibet as the only province failing to do so up till June 2010. For most of the 30 provincial EPBs, these guidelines are not much more than an exact copy of the relevant articles and catalogue of the national decree. In addition, the EPBs sometimes had limited personnel and financial capacity for implementation, and often added the task of implementation to an existing division without providing additional resources and capacity for implementation.

The 2010 review of the provincial EPBs' websites proved that, except for Tibet, all 30 websites have a direct clickable link to the item of information disclosure, while this was the case for only 21 provincial EPBs in 2008. On 27 (16 in 2008) of the 30 websites, one can click on the title of listed documents to obtain the full text of regulations or policy documents, while three websites (Hebei, Hunan and Xinjiang) present only a list of items falling under the disclosure decree, without having direct access.

Ten experts were independently asked to score the convenience of the websites using a five-point Likert scale ("1" inconvenient – "5" very convenient). The average scores are provided in Figures 2 and 3 for 2008 and 2010 respectively, showing a large variety among the EPB websites. In terms of the coverage of the contents as specified in the MEP Guidelines on Environmental Information Disclosure, the experts rated the information availability (but not the information quality) of the 17 items within the four categories of information (see Table 1): environmental laws and regulations; environmental quality; environmental management and supervision; and environmental accidents and emergency responses. Again, a 5-point Likert scale was used, ranging from "5" (full coverage of the 17 items) to "1" (no coverage of the 17 items). The Tibet EPB had no specific website until June 2010. Except for Tibet (which did have some information on the general provincial website, but no EPB webpage), all other EPB websites provide some information: In 2010, 18 websites scored on average "5", eight websites scored on average "4", and for four websites the average score was "3". Five of the 31 EPBs

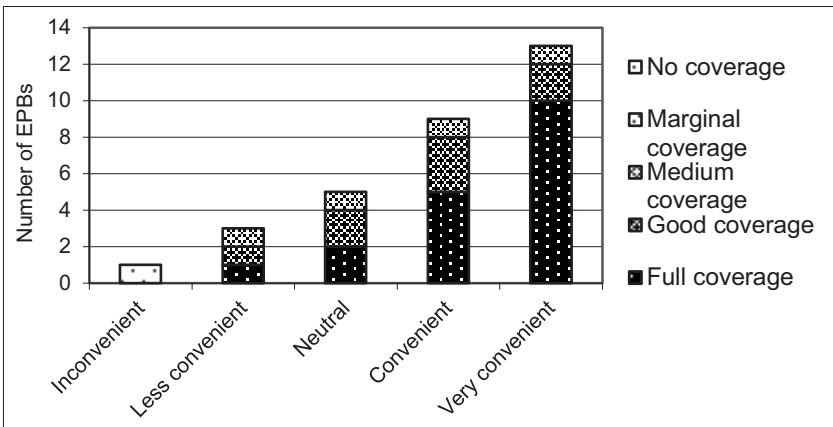
give no information on environmental accidents and emergency responses. Compared with the results of the 2008 survey, the number of websites with scores of “5” increased by two, and the number of EPBs that gave no information on environmental accidents and emergency responses halved, indicating some improvement.

Figure 2: Convenience and Coverage of Items of MEP and 31 EPB Websites in November 2008



Source: Authors' own compilation.

Figure 3: Convenience and Coverage of Items of MEP and 31 EPB Websites in June 2010



Source: Authors' own compilation.

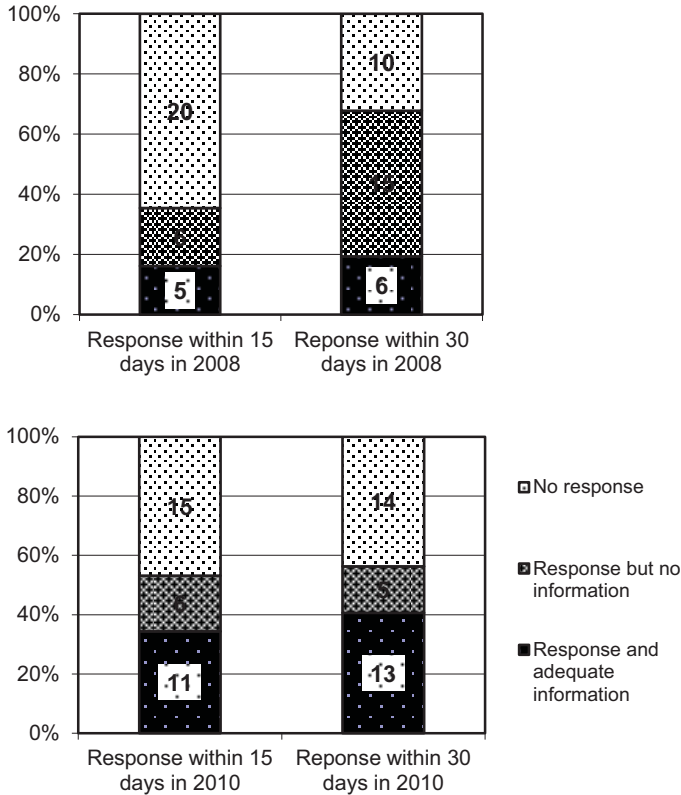


The 2010 survey showed that, of all provincial EPB websites, 21 offered online application forms for disclosure of environmental information, as does the website of the MEP. However, only 15 EPBs had well-functioning online application systems while the other six did not work. These 21 agencies also offered other ways to send in information requests (e.g. via mail, e-mail, fax and/ or telephone). Some of the other EPBs are more restricted in the ways they accept information requests. All EPBs and the MEP allow both individuals and organizations to send in information disclosure requests.

We used the possibility for filing information disclosure requests to design an experiment on information disclosure. As an institute of the Chinese Academy of Sciences, we filed an information request on key chemical industrial polluters and on environmental accidents. Of the 32 organizations (including the MEP), 16 EPBs and the MEP responded within the specified legal deadline of 15 working days in 2010. Of those, 11 EPBs provided adequate information on the emissions data of large chemical industries and major environmental accidents since 2005, and five EPBs and the MEP explained why they could not provide the requested information in time and requested an extension to process our application (see Figure 4). The other 15 EPBs did not react within 15 working days. After 30 days, the situation improved a little, with two additional organizations (the MEP and one EPB) providing information. Nevertheless, this shows a noticeable improvement compared to the response in 2008, when only six EPBs provided adequate information within 30 days.

In interviews with all EPBs and the MEP, a considerable number of them used secrecy of data, state security, social stability, confidentiality or similar arguments as excuses for their inability to provide the information. Some EPB staff made it clear that their leaders would not like to provide the information. Sometimes they referred to Article 10 of the OGIR, sometimes to MEP Policy Paper 187, 2004, sometimes to the specific type of information requested (company information and key environmental accidents being confidential), and once, an EPB representative asked questions about the identity and qualifications of the applicant (an academic institute of the Chinese Academy of Sciences) and for what purpose it would need the information. Few claimed that this information could not be obtained due to poor provincial monitoring systems, or poor technical and supporting facilities to produce data.

Figure 4: Response Rates of 31 EPBs Following Information Request in 2008 and 2010 (including MEP)

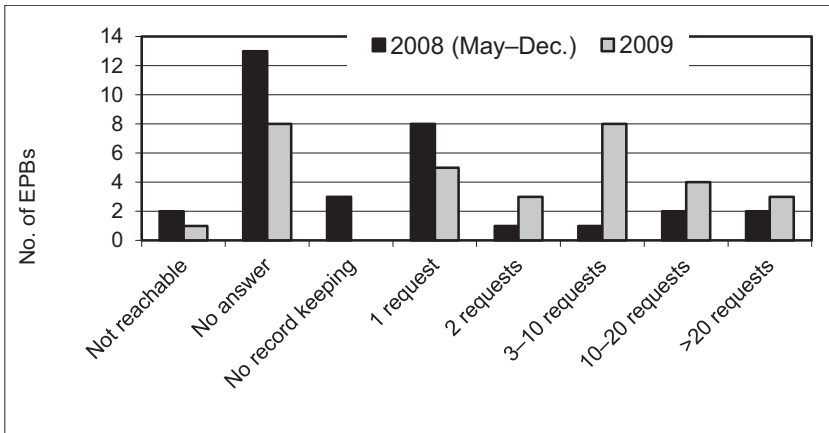


Source: Authors' own compilation.

Figure 5 provides a frequency graph on the number of requests for information “recorded” by EPBs from May to December 2008 and over the entire year 2009. In all provinces, individuals as well as organizations are entitled to file requests for environmental information disclosure, but only in a few provinces have individuals and organizations done so. The Shanghai EPB seems to have the best practice on information disclosure. It received – and registered accurately – 81 requests in 2008, and 97 in 2009, of which approximately 70 per cent came from individuals and 30

per cent from organizations. The MEP received 68 requests in 2008 and 72 in 2009, about 90 per cent coming from individuals (see also MEP 2009, 2010). The Henan EPB, the Beijing EPB, the Jiangsu EPB, the Guanxi EPB and the Anhui EPB also received considerable numbers of requests, mostly from individuals. For eight EPBs this experiment was the first request for environmental information they received in 2008, and for five EPBs the experiment was also the first request they received in 2009. The Guangdong EPB was reachable by neither phone nor fax for data in 2008 and 2009, and the Hebei EPB was not reachable for 2008 data. Quite a number of EPBs promised in both 2008 and 2009 to answer later but failed to do so even after follow-up requests. This experiment also illustrated that in 2008 hardly any EPB accurately registered environmental information requests they received. Most EPBs had to estimate the number of requests or needed a considerable amount of time before being able to provide an answer; three EPBs were even unable to provide an estimate. However, registering information requests seemed to have improved somewhat in 2009. Obviously, registering information disclosure requests is slowly becoming institutionalized within EPBs.

Figure 5: Number of Requests for Information Recorded at all 31 EPBs and MEP



Source: Authors' own compilation.

In our interviews, shortcomings in capacity, capacity-building and training of provincial staff, unclear procedures and responsibilities, and lack of environmental information were often mentioned by EPBs as main reasons for their poor implementation of the Environmental Information Disclosure Decree. Often, tasks related to the decree had been added to an existing division, without additional allocation of capacity or resources. Hence, the EPB divisions responsible for the implementation of the decree lacked hardware (technologies and information systems), staff and electronic “software”, as well as finances. A number of EPBs also mentioned the ambiguity of the guidelines and rules, for instance on responsibilities and procedures, which caused significant confusion in practice. And the poor quality of (existing) provincial monitoring systems, which were unable to generate the required information, were more than incidentally referred to. Existing data often need further processing and analysis before these can be used and meet the needs of applicants. EPBs often lack the knowledge and capacity to do so. There is also no exchange of experiences between EPBs on how to interpret and operationalize the decree and the provincial guidelines, or on how to set up efficient information disclosure systems.

These results are comparable with the outcomes of an earlier investigation. As part of the nationwide programme for information capacity-building of government agencies (or, the “e-government” movement), the MEP entrusted its Information Centre to evaluate the performance of all provincial EPB websites in December 2007, half a year before the decree came into effect (MEP 2008). Only the Tibet EPB was excluded. Expert judgement was used as the main method to assess website design, public participation, environmental information provision, and online interaction functions. The MEP’s conclusions on active and passive information provision are not too different from our November 2008 and June 2010 findings: Most of the websites presented relatively adequate information on policy documents, basic environmental quality, environmental news and announcements, and the environmental agency itself. But most provincial websites fell short of providing environmental information on pollution control, environmental standards, Environmental Impact Assessment (EIA) procedures and approvals, environmental emissions and monitoring data, environmental accidents and emergency responses, and environmental fees and fines. EPBs tend to release easily obtainable and less sensitive information, but keep complex and “sensitive” information – such as on environmental supervision,

emissions data, EIA outcomes, accidents and emergency responses – veiled.

## Environmental Information Disclosure by Companies

The MEP has advocated for company environmental information disclosure with growing intensity since the turn of the millennium. The EIDD is only one of a set of policy efforts to increase public availability of company environmental data. In early 2007, the MEP published a 237-page list of more than 6,000 industrial polluters on its website, requiring them to install automatic monitoring and control systems that are directly connected to local EPBs, and planning for disclosure of this collected data. There are various forms of non-mandatory environmental reporting and information disclosure by companies in China – for instance, reporting related to ISO14000 certification (Mol 2009a: 121), company sustainability reporting (<[www.SustainabilityReport.cn](http://www.SustainabilityReport.cn)>), corporate social responsibility reporting (following the 2008 CSR guidelines of the Assets Supervision and Administration Commission), and voluntary environmental reporting; all of these are increasing rapidly. Various studies have found that this company environmental reporting performs poorly with respect to disclosing environmental data and information. Shang, Liu, and Geng (2007) reviewed annual reports of 127 listed companies from 1992 to 2002 and concluded that the environmental information they provided was very general and limited. A 2006 survey of environmental information disclosure of China's top 500 companies showed that only 15 per cent of them disclosed any detailed environmental information. On top of that, this information hardly included up-to-date quantitative data (for example, on emissions); the data were also incomplete, did not provide year-to-year comparisons, and contained only information favourable to companies (Wu, Zhang, and Lin 2008). In another study, Liu and Anbumozhi (2009) analysed 175 major companies listed by the China Securities Regulatory Commission regarding their environmental information disclosure performance, finding that less than 20 per cent of them had descriptive environmental information, and only a handful voluntarily disclosed detailed quantitative information (Petro China, for instance). Note that in all these information disclosure assessments only the major companies were included, and these companies can be expected to be front-runners in environmental reporting and

disclosure. A more representative sample of Chinese industries would show even bleaker results on environmental information disclosure.

The above studies were carried out before the EIDD came into effect. In 2009 Greenpeace (2009) investigated to what extent mandatory corporate information disclosure, as stipulated in the EIDD, was implemented during the first year. Of the 500 Fortune Global and the 100 Fortune China companies, 18 companies (with 25 factories) were reported by local EPBs to be in violation of regulations on pollution discharge standards. Hence, following the EIDD these companies had to abide by mandatory disclosure. Greenpeace found that none of these 25 factories disclosed environmental information within the required period of 30 days. Four factories of three companies (Samsung, China Coal Energy and Weichai Power) disclosed their pollutant emissions (usually on the EPB websites), but only for a few of their discharged substances. Hence, an overall poor performance on environmental information disclosure, both for the Chinese and for the international companies. This is further confirmed by anecdotal evidence on individual cases, such as Greenpeace's failed attempt to make BASF disclose its emission data (Kaiser and Liu 2009). Poor compliance with the EIDD by both national and international corporations is facilitated by weak enforcement of local EPBs and by confusion among companies regarding the category of "serious polluting enterprises" and the disclosure of information on "major pollutants".

The Institute for Public and Environmental Affairs (IPEA) has set up a database on water pollution and air pollution, with 9,000 records. In 2009, using the EIDD, IPEA requested that 27 companies disclose their environmental discharge data. While 13 of them responded, only four of them actually released discharge data. No sanctions were used by EPBs to enforce disclosure of data (Wang and Ruan 2010). This poor performance in company environmental information disclosure forced the MEP to issue the "Notice on Strictly Implementing Environmental Protection Verification System in the Listed Companies and Strengthening Supervision Afterwards" on 13 July 2010. According to this notice, stock market-listed companies are required to disclose environmental data, which need to be verified by the MEP and provincial EPBs, and these verifications are to be published every quarter. The notice requires the provincial EPBs to take the stock market-listed companies as a priority target group for the enforcement of environmental information disclosure.

## Discussion and Conclusion

In comparing the various sources and studies on environmental information disclosure by public and private organizations, it becomes clear that environmental information disclosure is not evenly distributed throughout China. Eastern and coastal provinces seem to score better in websites and online interactive communication functions than the western provinces, showing the differences in technical and financial capacities between rich and poor provinces. It should be noted, though, that most studies only evaluate the coverage of the information, not the quality of the provided information. Another clear difference between eastern and western provinces can be noted in reactive information disclosure: Among the five EPBs that received the highest number of information requests, four are from eastern China. And in our 2008 experiment, five of the six provinces that provided adequate information (most of them in time) were rich eastern provinces. Wang and Ruan (2010) and IPEA and NDRC (2009, 2010) show that this is also valid for city-level (and sometimes even county-level) environmental protection departments, where major cities (and some counties) in Jiangsu and Zhejiang provinces are leading in publishing names of, environmental information about, and penalties leveled against heavy polluting enterprises on their websites. In a number of provinces (e.g. Hubei, Shandong), city-level rather than provincial-level EPBs seem to lead in environmental disclosure reporting. But the suggested relationship that rich provinces are also the ones that lead in openness and information disclosure is no iron law: Several rich eastern provinces did not respond to our request for information in 2008, including Hebei, Shandong and Guangdong, the latter of which also failed to respond in 2009. Also with respect to company information disclosure, there is a certain correlation but no iron law between good information disclosure and rich, international companies, as the Greenpeace (2009) study shows. Liu and Anbumozhi (2009) show that company size is a determinant of environmental information disclosure of Chinese companies but economic performance is not. Often it is governmental requirements rather than requirements from other stakeholders that make companies disclose environmental information.

How should we interpret the ambivalent response to requests for information disclosure? From our interviews we learned that often lack of (motivated) staff and resources and the absence of clear responsibilities are an important cause of information requests (sent by registered

mail, e-mail, fax, telephone or even online submission) ending up nowhere. And if these requests find a responsive EPB staff, it proves that they are often not able or not willing to respond to information disclosure requests as stipulated by the decree. This was also the case in company environmental information disclosure. According to the 31 EPB staff members interviewed in both 2008 and 2010, the main reasons for not providing the requested information are that the information is either nonexistent or classified as confidential. Although the information requested in our experiment is by no means confidential, confidentiality was quite often used as an excuse for withholding information on environmental accidents and industrial emissions. This ambiguous use of the confidentiality argument points on the one hand to conflicts between the decree and other laws and regulations – such as the Law on Guarding State Secrets, the Archives Law, the Administrative Procedural Law, the Law on the Prevention and Treatment of Infectious Diseases, and the Regulations on Preparedness for and Responses to Emergent Public Health Hazards – and, on the other hand, to the “attitudes” (cf. Liu 2007) of the EPB officers involved. In addition to these arguments of confidentiality and inability, poor performance of environmental information disclosure in companies and EPBs was also related to doubts about how certain clauses of the decree should be interpreted.

These shortcomings in information disclosure could be interpreted as starting-up problems. But given the fact that all EPBs and companies had one year of preparation before the formal implementation of the decree on 1 May 2008, and given that the system has now been running for over two years, it seems there is more going on than just starting-up problems. Obviously, although the decree is meant to improve environmental risk governance in China and strengthen civil society to become a partner in risk governance, the majority of EPBs and companies see it as a burden rather than a useful instrument. In general, insufficient resources have been allocated to build up local capacity for implementation of disclosure systems, and no political priority is given to active or passive environmental information provision and disclosure. Under these conditions, the ambiguity of some clauses in the decree gives provincial environmental agencies great discretion to avoid disclosure and avoid enforcement of company environmental information disclosure.

The implementation shortcomings of the EIDD can be partly interpreted as starting-up problems, but they are also related to the longstanding reticence, secrecy and monopoly of information in China’s political



system. At the same time, the new legal provisions are also part of wider developments and practices in China to open up environmental information systems to the public and make (environmental) authorities and companies more accountable in environmental risk management. Hence, we can expect that also in China environmental information disclosure will (slowly but steadily) be less and less understood in terms of a favour to the public, and more and more as an act and instrument of environmental risk governance. To advance this, future efforts should focus on further publicity of the decree to enhance public participation, on the establishment of an evaluation and supervision system of information disclosure (Sun 2008), on the mobilization of resources within and across agencies, on the exchange of experiences and best practices among EPBs, on strengthening the legal status (also vis-à-vis other regulations) of environmental information disclosure, and on the enforcement of the decree's provision toward “serious polluting industries”. Only then will the promise of environmental information disclosure as a new environmental risk management strategy materialize in China.

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