

# An Analysis of the Public Participation in Environmental Management in the Era of “Internet+”

Ju Chuanguo  
Northeastern University

In recent years, the application of Internet technology in the public participation in environmental management has been developing continuously in China. From the case of Maoming PX Incident and the case of Chai’s “Under the Dome,” it can be seen that Internet technology has both advantages of promoting the public participation in environmental management and disadvantages of the lacks of normative guidance. Government departments should not only adapt to the “Internet+” era and guide the public use of Internet technology in environment management, but also strengthen the construction of laws and regulations and the construction of institutional mechanisms to standardize concrete links of the public participation in environmental management through the Internet and finally establish a system of the public participation in environmental management in the era of “Internet+.”

*Keywords:* “Internet+,” public participation, environmental management

The public participation in environmental management refers to the social behavior that publics participate in government departments’ regulatory and decision about environment through a variety of ways and means in the form of personal status and social organization in order to safeguard their own rights and promote social welfare. In recent years, the development and application of Internet technology have had a significant impact on the concrete practice of the public participation in environmental management in China. On the one hand, Internet technology provides a new way for the public to participate in environmental management, which means they can participate more extensively and deeply in government departments’ decision-making in environmental management through the Internet. On the other hand, the problems of the Internet participation including procedures to be standardized and network information to be clarified will also affect the actual effects of the public participation in environmental management, which may even mislead the public’s understanding of ecological issues and disrupt the normal order of the public participation in environmental management in some environmental mass incidents. In order to make Internet technology play a better role in the public participation in environmental management, government departments need to strengthen the construction of laws and regulations and the construction of institutional mechanisms, and finally establish a system of the public participation in environmental management in the era of “Internet+.”

## 1. “Internet+” and Its Application in the Public Participation in Environmental Management

In March 2015, Li Keqiang, premier of State Council of the People’s Republic of China, put forward the

---

Ju Chuanguo, Ph.D. student, School of Marxism, Northeastern University, China; main research field: The Basic Principles of Marxism and Ecological Philosophy.

important concept of “Internet+” and demanded the project of “Internet+” action plan in the government working report, which will vigorously promote the integration of the Internet and the modern manufacturing industry and actively occupy the high ground of the competition in emerging industries. Specifically, “Internet+” refers to the combination of Internet technology with developments in various fields of economic and social construction, and the organic unification of scientific and technological progress, economic efficiency improvement and social organizational change in the use of Internet technology. In particular, it is to use Internet technology to promote the transformation and upgrading of traditional industries and improve productivity in China, to adjust and form relations of production that meet the development of social productivity in China and ultimately to enhance the vitality of social economy in China. In recent years, emerging industries such as 3D printing technology, artificial intelligence, Internet finance, E-commerce, mobile payment, and shared economy, which are supported by big data and cloud computing on the Internet, have enjoyed rapid development and played an important role in China’s industrial transformation and upgrading in the fields of industrial manufacturing, agricultural development, financial services , logistics and transportation, medical health, and other industries, many of which are numerous specific cases.

The technology of “Internet+” also has important value in the field of environmental protection. “Guiding Opinions of the State Council on Promoting ‘Internet+’ Actions Actively” announced in July 2015 listed “Internet+ Green Ecology” as one of the key action plans, requiring the use of Internet technology to enhance the investigation and monitoring of dynamic information on resources and environment and to realize the sharing of environment information so as to build a three-dimensional monitoring system on the carrying capacity of the environment and resources in a particular region, requiring to strengthen the real-time monitoring of pollutant emissions and form a mechanism for environmental information sharing among governments, enterprises, and the general public as well as a mechanism for monitoring and early warning on ecological and environmental risks so as to enhance the prevention level and emergency response capacity to deal with environmental pollution and ecological damage, requiring to improve the recycling system of waste resources and use network information technology to track the flow of waste resources so as to optimize the distribution of logistics outlets, to facilitate management services and to try to explore some models about renewable resource recovery, and requiring to establish an online trading system of used resources and promote the formation of an online trading platform for waste resources with industry, regional, or even national influence so as to enhance China’s pricing power of major renewable resources. Undoubtedly, the widespread use of Internet technology will help us form a comprehensive understanding of our environment, promote the concrete implementation of the environmental protection, and contribute to the further development of the construction of ecological civilization in China.

For a long time, there are always plagued issues such as poor participation awareness, simple participation form, low participation level, and relatively lagging participation time in process of the public participation in environmental management in China. One of the important reasons is that participating in environmental management requires an individual to pay considerable time and energy costs, which means that individuals need to learn relevant knowledge of environmental science, grasp the dynamic information of environment, and participate in decision-making meetings organized by government departments on a regular basis, making themselves feel overheat of environmental management on account of the time-space and economic costs. Nowadays, with the development of Internet technology and its extensive application in the field of ecological civilization construction, we can obtain the corresponding knowledge and information and get the management

decision of government departments conveniently and quickly through the Internet, break the limitations of time, and space and reduce the participation cost of the public through a variety of ways such as online investigation, online voting, video conference, and webcasting and gradually explore new channels and forms for the public participation in environmental management so as to promote the exchange and dialogue among governments, enterprises, and individuals, making the public participates in the environmental management and decision-making timely, effectively, and deeply.

At present, the application of Internet technology in process of the public participation in environmental management can be divided into two paths: One is “top-down” path and the other is “bottom-up” path, which have gradually formed a good Interaction among government departments, enterprises, and the public. In terms of the “top-down” path, in recent years, many localities and departments in China have vigorously promoted the construction of government web portals, Sina-Weibo accounts, and WeChat public accounts and strived to improve the transparency of government administration, the capability of doing business online, and the degree of public participation on the basis of the Internet, at the same time, the Ministry of Environmental Protection issued The Circular on Printing and Distributing “Overall Plan for Eco-big Data Construction” in March 2016 and set up a leading group for big data construction of environment in charge of the deployment of the specific application of Internet technology in environmental protection. As for the “bottom-up” path, with the increasing awareness of environmental protection and the widespread popularization of the Internet, the public has also begun to make their own voices heard through online channels, use public platforms such as Post Bar, Blog, Sina-Weibo, WeChat, Community Forum, and Webcast to disclose their environmental events, participate in discussions on ecological issues and express their opinions, triggering the coverage of traditional media, forming hot topics discussed extensively in society and maybe even promoting the occurrence and development of environmental mass incidents in specific circumstances so as to play an important role in the government’s management and decision-making about environment.

As a new phenomenon in society, the application of Internet technology in process of the public participation in environmental management has both advantages and disadvantages, which calls for the establishment and improvement of laws, regulations, and institutional mechanisms to guide them. In view of this, we will take the case of Maoming PX Incident in Guangdong in March 2014 and the case of Chai’s “Under the Dome” in February 2015 as examples below to analyze the conveniences and challenges that Internet technology brings to the public participation in environmental management and clarify its specific problems, so as to put forward corresponding measures and suggestions.

## **2. Case Study: The Benefits and Challenges of Internet Technology in the Public Participation in Environmental Management**

On March 30, 2014, the citizens in Maoming took a collective action of petition parade to express their concerns about the proposed p-xylene production project, and Internet technology played an important role in information dissemination, organization mobilization and media campaigning throughout the whole process of this incident. In detail, a large number of articles about the PX project appeared in the local community forums and Baidu Post Bar in Maoming in mid-March, causing widespread concerns among Maoming citizens. As a result, they congregated at the main entrance of the municipal compound and began to march along the street at about 8 am March 30, with information on the PX project and their petition parade circulating quickly in WeChat Moment, and QQ, WeChat, and other Internet chat software even becoming an organization mobilized

means directly. What's more, with the help of news push, forum postings and well-known bloggers of Sina-Weibo, Maoming PX Incident became a hot topic of social concern and reached its peak of network public opinion quickly on March 31. It is noteworthy that fake news such as "15 deaths and 300 injuries caused by the petitioning incident," "stopping the transportation of buses and trains to stop the petitions" and "tanks driving into the cities to suppress the masses" spread during the process of information pushing on the Internet, making People's Daily publish a series of articles to deny them—in the information confrontation between rumor spreading and rumor denying, students of chemical engineering in Tsinghua University clarified the low toxicity attribute of PX day and night on Baidu Encyclopedia, making an "Entry Defense War" in which the description of PX's nature had been modified 36 times repeatedly in 6 days since March 30.

In contrast with the negative impact of Maoming PX Incident, the self-media video "Under the Dome" released on the Internet by Chai Jing has achieved good social effect, causing widespread social concerns about the smog problem and promoting the management decision-making of government departments in managing smog pollution. In terms of the video itself, "Under the Dome" integrates a variety of self-media presentations on the basis of Internet such as TED Talks, live demonstrations, dialogue interviews as well as video presentations and utilizes a variety of technical means such as visual information, anthropomorphic concepts and video animation production to integrate the rich information materials such as video, data, and pictures, in a word, it can be said that "Under the Dome" is a product of the application of Internet technology. As for the transmission, "Under the Dome" was first released in the People's Daily Online at about 8 am February 28, 2015 and appeared in Youku, Tudou, Sohu, Sina, Tencent, and other well-known websites quickly, leaving total amount of video clicks more than 100 million times within 24 hours and triggering intense discussions in other network platforms such as Sina-Weibo, WeChat, community forums and so on. As regards the follow-up influences, the publics' discussions in Sina-Weibo, WeChat, and community forums showed that Chai's basic goal that leads them to focus on smog issues has been achieved whether they supported Chai's basic point of view or questioned her from different angles like science and economic cost, meanwhile, Chen Jining, minister of the Ministry of Environmental Protection of the People's Republic of China at that time, also affirmed the positive meaning of "Under the Dome" to arouse public awareness of environmental protection and promote the resolution of the smog problem at the media meeting held on March 1.

Concerning about two incidents above comprehensively, it can be seen that Internet technology can not only become an effective means for the public participation in environmental management and promote the continuous improvement of management decisions of government departments, but also contain the potential risk of lacking normative guidance and inducing environmental mass incidents. On the one hand, Internet technology can help to promote public participation in the development of environmental management: Firstly, it makes the participants more extensive because the public get information and express their point of view on the network platform conveniently and the time cost and economic cost of participating in environmental management is reduced greatly with the continuous development and popularization of the Internet construction; secondly, it makes the form of participation more direct because the participants speak out their own voices to express their own point of view and the relations among them are equal on the Internet; thirdly, it makes the path to participation even richer because the Internet has provided a new communication platform and diverse options for the public participation in environmental management and the continuous development of self-media has even created the conditions for the public to be the active sponsors of issues about environmental management; finally, it makes the participation activities more timely because the public can

acquire the basic knowledge of environmental science and the real-time information of environmental pollution in the network quickly, follow up the hot topics related to the ecological environment promptly and express their opinions and participate in the practice of environmental management activities timely.

On the other hand, Internet technology has some impacts and challenges on the public participation in environmental management: Firstly, the basic literacy of the participants needs to be improved because environmental management as a social and political behavior still requires every participant to improve his scientific knowledge and ability to participate constantly although the Internet has lowered the conditions for the public participation, for example, some citizens' understanding of the basic nature of PX is biased and thus evokes the environmental mass incident in Maoming; secondly, the participation procedure needs to be regulated because it is still an important issue to guide new ways and incorporate new forms into process of the public participation in environmental management to maintain it in the order since the use of Internet technology makes the public participation more extensive in environmental management; thirdly, the public opinion on the Internet needs to be guided because the agenda setting function and self-restriction atmosphere of the Internet are far from mature enough that settings of the discussion scope of environmental management must be regulated, for example, some Internet users even exposed Chai's own private life in the discussion of "Under the Dome;" finally, the false information needs to be cleaned up because the Internet can be used as a medium to spread both scientific knowledge and false information, for example, the PX entries in Baidu Encyclopedia was repeatedly modified and rumors spread on the Internet in Maoming PX Incident, disrupting the order of the public participation in environmental management.

In summary, government departments should not only strive to adapt to the development of the "Internet+" era and actively guide the public use of Internet technology to better participate in decisions of environmental management, but also strengthen the construction of laws and regulations and the construction of institutional mechanisms to overcome problems during the public participation in environmental management through the Internet so as to make Internet technology truly helpful to the public to participate in environmental management.

### **3. Recommendations on System Measures of the "Internet+" Public Participation in Environmental Management**

First, government departments should strengthen the popularization of Internet technology, and raise the scientific, cultural, and political literacy of publics in their participation in environmental management on the Internet. The first is to promote the social popularization of Internet technology, improve the construction of Internet infrastructure constantly, and promote knowledge and skills of computer and Internet in public education so that publics have the ability to use the relevant software systems and network platforms to participate in environmental management; the second is to attach importance to the Internet as means of scientific knowledge dissemination and strengthen the work of environment science popularization through the search engine rankings, scientific knowledge encyclopedia introduction, professional website for environment knowledge, blog, WeChat, Post Bar, and so on to facilitate publics to form a scientific assessment of the specific environment issues on the Internet; the third is to cultivate the civilized habits of the public in process of the public participation in environment management on the Internet, guiding publics to discuss rationally and speak politely, insist on seeking scientific truths and persist in exploring the facts themselves, so as to create a good public atmosphere on the Internet; and the last is to improve publics' political literacy in decision-making

in the environmental management so that they can clearly define their own rights and obligations, effectively identify and reject false information on the Internet and unreasonable demands for benefits, and choose reasonable, lawful, and appropriate ways to safeguard their own legitimate rights and interests.

Second, government departments should establish and improve laws, regulations, and institutional mechanisms which are compatible with the public participation in environmental management on the Internet, clarify the rights and obligations of government departments and publics, and standardize specific process of the public participation in environmental management through the Internet. The first is to strengthen the top-level design of the “Internet+” public participation in environmental management, which means to make “Internet+” public participation in environmental management institutionalized, standardized, and programmatic through the development and improvement of laws and regulations on the one hand, and build specific process of the “Internet+” public participation in environmental management and make a practical and meticulous arrangements combined with the actual situation in various regions and departments through the establishment and improvement of the system of the institutional mechanisms on the other hand. The second is to clarify the respective rights and obligations of government departments and publics, which means to establish and improve laws and regulations on government departments’ guiding and responding to the “Internet+” public participation in environmental management so as to ensure that government departments fulfill their social management responsibilities actively and put an end to lazy governance on the one hand, and establish and improve laws and regulations on the public participation in environmental management on the Internet so as to fully protect the legitimate rights and interests of publics and clearly defined obligations and responsibilities of publics through the network public opinion management such as network real name mechanism and network credit evaluation system on the other hand.

Third, government departments should build a software system and network platform for the public participation in environmental management, adapt to the new atmosphere of Internet dissemination actively, and enhance the service awareness and coping skills of grassroots government workers in the process of Internet communication. The first is to create an Internet software system for the public participation in environmental management so that publics can learn the scientific knowledge of environment online, grasp the basic environmental information, understand the government’s dynamics, initiate environmental issues, express their views, engage in online activities and obtain feedback from government departments; the second is to master all kinds of expressions of new media based on the Internet, use Internet technology to realize the interaction between government departments and publics actively, and enhance the government’s presence and influence on the Internet. The third is to realize the integration of online and offline, which means to combine the new ways and new forms brought by Internet technologies with the existing ways such as newspapers, magazines, environmental hotlines, hearings, and symposiums to connect all aspects of the public participation environment management; and the last is to improve service awareness and coping skills in the process of Internet communication, understand and adapt to the directness, openness and diversity of public opinions on the Internet, carry out multi-level and multi-directional investigation and research and obtain the opinions and feedback of publics with Internet technology so as to solve various problems of publics in process of the public participation in environmental management properly.

Fourth, government departments should establish and improve mechanisms for collecting and judging internet public opinions related to the public participation in environmental management, establish and improve emergency response mechanisms for public opinions and especially prevent and mitigate the catastrophic

effects of Internet technology on the occurrence and development of environmental mass incidents so as to ensure the public participation in environmental management in an orderly manner. On the one hand, it is necessary to establish and improve a risk assessment and early warning mechanism for social public opinions about environment, including establishing and perfecting the collection mechanism, judgment mechanism, handling mechanism, and tracking mechanism of Internet public opinions to form some quantifiable observation indexes and normalized identification systems, so as to induce potential risks of environmental mass incidents, guide the development of Internet public opinions promptly, and maintain a good network atmosphere and normal order of the public participation in environmental management. On the other hand, it is also necessary to enhance emergency response capability, make a centralized and unified leadership deployment, establish and improve a decision-making system, management system, consultation system, and execution system for handling Internet public opinions, clarify specific regulations and operational procedures and establish a linkage system with smooth flow of information and coordinated actions, so as to make response flexible according to the actual situation on the Internet. In addition, it needs to be emphasized that we must pay attention to handling the relationship between government departments and publics in the process of handling Internet public opinions, avoiding the use of coercive measures such as network control and information blockade, avoiding the intensification of contradictions and greater impact on social order.

Fifth, government departments should establish and improve the accountability mechanism for major public accident and punish the use of the Internet to disseminate rumors and disrupt normal order of the public participation in environmental management, safeguarding the legitimate rights and interests of publics. The first is to promote the legislative work to clarify the legal definition of unlawful acts such as cyber rumors, cyber frauds, and Internet language violence and clarify the conditions for the determination of the responsible parties for these wrongdoings, so as to provide a legal basis for the concrete implementation of the accountability mechanism; the second is to pay attention to collecting evidence, taking community forums articles, post bars message, Sina-Weibo status, chat records, and other Internet electronic data into the range of evidence collection through the condition limitation and amendment interpretation by laws and regulations step by step, so as to provide the evidence support for the accountability mechanism; and the last is to increase the penalties for unlawful acts such as cyber rumors, cyber frauds and Internet language violence and stipulate specific punishment according to the severity of the subsequent effects, so as to ensure the “Internet+” public participation in environmental management in an orderly manner.

### Works Cited

- “Chai Jing’s under the Dome Awakens Environmental Awareness.” *IT Time Weekly* 3 (2015): 46.
- Li Keqiang. “Government Working Report in 2015.” *People’s Daily* 1 (2015).
- Li Gang. “It is a Rumor That 15 Dead and 300 Injured in Maoming.” *People’s Daily* 4 (2014).
- Ma long, Liu Xianyun, and Li Gang. “PX, a Special Defending War of Science.” *People’s Daily* 4 (2014).
- State Council of the People’s Republic of China. “Guiding Opinions of the State Council on Promoting ‘Internet+’ Actions Actively.” *Economic Daily* 5 (2015).
- Yang Yinjuan. “Social Media, Frame Alignment and Mobilization of Collective Behavior: The Study of Anti-PX Protest of Maoming, Guangdong.” *Chinese Journal of Journalism & Communication* 2 (2015): 117-29.
- Yuan Qing Think Tank. “Analysis of Public Opinions in Maoming PX Incident in Guangdong Province.” *Economic Herald* 6 (2014): 37-42.
- Zhu Xiaotong and Zheng Hui. “On the Communication Skills of Chai Jing’s ‘Under the Dome.’” *News Word* 8 (2015): 315-6.