Managing Water Pollution in China with Social Media

Adelaide Knowles
Research Assistant
Global Food and Water Crises Research Programme

Key Points

- The impact of rapid economic expansion has put significant pressure on China’s scarce freshwater sources with approximately 60 per cent of groundwater and 35 per cent of rivers polluted to levels unsuitable for direct human contact.
- The government has introduced key policies in the past three years aimed at addressing the growing problem, including the Water Pollution Prevention and Control Action Plan in 2015, which is China’s most comprehensive water policy to date.
- Public participation policies provide a social method in support of more traditional command and control policies, and market manipulations that have been characteristic of China’s approach to addressing water pollution.
- Social media provides a networked environment to develop government approved frameworks for public participation to support established, centralised water pollution policies. This approach is tentatively being explored by the Chinese Government.

Summary

The Chinese Government has demonstrated in recent times that it is serious about its water pollution problem and has developed comprehensive policies and dedicated significant resources to address the issue. Public awareness of water pollution issues in China is growing, and despite a restrictive and controlled social media environment, there are signs that the government is increasingly willing to engage with its citizens. The character of these interactions is distinctly Chinese in that the government first organises the pathways through which its citizens can provide feedback rather than allowing independent and unrestricted social movements to emerge, which are swiftly shut down. This approach contributes to the enforcement of state policies at a citizen level, while maintaining the central and hierarchical character of Chinese political power.
Analysis

China is home to approximately 20 per cent of the world’s population, but only seven per cent of the world’s fresh water reserves. Millions of Chinese citizens regularly drink water that has been deemed unfit for human consumption as a result of the contamination of waterways, accrued from the increasing industrial pollution associated with its massive economic growth. Public exposure to the problems associated with water pollution has increased as a result of the increased rate of direct and indirect consumption and demand for water from China’s growing middle class that has emerged alongside its growing economy. This has forced China to address the drinking water quality and supply concerns of its citizens, while managing the increasing demand for water from the intensive industrial base of its economy.

The scale of the water pollution problem in China is immense, with high levels of contamination in its rivers, lakes, groundwater and oceans. According to China’s Environmental Protection Authority, 35 per cent of China’s major rivers are not fit for direct human contact, and nearly all of its drinking water requires some degree of treatment. Although 600 million urban residents and 400 million rural residents reportedly have access to clean drinking water, the quality remains unreliable and water is boiled and disinfected as a standard precaution before drinking. That still leaves approximately 300 million rural Chinese without regular access to safe drinking water. The problem transcends drinking water concerns, with 19 per cent of China’s seven rivers and basins unsuitable for agricultural or industrial use and 30 to 50 per cent of Chinese coastal fish stocks depleted from overfishing and pollution. The effects of widespread water pollution include mortality, reduced biodiversity and loss of ecosystems, and are already having an impact on the Chinese population.

The major contributors to China’s water pollution problems include poor sewerage systems, industrial spills, extensive use of agricultural fertilisers and pesticides, and toxic dumping. Two hundred million tons of wastewater from industrial production and households are discharged into urban rivers on a daily basis. In a country where water is already scarce, 60 per cent of China’s water shortages are attributed to water pollution. The problem is exacerbated by the fact that water pollution takes more time, money and expertise to address than comparable problems such as air pollution.
As shown in figure one and two, over 95 per cent of China’s rivers and 90 per cent of groundwater sources are polluted to some degree. This has become an issue of growing social discontent, and public awareness has risen considerably in the past decade, resulting in public protests and demonstrations that have been quickly shut down by authorities. In response to public concerns and to the increasing economic risk of not taking action to secure its water resources, the government has made addressing the water pollution problem a priority.

**Water Pollution Policies and Initiatives**

In 2014 Premier Li Keqiang declared war on water pollution with a war chest worth $US330 billion ($450 billion), with the goal of reducing water pollution by 30 to 50 per cent by prioritising safe drinking water, and dealing with the increased wastewater pressures from urbanisation. Three “red lines” were set up to support the stringent and effective management of water resources with targets set for 2015, 2020 and 2030 that covered total water usage, water usage efficiency and pollution controls. This approach focussed on tools that included water pricing and more severe punishment for pollution violators. To adhere
to these “red lines”, the government will need prove that its water pollution policies, laws and regulations can be enforced and their objectives achieved in practice. The war on water pollution is a clear call to action, but delivering on its convictions will require stronger government supervision of its projects, in combination with rigorous and independent monitoring, which has been notably lacking in this most recent period of Chinese economic expansion.

In April 2015 the State Council of the People’s Republic of China issued the much anticipated Water Pollution Prevention and Control Action Plan, or “Water Ten” plan that draws upon the input and co-ordination of multiple government ministries and departments and is China’s most comprehensive water policy to date. This multidimensional approach draws together a number of prior policies including its three “red lines” and is reflective of the cross-cutting measures required to address the complexity of China’s water problems. The policy aims to close existing loopholes, enforce stricter standards, increase water monitoring efforts, strengthen the enforcement of environmental laws, punish polluters and target heavily polluting industries. The regulatory environment is assisted by the government setting realistic goals and timelines that aim to first stabilise the water pollution problem, then prevent and control its pollution before finally committing to the improvement of overall water quality.

In 2016 the thirteenth Five Year Plan (FYP13) was released and while the FYP13’s purpose is to outline China’s general policy direction, it also sets specific goals related to water consumption and water quality. Primarily, it hopes to reduce water consumption by 23 per cent from 2015 levels by 2020 to ease the impact of water pollution. The plan further outlines the development and upgrade of urban sewage facilities, aiming to increase rates of wastewater treatment to 95 per cent in urban areas and 85 per cent in non-urban areas. It also demands contamination from agricultural pollutants be significantly reduced, by targeting chemical fertilisers, insecticides and pollution-heavy industries. It is a good sign that this is the third major policy development in three years that has taken aim at China’s water pollution problem, and is an indication of leadership on this issue from the very top levels of government.

In these past three years, China has set itself specifically targeted and achievable objectives and demonstrated that it has the political will and regulatory frameworks to tackle water pollution as part of its broader societal transformation from the “factory of the world” into an ecological civilisation. Despite these policy advances and a strategic commitment to addressing water pollution, it remains to be seen whether the Chinese Government alone has the means to achieve its ambitious environmental goals.

While China has been successful in recognising its water pollution problem and the challenge it implies, logistical problems remain. Responsibilities for water management are distributed between a number of government agencies and legal authority is unclear. Separate agencies utilise different monitoring methods that result in discrepancies and incomplete water pollution data, which misinforms the progress of implemented policies. Transparency in the enforcement of environmental laws and regulatory frameworks needs to be further developed to ensure compliance by local governments who benefit economically from
protecting local industrial polluters. These challenges must coexist with China’s continuing need for economic growth and its rising consumer demand for manufactured goods. For effective oversight of its water pollution policies, and in order to overcome the aforementioned challenges, the government will need to engage more directly and dynamically with its citizens, who have the capacity to monitor, report on and identify inefficiencies, insufficiencies and policy violations.

Public Participation and the Role of Social Media

Public participation is one of the newest environmental protection tools available to China and differs from its previously deployed means which include direct regulation, market manipulations and the creation of new markets. For the moment, China’s most significant water pollution measures are built upon command and control policies that outline laws, standards, bans, licences and limitations on polluters and pollution. In support of these policies are taxes levied from water prices, subsidies for high performers and the soon to be installed 2017 emissions trading scheme. In contrast to the chiefly political and economic measures taken in the past, public participation is a social method that taps into the power of citizens through education, transparency and feedback mechanisms. Public participation measures are important to the success of Chinese water pollution policies because it is the people who directly suffer the immediate and worst effects of an unmitigated water pollution crisis.

Social media provides the right networked environment to develop frameworks for public participation and citizen interactions that can be designed in support of centralised water pollution policies outlined in the previous section. Environmental non-government organisations that address water pollution are already active on social media, but they suffer from decreased agency due to the strict regulation of China’s internet and social media environment, which is significantly more restrictive compared to its Western counterpart. Limited information, paired with limited opportunities for public actions, including protest, mean NGOs have had success in raising awareness of the water pollution problem, but have very little ability to enact meaningful change. Despite a difficult social media operating environment there are signs the government is becoming increasingly willing to work with NGOs and the citizen population to improve the administration and success of its centralised policies.

Reporting, Monitoring and Compliance

The Ministry of Environmental Protection (MEP) has signalled its intention to establish a compulsory, nationwide, real-time online environmental monitoring system by 2020 that targets sources of fixed pollution, such as factories, that will make data regarding local pollution levels available to the public. Using social media, China’s “netizens” will be able to share and monitor polluters and pollution levels, to raise awareness and apply community pressure on local government, agencies and enterprises to ensure compliance with national initiatives and strategies. Real-time monitoring by the government will empower demand for more immediate action by citizen-led NGOs, which, as of 2015, have been empowered to litigate in the public interest. The urgency of this type of action complements the long-term strategic plans that have been outlined by the Chinese Government policies so far.
This initiative has its roots in campaigns that have been initiated and sustained by civil actors. The Institute of Public and Environmental Affairs (IPE) is a Beijing-based not-for-profit established in 2006. Its goal has been to expand environmental information disclosure to facilitate local understanding of the hazards and risks in surrounding community environments. In 2006 it released its first online product, the “China Water Pollution Map” that tracks water pollution using public records to compile a visual map of pollution hotspots that singles out polluting enterprises. The data was based on water pollution citations received by polluters from environmental authorities, which were one of the few publically available sources of water pollution data. The data has been monitored from year to year to provide insights into trends in industrial and domestic discharges and how levels were changing.

The “China Water Pollution Map” has been endorsed by state-run news agency Xinhua News and is an indication of the support the project has from the government. Environmental NGOs, like the IPE, are seen as a bridge between government and the people and have developed roles in support of regulators, such as the MEP. This is demonstrated by the latest April 2016 update and rebrand of the IPE pollution map into the BlueSky Map 3.0 mobile application which now monitors water and air pollution in real-time using data provided by the government.

While the government has historically been sceptical of public participation and social media usage for fear of it facilitating organised dissent, the MEP’s latest initiative may be a sign of things to come. As part of the MEP’s “black odour rivers” (黑臭河) campaign, citizens can upload photos of any rivers they consider to be excessively polluted. Photos can be submitted by citizens to the Ministry’s WeChat Account, which provides a platform for direct communication to the government. The MEP guarantees that each of these “citizen reports” will receive an official response within seven days and, if deemed excessively polluted, will be added to the official list of “black odour” rivers. This type of citizen engagement has thus far been missing from government actions, and is proving popular with Chinese citizens who successfully added 2,000 rivers nationwide to the list that the government has promised to clean up by 2017.

Opportunities for Social Media Integrated Public Participation in Water Pollution Governance

Policy Consultation

Online consultation is an important institutional feature of the Chinese internet. It constitutes one of the central mechanisms through which the government solicits feedback and public input on draft laws and regulations. While China does not consult on national security or foreign policy, it does invite the public to contribute to matters for which there is significant citizen dissatisfaction, such as in the 2008 case of the National Development and Reform Commission undertaking online consultation to inform its proposed health system reform. This process was applied in June 2015 when the government released a draft of its proposed environmental tax law, which was opened to the public for consultation. The process of consultation, however, is less than perfect, favouring certain demographics that
have the time, influence and inclination to contribute to Communist Party policy, but it is a trend in the right direction.

*Education, Awareness and Building Knowledge Networks*

*Under the Dome*, a 2015 documentary film, highlighted the negative health effects of the air pollution problem in China. The film, produced by former China Central Television investigative journalist Chai Jing, was viewed over 150 million times on the Tencent social media platform in the four days it was available online, before being removed by China’s censorship regime. Ms Chai’s critical assessment of China’s pollution problem featured a year-long investigation that is both deeply personal, in her account of a benign tumour that her daughter developed in the womb - which she blames on air pollution - and deeply critical of the government’s ability to enforce its environmental laws. Such resonant messages are powerful enablers of public sentiment, which the Chinese Government considers dangerous. Despite the dissatisfaction with critics when it comes to delivery of improved environmental outcomes, the government must contend with a more informed and increasingly anxious public.

Utilising social media in the distribution of educational materials that promote China’s ambitious shift towards an ecological society will depend upon them reflecting solutions to its water pollution problem, within government frameworks, rather than reflecting the troubling and intractable problem of water pollution. Thus, by first establishing pathways for public participation, such as the “black odour rivers” (黑臭河) campaign, the Chinese Government can then direct and enable public sentiment into productive channels of state sanctioned action, using social media networks to transform a potential societal risk into a policy asset for the regime. This “government organised citizen action” has the effect of enrolling the public to assist in the enforcement of state policies, while maintaining the central and hierarchical character of political power.

**Conclusions and Findings**

China has demonstrated that it takes its water pollution crisis and other environmental crises seriously, but there are necessary further steps to ensure that its policies translate into positive environmental outcomes. It is argued that the missing component of success is vibrant public participation that can ensure local compliance with national initiatives. The increasingly government-controlled Chinese social media landscape provides an ideal platform to build the necessary levels of public participation needed to ensure successful outcomes in redress of the seemingly intractable water pollution problem.

When the government decides to pursue a deeper strategy of public engagement through social media platforms to address its water pollution problems, it will first protect itself against dissent by creating channels through which the public can direct its energies. It has positioned itself to do so through the following actions:

1. Setting direct action policies that acknowledge the scale and importance of the water pollution problem and dedicated resources to address specific concerns.
2. Establishing the institutional frameworks through which citizens and NGOs can acquire agency in the day-to-day delivery of central government policies. This has been instigated through the public release of government pollution data and the facilitation of citizen roles in reporting cases of water pollution non-compliance to authorities.

3. Designing frameworks that empower citizens and NGOs to hold local authorities accountable to environmental laws by enabling public interest litigation against illegal polluters. This capability was introduced in 2015 in a revision of China’s Environmental Protection Law, which has given civil society the ability to sue polluters in the public interest. The government, however, is proceeding cautiously.

4. Utilising education and information campaigns to direct citizen participation towards state authorised civil actions that address the public sentiment and demand for action. This approach has also been cautiously advanced and trialled through the “black odour rivers” (黑臭河) campaign.

What we see in China is a unique interaction between citizens and government that attempts to pre-empt public discontent, first by censoring the problem, then addressing problems specifically in cases where censorship has failed and, more broadly, through direct action policies that demonstrate its commitment to the issue of water pollution. Citizens demand delivery of improved water pollution outcomes, not just the delivery of vibrant policies, which is why China has established the institutional and legal frameworks through which it prosecutes its policies and provided a limited and controlled means through which the public can participate.

By directing citizen energies into participatory frameworks that are actionable rather than political, the Chinese Government is able to absorb criticism, deflect blame and channel public discontent toward polluters rather than itself. Public participation is positioned to fill the operational gaps in the Chinese Government’s comprehensive commitment to addressing water pollution. In this way, China is in the midst of developing a distinctly Chinese social media strategy to engage its environmental problems that is less “grassroots” and more “mowed lawn” in its convictions. Broader engagement with its citizen resource enables China to address the issues to which the central government can be blindsided. Social media will be a key component in communicating the experiences of citizens at the “frontlines” of China’s water pollution problem, by facilitating constructive and sanctioned exchanges with a government that has shown a deep commitment to attending to its water crisis.

*****
Any opinions or views expressed in this paper are those of the individual author, unless stated to be those of Future Directions International.

Published by Future Directions International Pty Ltd.
80 Birdwood Parade, Dalkeith WA 6009, Australia.
Tel: +61 8 9389 9831 Fax: +61 8 9389 8803
E-mail: mpiesse@futuredirections.org.au Web: www.futuredirections.org.au