



China's Environmental Disaster: Social Problem and Business Opportunity

Marcin Przychodniak

China's economic development model has led to significant environmental contamination. The scale of the damage endangers the life and health of China's inhabitants. The authorities are aware that their lack of action in the past has undermined their credibility and harmed China's image worldwide. In 2015, the Chinese government declared a "war on pollution" and signed up for commitments under the Paris climate agreement. Simultaneously, China aims to develop the green sector of its economy. Actions it's taken so far include a reduction in smog in 2017, but a lasting improvement in the country's environmental condition is slowed by the huge costs of it and the resistance of local authorities. China can be expected to be moderately engaged in the implementation of the Paris agreement.

The development of China's economy has led to catastrophic contamination of its soil and water. The situation results from the lack of norms in industry, burning coal for energy, and the growth of its automobile transport sector (from 2010 to 2016, the number of cars in China increased from 90 million to 200 million). The contamination can be found across the country but is a major concern in the big cities of east, north and central China.

Social and Political Consequences. China's poor environmental state has a negative effect on the health of its residents. According to Chinese scholars, every year more than a half million people die because of pollution. The number of so-called "cancer villages," towns near industrial plants where there is a high rate of cancer, is growing. The cases of sick kids from schools located near industrial areas are highly publicised in social media and portrayed as especially outrageous. The poor environmental standards of China's chemical industry is another threat to health, and in some areas, even to human existence. From January to August 2016, there was on average one industrial chemical incident per day. The growing number of diseases caused by pollution has forced the Chinese to pay more for medical treatment. Soil and water contamination has reduced local crop production by 2% a year, which compels Chinese citizens to buy more expensive imported food.

The authorities for many years ignored the problem. Pressure from society has made them disclose pollution data but the information is still under government control. Lawsuits in environmental cases are still being hindered, with petitions dismissed over a lack of regulation or because of ties between the court and the local authorities. Plaintiffs are also being charged for trial fees. Lawyers dealing with environmental cases can have trouble renewing their law licenses.

The Authorities' Solutions. The disastrous level of pollution and growing social unrest persuaded China's authorities to implement solutions focused on improving the environment. Their first step was legislation. In 2013, a plan to reduce the use of coal and raise the level of renewables in energy production was introduced. In January 2015, an Environmental Law was enacted that, e.g., gave local authorities the power to fine companies that are the main polluters. In January 2018, a ban on plastic waste imports was introduced (in 2016,

China imported more than 7 million tonnes). The importance of fighting pollution was also underlined by leader Xi Jinping in his speech during the 19th Chinese Communist Party summit in October 2017.

The authorities have focused on policy changes like fighting smog, where an improvement in environmental conditions is simpler to achieve and more visible compared to improvements in soil or water quality. Every winter, about a third of the aluminium factories in Beijing and Henan, Shanxi, and Shandong provinces are closed. In the capital, road works are also halted for four months each year. In March 2017, the authorities announced that 103 coal power plants would be closed. The last coal power plant in Beijing was closed at the same time. The government also advised the use of gas instead of coal. However, gas is too expensive (the price regularly rises during the season, e.g., in November 2017 it went up by more than 40%) and the distribution system is poorly developed. That has forced authorities to cancel previous bans on coal usage to be able to provide heating for households in the winter.

To increase environmental standards, China promotes its green-economy sector, and in competition with developed states, in 2015 decided to join the Paris agreement. It declared it will lower its carbon dioxide emissions but because of the pace of the country's development, not until 2030. That improved China's image on the international arena and in turn has strengthened its determination to build a modern, green sector of its economy. The process became a part of China's economy policy. It aims to build a competitive advantage in the sector and increase know-how. In Poland, for example, Chinese investors bought the recycling company Novago and decided to bid on a project to build a low-emission garbage incinerator in Warsaw. In 2017, China invested more than \$44 billion worldwide into international energy projects and in environmental protection (an increase of more than 38% in comparison to 2016), making it the world leader in investment and production in the sector. As part of its anti-smog actions and in pursuit of a competitive advantage over the U.S. and EU, China is growing its electric and hybrid-car industry. According to new regulations, since 2019, 10% of each producer's sales in China must be low-emission vehicles.

More energy is being produced from renewable sources. Using protectionist mechanisms, China is looking after its own producers in the sector (60% of the world photovoltaic production market is held by Chinese companies) but also invests in its Western competitors, including in wind energy. By 2020, China plans to invest at least \$360 billion in the renewable energy sector.

Effects and Prospects. China's actions have had limited effects on environmental improvement so far. In 2017, the country was able to limit smog (as measured in particulate matter of a certain size, PM2.5) in major agglomerations: Beijing-Tianjin-Hebei (down by 25%), Pearl River delta (-15%) and Yangtze River cities (-20%). The average, general level of PM2.5 for 338 Chinese cities decreased in comparison to 2016 by 6.5%, and in 2017 resulted in a more acceptable average level of 43 µcg/m³ of PM2.5 (below 50 is considered good). Water pollution levels also slightly improved. Measurable water not suitable for any kind of usage decreased in the first half of 2017 by 1.7% in comparison to the similar period in 2016.

Maintaining the balance between stopping environmental degradation and growing the economy is a challenge. This balance is especially difficult for local authorities, who are reluctant to close factories or limit investment. Provincial authorities also misuse funds designed for environmental protection. In 2016, China's National Audit Office reported that about \$2.5 billion destined for projects to improve water quality had been embezzled. Despite local authorities' concerns about a decrease in economic growth from battling pollution, there was a positive signal to consider. The purchasing managers' index (PMI), a key indicator, only slightly weakened in December 2017 (to 51.6%) in comparison to November (51.8%).

The main problem still is the huge costs linked to environment clean up as well as to reform of the energy production system. It is estimated that cleaning all affected soil would cost more than a \$1 trillion. This extreme level of financial need shows why growing renewable energy is not as visible in the 2016 analysis provided by China's Energy Commission. It still forecasted growth in electric energy production based on coal over the next five years (to 2021) at 19%, despite the announcements that China would increase the share of renewable fuels and gas in its energy mix.

In the international arena (such as implementation of the Paris agreement), China's priority is on building green-sector competitive advantages, not on development of a global model to reduce carbon dioxide emissions. That is why China's authorities are, on one hand, sceptical about implementation of the accord backed by inspection mechanisms, and on the other, promoting financial help for some signatories, and China has maintained its declaration to provide \$3 billion for them. Keep in mind that the decreased U.S. engagement in climate protection is not in China's interest because it increases the pressure from other signatories on China to take the leadership. They would like China to support clear emissions-monitoring regulations during negotiations of the implementation of the Paris agreement, scheduled at this year's COP24 summit in Katowice, Poland.¹ Consensus with China on greater inspection mechanisms is less probable because of its need to keep its economy growing and present itself as still a "developing" country. During COP24, China probably likely will simulate compromise in such areas as emissions monitoring than act like a leader that will push for agreement.

¹ M. Wąsiński, "Between Bonn and Katowice: The Challenges in Global Climate Negotiations," *PISM Bulletin*, no. 2 (1073), 4 January 2018.