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# Editorial: Living with Toxicity in Greater China: Realities and Reactions

*Loretta Lou, Department of Sociology, University of Warwick*



Decades of unrestrained development has led to some serious environmental problems in China and Taiwan today. While sustainable development and effective enforcement of pollution control remain a challenging task for both governments, we begin to see a variety of creative responses from the bottom-up.

In this *Toxic News* issue, we feature four articles that discuss such endeavours in detail. The first article by [Yu-Rong Joy Liu](#) describes the complex mix of pride and bitterness among communities that live in or near coal-mining sites in Shanxi, China. She examines how local residents articulated their circumstances and re-fashioned their identities in relation to the central government's 'War on Air Pollution' and 'Ecological Civilization'.

The second article by [Lu Zhijian](#), an NGO worker and former Water Quality Inspector in China, provides valuable insight into water monitoring in the country and calls for collective actions to protect our water sources as it is clear that state-of-the-art water purification technologies are by no means a panacea for water pollution.

Our third article by [Adam Liebman](#) reviews Jiu-Liang Wang's influential documentary *Plastic China*, which depicts the everyday joys and suffering of waste sorting and the complex relations between waste, value, labour, and justice.

Finally, [my own contribution](#) introduces Taiwanese rock band Sheng-Xiang & Band and their successful album *Village Besieged* – the world's first music album about the human tragedies of petrochemical pollution. From villagers to water gatekeeper and filmmaker to musicians, I hope this issue showcases the diverse responses to toxic pollution and offers inspirations for future interventions.

# Sacrificing and Saving the Environment: The Case of Shanxi

Yu-Rong Joy Liu, University of Arizona, Tucson



Sitting across a tea table in the living room, a local official shared her thoughts on my question about Shanxi Province's image as a coal producing province in people's mind:

*"You should write about how we overcome air pollution, and that the sky is so much clearer than twenty years ago. When I was a student studying in the city, our clothes got so dirty everyday, our faces got black right away. But now, we can see the skies again."*

The health and environmental impacts of the extractive industry are severe. Resource-dependent communities that live near the extractive industry's energy source are the ones who suffer the most from water, soil and air pollution, as well as from respiratory diseases. However, not everyone in the affected community responds to pollution in the same way. How they respond depends greatly on their position in the political economy.

Shanxi Province is the largest coal mining center in China, only second in size compared to Inner Mongolia. The communist government has long considered Shanxi as the main energy resource provider for the country, ignoring the province's long history of being a trade and banking center since 1600s. This emphasis on coal production and the economic contribution of the energy-intensive industries have led the provincial government to prioritize it, as the central government is putting a lot of pressure on provincial government to perform well in terms of GDP. Easy access to coal and political pressure propelled the development of heavy industry. Consequently, less efforts are devoted to developing agriculture and service sectors in Shanxi, which resulted in the

current impasse and challenges in re-structuring the economy into one that depends less on the extractive industries.

Another macro consequence of being a coal mining center is environmental pollution, especially air pollution. In 2013, the Chinese government declared a war on air pollution, which has become a unifying ideology and policy tool for the government to re-structure its institutional system and legitimize its role as the protector of the nation-state and its air quality. This policy also provides legitimacy and funding for the provincial government to implement other related environmental policies, helped forms linkages across different agencies and businesses, and affords a common language for interpreting social reality. Afforestation policy was one of those policies that has been incorporated into the war on air pollution strategy by the central government due to its potential in mitigating greenhouse gas emission and carbon sequestration.

My research examines communities that are located in areas where coal is not geographically accessible, or cost-effective to extract. These communities suffer less from air pollution, and rely on other natural resources for development, namely their land for smallholder agriculture-based economy. Unlike their neighboring communities in Shanxi, where people benefited from the rapid economic development accompanied by the mining industry boom in the last few decades, the communities that I study rely on agriculture and afforestation in both cultivated and uncultivated area for economic development. Local officials view afforestation as the locus for institutional performance and the afforested landscape as a banner of triumph for Ecological Civilization, a term long used by the central government to promote nation-building and address the negative environmental impacts brought about by rapid economic development. Afforestation is incomparable to mining in terms of the revenue it generates, which are reflected by different levels of urbanization in these communities. In coal-dependent communities, the air and environmental quality is visibly poor, coated with a layer of black dust on roads, buildings and grounds. But the grandeur of their city-scape filled by modernized high-rise buildings was uncommon in other rural areas, and their roads were bustling with traffic. In communities without coal production, the air is fresher and the sky is bluer. However, the size and number of the buildings in the city center are a lot smaller.

In addition to understanding the mining impacts produced by the larger macroeconomic forces, the ways local residents respond to these different precarious placement is part of my larger research question about environmental relations in a strongly bureaucratized society. As a researcher, I learned about how local residents articulate their identity and actions in relation to the discourse on air pollution in the larger geographical region. More importantly, how they position themselves in relation to nation-building through sacrificing and saving the environment.

### **Sacrificing the environment**

When I asked a similar question regarding Shanxi Province as a coal producing center, a local cow-farmer responded with a mildly proud and bitter sentiment:

*“We gave everything to them! The prosperity of this country is built on our hardships.”*

The cow-farmer was from a neighboring town and arrived to my study site to sell a small load of coal for household usage. He was a truck driver for transporting coal before inheriting the livestock business from his father. He learned a bit about the coal business and was still doing minor trading because of its relatively high profits compared to earnings of a farmer.

Before the Chinese government declared a war on air pollution, coal production and other heavy industries, such as iron and steel, were the primary pillars of Shanxi's economy. A shared identity among residents of Shanxi Province is that they played a role in building the country by sacrificing their environment, health and labor, be it willingly or unwillingly. The conflicting sense of suffering and benefiting from a production system in a rapidly developing nation is not uncommon. In areas where coal was costly to excavate, residents often held a bitter and envious attitude towards counties that are able to modernize faster and grow their wealth because of coal. But these resource-based advantages in economic development are becoming constraints and obstacles for local government to continue hedging their bets on coal under the mandate of the war on air pollution. Regulations and increasing government control on clean energy production, price of coal and corruption in coal business had drastically decreased the amount of coal production and its profitability in the last five to ten years. Once pressured to provide energy for development, Shanxi is now carrying the burden of cleaning up the consequences brought forth by it. Communities that live in counties without coals – about 30% of Shanxi's counties – are now formally tasked with the role of greening the environment.

### **Saving the Environment**

One of the ways the Shanxi government adapts to the new policy against air pollution is to re-direct their development priority towards the making of electric cars, especially for public transportation. Taiyuan, the capital city of Shanxi, becomes one of the twenty Electric Vehicle Capitals in the world identified by the International Council on Clean Transportation (ICCT) in 2018. Another policy priority that fits the circumstances and geographical making of Shanxi is afforestation. Shanxi has large amounts of quarries and disturbed land as a result of mining. Together with its fragmented hilly landscape, which is difficult to cultivate by machinery, this region has a lot of potential for afforestation and ecological restoration compared to alternative ways of development, such as industrialization projects in flat plain areas.

Local officials in areas without coal invested their energy and time into afforestation and other ecological restoration projects, including repairing the coal industry's negative impacts on the environment. Local officials are proud to see visible changes in landscape and decreases in air pollutants, soil erosion, and sand storms. But farmers in these areas do not view these improvements in environment as positively as officials. Lacking alternative pathways to improve their economic well-being compared to their neighbors, farmers and local residents in general stated that they do not benefit from afforestation. Rural development policies and education system reform has much more direct impact on their livelihoods, which is based on low-skilled jobs and subsistence agriculture. Afforestation may provide partial income (0-20%) for farmers, but not the main source. Without proper institutional, technical and financial support, planting trees on cultivated land creates environmental and financial risks for farmers. In comparison, local officials in areas with coal mining business did not do much about conserving and greening the

land until the past few years, hence the lower involvement and development in afforestation projects by both farmers and officials in these communities.

Local officials are not the only one putting their time and money into saving the environment. A domestic grassroots organization from Beijing working on protection of endangered keystone species considers themselves as the pioneers of the New China. Another non-profit organization that has worked in the region for over 13 years view themselves as laying the groundwork for future rural development by reforesting and preserving the landscape. They identify themselves as patriots. A farmer who had the chance to participate in the afforestation project reflected on the sense of empowerment he felt when he was able to gain the symbolic and tangible benefits of preserving the once degraded land.

Moreover, local officials in the city would proudly point to the construction of charging stations for electric cars, and tell the story of how they battle with air pollution through regulations and negotiations with tangled networks among the political institutions, bureaucracy and big business. These on-going “battles” and “wars” do not have clear starting or ending point, and are visible in media and breathable in everyday lives. Air pollution, coal-mining, and afforestation have become a common language for expressing both frustrations and passions of nation-building by those who suffer from and those who find purpose in it.

## Conclusion

Research literature and media tends to pay more attention to the impacts of environmental pollution in China through the lens of globalized notions of environmental conservation, centralized governance structure and public health concerns for communities. Indeed, air pollution in China has become a global cautionary tale for environment protection. It is also a reminder of how people in all positions of the political ecology are navigating the constantly changing and contradictory sentiments and identities in the project of nation-building.

*Main photo: Small coal truck (Credit: Liu)*

# Is Tap Water in China Safe to Drink? A Water Quality Inspector's Perspectives

Lu Zhijian 陸志堅

*Technical Director of Guangzhou New Life Environment Protection Promotion Association, Former Water Quality Inspector and Project Manager of Lau Kai Conservation*



Access to safe and clean water is essential to human health. However, public concern over drinking water safety has risen sharply in recent years following a number of water pollution incidents. The pollution incidents have left people wonder if it is really safe to drink from the tap. Where does tap water come from? Has the water been treated? Is it clean? What can ordinary citizens do to improve the safety of their tap water?

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## A day in the life of a water quality inspector

**11:30 PM** I put on my uniform, picked up my toolkit, and walked towards the the central control room where I started my day of work. When I got there, my supervisor said to me, "The water today is a bit tricky. You may have to increase the dosages. Do what you need!" When I looked up the water quality on our monitoring system, I found that the values of dissolved oxygen in both today's and previous days' records were a little bit low at midnight yet oxygen consumption was on the rise during the same period . I think I knew what was going on. I increased the dosage of chlorine and coagulant and tested the values of ammonia nitrogen, nitrite nitrogen, oxygen consumption, turbidity, pH value, chlorine residue, etc. Everything seemed fine. According to the result, I modified the dosages slightly and logged the results in the report.

**1:00 AM** I was overwhelmed by the loud noise of the pumping station. This is the place where our tap water comes from. I went downstairs to check the electric cabinet and the performance coefficient of an operating pump's outlet pressure. Everything was normal.

**2:30 AM** Back to the central control room. I put on my coat, grabbed a torch, and went on to patrol the water purification system.

My first stop was the flocculation tank. As I increased the quantity of the coagulant, I checked to make sure that the coagulation was satisfactory and that the alum flocs were well-formed. Walking along the hallway, I arrived at my second stop, the horizontal-flow sedimentation tank. I checked if the water in the sump was clear enough for better filtration. My final stop was the filtering tanks. I inspected and recorded the backwash process of one of the filtering tanks. I also took time to observe the water colour and the sand surface of other filtering tanks. Following an inspection of the water purification infrastructure, I moved on to examine other facilities.

During each night shift, I had to patrol twice and complete an hourly water quality check. I also logged my activity report of the previous day during my shift.

**8:00 AM Finished** work and went home.

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## Is Tap Water Clean?

I have worked in a water plant in a southern Chinese city for six years. I know the public has lost confidence in the quality of tap water following a number of water pollution incidents. Many households have installed water filters or shifted to bottled water entirely. Some even use tap water just for flushing. When people heard that I worked in a water plant, the first thing they asked was, "Is tap water safe to drink?" "Yes," I said, "I drink boiled tap water at work and at home." Their concerns are understandable. They worry because they do not know how water is treated and monitored in the water plant. Fear springs from ignorance, as the saying goes.

Today's water purification techniques have hundreds of years of history. It is a process that involves coagulation, precipitation, disinfection and filtration. The purification techniques are mainly used to treat "Grade II waterbody" as defined by the *Environmental Quality Standards for Surface Water* (GB3838-2002). After a series of physical, chemical and biological treatments, the treated water should meet the national standards of China (*Standards for Drinking Water Quality* (GB5749-2006)).

But as China's economy grows and the population expands, natural waterbodies have been badly affected by environmental pollution. New pollutants, such as organic matters and heavy metals, are more complex and more difficult to treat. Nowadays, water plants in big cities like Guangzhou, Shanghai and Shenzhen are equipped with new water purification technologies to remove these pollutants that couldn't be effectively removed by conventional water purification techniques (e.g., biological pre-treatment, ozone-activated carbon filtration). In particular, the ozone-activated carbon filtration, a new water purification technique, is effective in removing organic materials and controlling the regrowth of microorganism. Unlike conventional water treatment process that could produce carcinogenic by-products (most of these substances are still within the safety



limit outlined in *Standards for Drinking Water Quality* (GB5749-2006)), ozone-activated carbon filtration prevents the generation of carcinogenic halogenated by-products when chlorine – a disinfectant – interacts with organic matters in the water.

*Although this kind of transfer enables cities to access better water sources, since cities can now rely on outside supply, they no longer take their environmental problems seriously.*

However, state-of-the-art water purification technologies are not a panacea for water pollution. For example, if the level of ammonia nitrogen exceeds 4 mg/L, the biological pre-treatment will not be as efficacious. As pollution worsens, many water plants have to change their water sources. We see cities are sourcing water from other cities, even provinces. As we know, the massive South–North Water Transfer Project aims to channel water from the Yangtze River in Southern China to the more arid north. **Although this kind of transfer enables cities to access better water sources, since cities can now rely on outside supply, they no longer take their environmental problems seriously.** Take Hangzhou and Guangzhou as examples. Situated in the river networks of the Yangtze Delta and the Zhujiang Delta respectively, both cities have an abundant supply of water. In spite of this, Hangzhou and Guangzhou are spending huge amounts of money on water diversion infrastructures because they do not have not clean water sources in their immediate environment. Apparently, this is not a long-term solution. We must treat the root cause and make an effort to protect our water sources.

### How is the tap water monitored in China?

Tap water quality is closely monitored following the *Standards for Drinking Water Quality* (GB5749-2006) since 1 July 2012. On top of that, the government's water departments, health and epidemic prevention departments and housing construction departments also run regular tests on drinking water. In the water plant where I used to work, samples are collected and tested once a month by the water department; once a quarter by the health and epidemic prevention department, and once every half year by the housing construction department. However, what and how each of them inspected was not clear to everyone. It is also hard to determine how consistently the *Standards for Drinking Water Quality* (GB5749-2006) are complied, as not all the cities voluntarily release their tap water quality data. Even if they do, their results are not comparable as the ways they disclose their data and information are not the same. In January 2015, *Oriental Outlook* published a report on the public information about tap water quality (between June and December, 2014) in 29 Chinese cities. According to the report, more than 70% of the 29 cities have enforced relevant water management regulations and requirements about information disclosure requirements. However, there are large differences in the publication cycle. Among them, 15 cities including Xi'an, Nanjing, Shanghai, Guangzhou, Urumqi, Hangzhou and Chongqing published their water quality information once a month, accounting for 52% of the total number of cities; Jinan, Qingdao and Wuxi once a week; Ningbo, Shaoyang and Suzhou once everyday. In addition, Hefei published its water quality information every 10 days, while the capital Beijing does so quarterly; Wuhan does not publish regularly; Shenyang, Loudi, Zhangzhou, Changchun and Harbin does not disclose any water quality public information. At present, my city Guangzhou publishes 42 routine inspection indicators every month and 106 inspection indicators every six months.

## Information transparency for peace of mind

*Most importantly, the government needs to make information about our tap water more readily available, accessible, and understandable*

Purification and monitoring are certainly important. However, to truly give citizens a peace of mind about tap water, the government needs more effort. **Most importantly, the government needs to make information about our tap water more readily available, accessible, and understandable.** When the information is inconsistent, citizens have no way to discern the quality of the tap water they are drinking. At the moment, water plants' response to citizens' complaint about water anomalies was cursory. They'd say something like "the water quality is up to standard upon examination." For instance, recently in Lanzhou, citizens have reported changes in the taste of their drinking water. In response, the local water department simply released the data of ammonia nitrogen level in the water, insisting that the water was clean and safe to drink. Such simplistic responses would only undermine the authority's credibility. Only by pulling the wraps off the tap water condition can the public's mind be put at ease. Water is the source of life, whatever our position in the society, we should do our best to protect our water sources.

*Translated by Loretta Lou and Crystal Chan*

\* The original article (in Chinese) was published in 2015 in *Luye Magazine*, volume 3, issue 199, p.21-27. (本文原刊於《绿叶》杂志 2015年·第3期·总第199期)

# Plastic China: Sorting Plastic, Sorting People

*Adam Liebman, Stanford University*



*Figure 1: Yi Jie caring for a younger sibling. Official photo.*

*Plastic China* (2016) begins with a cargo ship pulling into Tsingdao Harbor in northern China, where shipping containers are mechanically loaded onto trucks. The documentary picks up the trail of one shipping container headed for rural Shandong Province. As the truck drives into a village, the film's only scene-setting caption reads: "China is the leading importer of plastic wastes from Japan, Korea, Europe, and USA."

The film thus follows a peculiar type of commodity that fills some of the containers of global-crossing cargo ships. In some contexts, these materials are considered "recyclables" or "scrap" (i.e. used or discarded matter that can be reused to produce new things). But the more negative-sounding "plastic waste" is an appropriate label, as the film goes on to show the incredible amounts of waste that is leftover, as well as toxicity released, through the unregulated process of converting post-consumer plastic packaging into the small pellets that can be sold as raw materials to manufacturers.

Yet, the focal point of the un-narrated documentary is not on waste, pollution, and toxicity. Rather, these themes constitute the film's setting as viewers are taken into the intimate inner workings of one family-run plastic waste processing workshop, where a human drama unfolds involving everyday joys and struggles, play and suffering.

Yi Jie, an unschooled eleven-year-old girl, is the main character. Her father Peng works for the owner of the workshop and performs much of the manual labor along with his wife, other occasional hired hands, and the owner himself. Peng's family—which

includes an increasing number of children—long to go back home to Sichuan Province, but they are stuck living alongside the boss' family amid small mountains of plastic waste. The children of the two families play together, making creative use of the waste world where they live. However, the relationship between boss and worker is not as harmonious. At times tensions erupt into arguing and violence: over wages, over Peng's earnestness of work and the resulting quality of final products, and over whether to send Yi Jie to a local school. Yi Jie is torn between loyalty to her father, who drinks away a significant part of his meager earnings and wants her to stay home to take care of her younger siblings; and the boss, who wants to help her go to school and even offers to adopt her.

### Sorting the Plastic

Yi Jie misses home and often appears unhappy, but she experiences a cheerful moment when talking with her Grandmother on the phone, prompting her to reminisce about life in Sichuan and to anticipate her return. The short phone conversation centers on a theme that can be used to analyze multiple aspects of the film: sorting.

**Grandma:** *Is your dad working?*

**Yi Jie:** Yeah, he is sorting the plastic.

– *Will you help him?* – Yeah. *Really?* Yep. *Do you know how to sort plastic?* – Yes, I do (proudly).

**Yi Jie's Mother:** But you have to take care of the baby (chuckling).

**Grandma:** *Will you be back soon?* – In two months... (Yi Jie smiling widely) ... *I heard you are coming back, I'm so happy.*

Yi Jie indeed must balance childhood play with helping take care of her siblings, other domestic work, and sorting plastic waste. Sorting mostly involves separating out the many kinds of worthless plastic and other garbage that gets thrown into recycling bins, from the plastic that can be processed (cut, washed, melted, and formed into pellets). Since roughly 5,000 households in the township are engaged in the plastic recycling business, excess waste is dumped everywhere, including in and around the fields where crops are still grown, and animals grazed. One farmer complains that his sheep started losing weight and when the butcher opened their stomachs, they were full of plastic.

In another troubling scene, the children discover dozens of dead fish floating in a river that is filled with garbage and foamy bubbles. The Peng family gathers the fish and fry them for a special festive meal. Although it is not clear where the fish came from and what caused them to die, the cloudy chemical baths necessary to wash plastic waste loom as a likely source. Piles of plastic waste are also often shown smoldering or completely on fire, while Yi Jie and her family use some of the excess plastic as a convenient and free fuel for cooking. The film does not contextualize the toxicity involved with such burning, but the smoke gives the film a gloomy and ominous ambiance; it is often there in the background, returning again and again to cloud the air.

The adults complain that the work is hard and dirty, and the plastic waste is smelly and disgusting. That the low budget processing of plastic waste might pose serious long-term health risks mostly goes unspoken, although this does not mean that there is no awareness or concern. Kun, the boss of the enterprise and implicit head of the household, points to three tumors growing on his back side. "Damn plastics! My body is

broken.” Yet, he is afraid to do anything about it. “I don’t dare go to the doctors. What if there is something... something bad... What about my family?” Profit margins from the plastic recycling business are very thin, but Kun emphasizes that this is his only choice: “To make a living (singing sarcastically) ... for my kids, for my parents.” School is expensive enough that Kun can hardly afford to send his son, while Peng cannot afford to send his daughter.



Figure 2: Smoke from burning plastic (top left); laborers sorting plastic waste (top right); a bath for washing plastic (bottom left); a polluted river (bottom right). Photos courtesy plasticchina.org

## Sorting the People

The relationship between Kun and Peng becomes most strained when a buyer of the plastic pellets is unsatisfied with the quality, forcing Kun to adjust his price and lose a lot of money. Inadequate sorting seems to be the issue, and Kun scolds Peng: “Why didn’t you sort carefully? You are responsible for it. You are wasting my plastic!” But Peng complains that he has worked loyally for years and that his wages that are far too low. He swears at the boss, then Kun swears back, standing over Peng aggressively and slapping his face twice, telling him to leave and never come back. After Peng drunkenly curses into the night from his separate living area, the dispute blows over and the work continues.

Although Kun is the boss, he is not wealthy by any means. The two farmer families have both been compelled to join an unsavory node of global industrial production where some of the most fundamental processes of capitalism take center stage. This includes the labor of sorting materials according to what is useful for production, without consideration of human health or environmental impact. It also includes a sorting of social roles into a worker and owner—two roles that determine an unequal distribution of

value produced through the labor of sorting. As such, their tensions and disputes are the playing out of a certain form of power.

In many ways, the drama that unfolds between the two families and their struggles to make money could be seen in any small-scale industrial factory where the work is dangerous and damaging. However, there are some important specificities that come with the particular labor of processing post-consumer plastic waste imported from wealthier countries around the world. The origins of the waste are marked by foreign language labels and advertisements. Potentially anything could be in the waste, which not only causes apprehension and disgust, but also provides excitement at the possibility of finding “treasures.” Kun is delighted when he discovers an unopened foot cream, and finds a Korean video online showing how to use it. His wife tries it out later that night. Meanwhile, the children find balloons and other interesting items and toys.

Mostly, however, the children find images and leftover shells of commodities that they desire but will likely never consume or possess. While her father is blamed for sorting poorly, Yi Jie engages in an entirely different type of sorting as she meticulously cuts out and assembles images of the shoes, dresses, and other things that she would choose to purchase in a different life as a consumer. The boss also has fantasies of consumption, and he dreams of buying a new car after his old van starts breaking down. The two families go to see a car show and Kun is giddy while sitting in fancy cars that he thinks he might be able to afford someday. But Peng and Yi Jie look uncomfortably out of place, as they know that they will never be a part of this world. Back home, Yi Jie cuts out images of cars and the scantily-clad women that show them on the auto show floor and pastes them on paper, carefully curating her own miniature car show.

Eventually, the boss uses all the family’s money to secure a car loan and drives a shiny new car home across fields of burning garbage. He proudly shows it off to Peng and the neighbors. Shortly after, Peng finally decides to take his oldest two children back home to Sichuan. He takes Yi Jie and her brother to the train station, but they cannot acquire tickets because her dad does not have an ID card. Then they go to a bus station (where ID cards are not necessary), but Peng does not have enough money to pay for tickets. Being too poor to return home is a heartbreaking reality for Yi Jie. Dejected, the family has no choice but to return to the drudgery of working for Kun.

Later, the kids play a game in which Yi Jie sells train tickets out of a window and the younger boys come to buy. Yi Jie seems to enjoy having the power to both distribute tickets and deny them to those who do not have enough money, instead of being the one denied a ticket. Thus, not only does she dream of going home to rural Sichuan (where she has lots of friends and family, school is free, and agriculture is still dominant); also, she is learning to dream of occupying a different position a world where people are sorted into different categories—where some have the money to fulfill their needs and desires, and others are stuck sorting out the mountains of trash that remain.

## Repercussions

The director and cinematographer of *Plastic China*, Jiu-Liang Wang, made the film in part to influence waste exporting countries to take responsibility for their own garbage. In July 2017, Wang’s efforts were bolstered when China’s Ministry of Environmental Protection notified the WTO that it would soon forbid importing four classes and twenty-four types of

“solid wastes,” including post-consumer plastics. The announcement sent ripples through the global scrap recycling industry, which relied heavily on Chinese buyers for almost two decades. As the ban has gone into effect, commodity prices for many types of scrap have dropped to the extent that markets are collapsing, and exporting countries are indeed being forced to deal with their own waste. The brilliance of *Plastic China*, however, extends beyond efforts to redirect global flows of waste. The film captures an underworld full of agency, imagination, struggle, and inequality lurking across oceans, far from “recycling” bins, yet intimately tied to them. It thereby begs for deeper reflection into the complex relations between waste, value, toxicity, and justice.

# ‘Village Besieged’: An Elegy for Victims and Protest Against Taiwan’s Petrochemical Pollution

*Loretta Lou, Department of Sociology, University of Warwick*



Even though it is becoming more and more common for musicians to take on the issue of environmental degradation in the age of Anthropocene, to produce an album about a particular kind of toxic pollution is literally unheard-of until Taiwanese indie rock band Sheng-Xiang & Band released ‘Village Besieged’, a double concept album that features 18 Hakka themed songs about the detrimental effect of Taiwan’s multi-billion-dollar petrochemical industry. Since its release in 2016, ‘Village Besieged’ has received critical acclaim and won many awards in both Taiwan and China, including the Golden Melody Jury Award and the Chinese Music Media Awards for the Best Band and Best Album Design.

Although Taiwan’s petrochemical industry has slowed down in the last decade due to growing competition from China and other emerging economies, Taiwan remains a global petrochemical powerhouse and the eighth largest ethylene producer in the world. According to a recent report, ‘in 2010, the total revenue from Taiwan’s chemical industries reached \$135 billion, accounting for 29.3 percent of Taiwan’s overall GDP in the manufacturing sector’ (Hu and Chen 2012:41). Despite its economic importance, the



petrochemical industry has brought enormous harm to the environment and nearby communities, giving rise to widespread resistance. In particular, protests against naphtha crackers, by which ethylene is produced, have propelled the development of Taiwan's environmentalism since their emergence in the mid-1980s (Ho 2014:5).

Kaohsiung, for example, has been a petrochemical hub in Taiwan since the Japanese colonial era. Lin Sheng-xiang, a Kaohsiung native and the lead singer-songwriter of Sheng-Xiang & Band, observed horrendous environmental degradation in the area since the Kaohsiung refinery went into operation in 1947. As he said in an interview with the *Initium Media*: 'Every time I'm on the train back to Kaohsiung, I see chimney after chimney as the train passes through Zuoying District. The smell, oh my, it smells like it's going to explode if you lit a cigarette' (Lu 2016).

According to Ming-Sho Ho's research, the 'first four naphtha crackers were state-owned and were built without visible opposition' (Ho 2014:7). However, following the lifting of martial law in 1987, all subsequent naphtha-cracking projects evoked resistance in varying degrees (ibid), including the No.6 Naphtha Cracking Plant that became the focal point of *Village Besieged*. After witnessing an explosion in the No.6 Naphtha Cracking Plant[1] first-hand, Lin felt necessary to tell the world about the dangerous but all-pervasive petrochemical industry in Taiwan. As he sings in 'Pollution Has No Passport' (in *Village Besieged*, Disc 1): "All plants have nationalities, but pollution has no passport."

Thanks to the sociological training of Chung Yung-feng, the lyricist of Sheng-Xiang & Band, many of the songs in the album resulted from field research and interviews with the affected communities. 'Village Besieged' is an elegy for victims of Taiwan's Petrochemical Pollution. From villagers who were forced to leave their homes to families who lived near the Naphtha Cracking Plant and eventually died of cancer (see 'Going Away, Not Leaving' in *Village Besieged*, Disc 2), Chung was able to weave their stories into songs that speak to people across background (HKEJ 2016). Such work is unique and pioneering. At least in the Sinophone world, environmental issues are usually addressed and disseminated in writing or through visual media such as films and visual art. In comparison, music is a powerful but underused tool for engaging people in environmentalism. 'Village Besieged' is no doubt a milestone in the emerging genre of Chinese environmental songs.

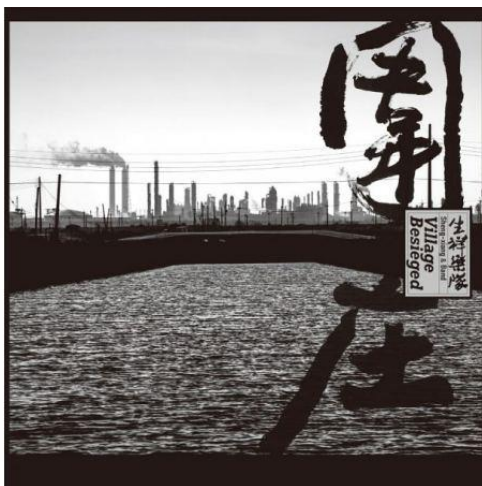


Photo credit: Foothills Folk

**Track list**

Disc 1	Disc 2
欺我庄 Bullying Our Village	答覆 Answer
日曆 Calendar	毋願 Not Giving In
圍庄 Village Besieged	農業學工業 Agriculture Learning From Industry
南風 The South Wind	藤纏樹 The Vine That Clings To The Tree
污染無護照 Pollution Has No Passport	出, 不走 Going Away, Not Leaving
慢 Slow	埕地無失業 In The Marshes There's No Unemployment
宇宙大爆炸 The Big Bang	戒塑膠毒 Quitting Plastic Poison
拜請保生大帝 Calling For Guidance From The Guardian Of Good Health	風入松 Wind in the Pines
火神咒 Invocation Of The Fire Spirit	動身 Moving On

Furthermore, Sheng-Xiang & Band demonstrates a great potential of environmental songs for social mobilisation. Remarkably, 'Village Besieged' was an entirely crowdfunded project. Within two months, the Band raised NT\$ 2,641,705 New Taiwan Dollars (approximately €74 thousands euro) from 2555 donations ([FlyingV 2016](#)). The donations allowed the Band to have complete control of the album without worrying too much about the commercial side of things. The success of Sheng-Xiang & Band proves that with the combination of excellent music, a timely topic, and a government tolerant of dissent, protest songs will go a long way in the Sinophone world.

[1] For more about Taiwan's Naphtha Cracking Plants resistance, see Ming-sho Ho (2014). *Resisting Naphtha Crackers: A historical survey of environmental politics in Taiwan*, in *China Perspectives*.

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