

6. China: political ecology with Chinese characteristics – limits to eco-compensation

with Dr Juan Liu

A SAMPLE WITHIN A SAMPLE

As an improvised political discourse, the idea of an anti-entropic “circular economy” was launched in China in 2008 in the form of a *Law for the Promotion of the Circular Economy*. It was unthinkingly accepted because it was a political orientation from the top political levels. The “circular economy” has also been proposed in Europe, but at the same time has been the object of empirical analysis and indeed of derision (Strand, Kovacic et al. 2021; Martínez-Alier 2021). In 2007, I was invited to the centennial anniversary of Tongji University in Shanghai on behalf of the International Society for Ecological Economics, with Peter May and Robert U. Ayres, to discuss in small meetings the “circular economy”. We dismissed it, gaining polite smiles in return. In 1969, Ayres had authored a famous article with Kneese in the *American Economic Review* arguing that “the economic process irremediably causes uncompensated externalities unless all inputs would be fully converted into outputs, with no unwanted material residuals along the way”. In Shanghai, we did not present calculations such as those of Haas et al. (2015) showing that the degree of circularity of the world economy is less than 10 per cent – there is a great “circularity gap”, a breach, a rift, a chasm, an abyss, a very large ravine or crevasse. As ecological economists, we remain very sceptical regarding the official slogan of the “circular economy”. The four billion tons of coal mined and processed in China every year leave indeed some “unwanted material residuals along the way” once they are burned: ashes in the soil, particles in the air, carbon dioxide in the atmosphere. China’s economy is very far from being circular, it is entropic, requiring supplies of energy and materials from the “commodity frontiers”, producing also more waste. Therefore, new ecological distribution conflicts arise all the time. Acknowledging the reality of Chinese economics and politics, the main question we would like to answer is whether in practice (and not in the slogans) the political ecology of China is different from the political ecology of other subcontinents. It has Chinese characteristics to be further researched: for example, the differences in the environmental conflicts inside the various regions of this immense country, but also China’s involvement in cases outside China, and the relations between internal and external investments and events. **How is China learning to be an imperialist country (flag follows trade) in South and SE Asia, Latin America and Africa? Conflicts inside and outside China are not disconnected: China will reduce coal consumption at home (says its government) but finances coal-fired power plants (CFPPs) elsewhere.** We must take into account the political ecology of the Chinese Belt and Road initiative in the same way as the political ecology of France must include the doings of Areva and Total in the Françafrique and elsewhere, and the political ecology of the United States must include the *de facto* absence overseas of environmental liability of its corporations. Similar observations apply



Figure 6.1 The cover of the journal *Ecología Política* 56, 2018: *Political ecologies of China. Environmental conflicts and activism in the People's Republic of China, Environmental impacts of Chinese investments in Latin America, Resistance and alternatives to development projects driven by Chinese capital. The poem is by Dr Juan Liu*

to China, as its civil society becomes more knowledgeable about the world and China's impacts on it. A new activism might arise focusing on Chinese extractivist firms abroad (Figure 6.1).

The Chinese poem on the cover of the *Ecología Política* journal was written by Dr Juan Liu. It can be translated as follows:

Everyone seems to love you.

A symbol of luxury, wealth and glory.

How many are there who know how much blood and tears of nature and humans permeate you?

The wounded hills with ravines, the devastated mother earth, the rivers that frighten animals and people and those lives that are consumed after suffering so many pains?

With your shining mask you have committed so many crimes: cancers on the one hand, pneumoconiosis on the other.

In China, two top political ecology slogans are the circular economy and ecological civilization. A third one is eco-compensation (while waiting for the “circular economy”), which both the government and the academic establishment insist upon. One doubts whether this is an innocent application of environmental neoclassical economics (the fetishism of internalization of the externalities in the price system) or rather a great show of cynicism to disguise the lack of voice of the victims. How can a political system inspired remotely by Marxism impose commensuration of environmental damages in monetary terms? The production of commodities perhaps hides the exploitation of surplus labour, and below this (in the “hidden abodes” of capitalism), the supply of domestic labour in families and the abuse of nature are concealed.

If China is really going to go green (in practice, not in rhetoric) it will be in part thanks to grassroots resistance against the socio-environmental effects of industries, together with changes in public policies. Indeed, the population policy (that has not relied on bottom-up feminist movements but on state directives) has certainly been effective in stopping population growth already many years ago. This is an argument in favour of a coercive state even at the cost of much individual pain. It is better when fertility rates go down by voluntary decisions, as in many other countries in the last one hundred years (Chapter 29).

Perhaps the trust in the grassroots for environmental protection is misguided because citizen activism is curtailed by fear of the state, particularly in some regions and in minority populations. The state defines itself officially as multi-ethnic but Convention 169 of the ILO and similar norms reinforcing Indigenous positions do not apply. The very nature of the state stops activism among ethnic minorities as well as among the common people, the *lao baixing*. It is well known that in other countries the exit from authoritarian or dictatorial regimes opened up political opportunities for short-lived “green springs”. There is no chance of a breakdown of the Chinese political system that would release such pent-up forces. Unless the state approves of it, it is risky to introduce new topics – e.g. “the entropy law and the economic process” as an argument against the litany of the “circular economy”. On a lower key, the film *Under the Dome* on urban pollution was a success in 2015 on the web in China but was forbidden after a short time.

The similarities to the political ecology of other countries are clear when you look at the commodities in question, the protagonists of the conflicts, the forms of mobilization and the outcomes. Some environmental activists are killed (12 cases out of 160 conflicts from China in the EJAtlas). The rate of success in environmental justice is similar to that of the EJAtlas as a whole (30 out of 160). But the role of private corporations is somewhat different: they seem to be subject to state power to a greater degree than in other countries. A Latin American perspective is useful in this regard – e.g. how are extractivist Chinese companies behaving in Marcona or Las Bambas in Peru, compared to their behaviour in China?

Many of the Chinese cases in the EJAtlas have been entered by Dr Juan Liu (ICTA-UAB) and her research team at CAU Beijing or earlier at the Northwest A&F University in Yangling (Shaanxi), others by interns at ICTA-UAB. Lora-Wainwright and her students from Oxford also entered some cases. Her first book on China was about “cancer villages” and her second book introduced the concept of “resigned environmentalism” (Lora-Wainwright 2013, 2017; Navas 2018). But there are vigorous protests in some environmental conflicts in China, not only “resignation” despite a severe policy of public order and what one senses as general acquiescence to the government. Other “transversal” chapters (10, 11) include more Chinese cases.



A. Grimaldos

Source: A. Grimaldos

Figure 6.2 Regions of China

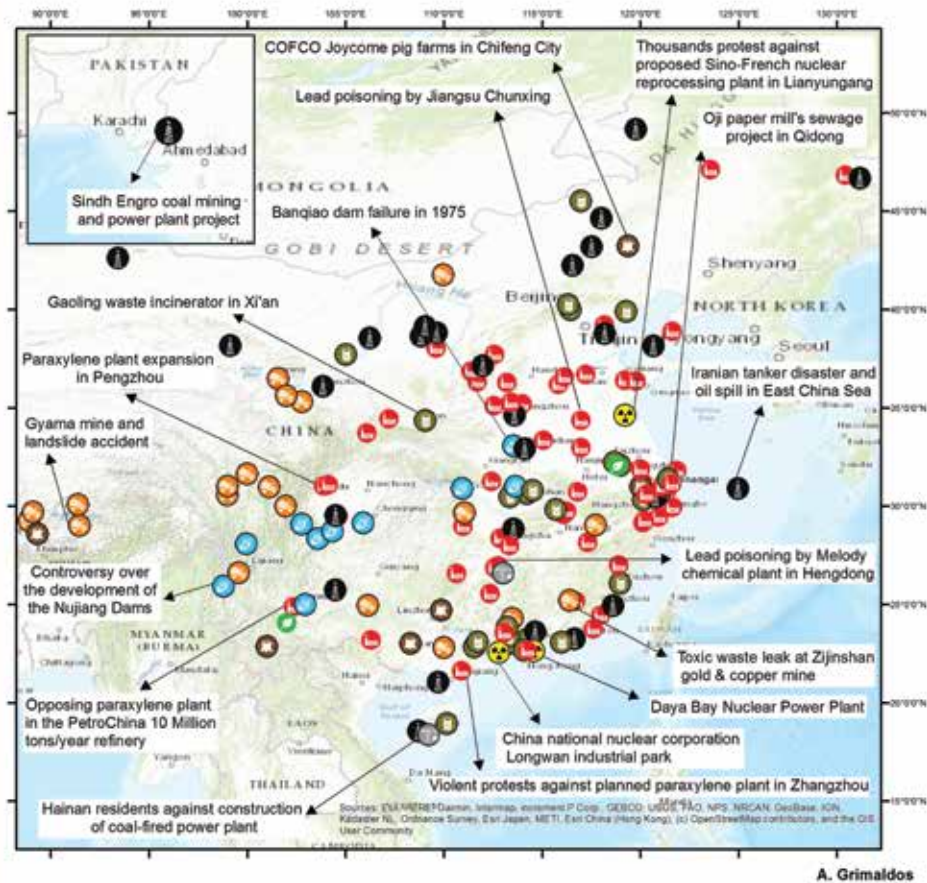
Environmental Conflicts: China



Legend

- Biodiversity conservation conflicts
- Biomass and Land Conflicts (Forests, Agriculture, Fisheries and Livestock Management)
- Fossil Fuels and Climate Justice / Energy
- Industrial and Utilities conflicts
- Infrastructure and Built Environment
- Mineral Ores and Building Materials Extraction
- Nuclear
- Waste Management
- Water Management

Source: Environmental conflict data retrieved from EJAtlas.org



Source: A. Grimaldos

Figure 6.3 Selected EJAtlas cases in China

OPPOSITION TO PARAXYLENE PLANT IN ZHANGZHOU AND EXPLOSION ACCIDENTS, FUJIAN¹

In the EJAtlas, conflicts around paraxylene (PX) in China stand out. We include only two here. **Despite government restrictions, China has witnessed large mobilizations against PX,** a highly flammable petrochemical used to produce plastic and polyester. Protests in Xiamen in 2007 succeeded in stopping the construction of a PX plant. The protests spread to Dalian, Chengdu, Shanghai and other locations. Coal-fired power plants, PX conflicts and incinerators triggered new forms of mobilization in China, the so-called “collective walks” (*jǐtǐ sànbù*).

The Zhangzhou PX project was originally to be located in Xiamen but the site of the plant was moved in 2008 after Xiamen residents protested the 10.8-billion-yuan development on environmental grounds. In 2008, the Fujian provincial government opted to relocate the Xiamen project to Gulei. To avoid upsetting the public, there was no mention of ‘PX’ and the government referred to it as the ‘Gulei Major Chemical Project’. According to media reports, the Zhangzhou city government did everything in its power to find a home for the unpopular project, calling upon other local officials, the courts, and even the Communist Party’s disciplinary committee to ensure the plans went ahead.

On 29 February 2008, thousands of Dongshan people (an ethnic minority) who were living in the neighbouring area of Gulei went to the streets to express their concern and protest the relocation of the PX project rejected by Xiamen to Gulei peninsula. Several police vehicles were smashed, one protester died and several were injured. In January 2009, after the initial EIA of the project was issued by the Ministry of Environmental Protection (MEP), the plant was situated in the Gulei Economic Development Zone, on a natural deep-water harbour about 100 km south of Xiamen. Other petrochemical projects were developed: a 100-billion-yuan petrochemical complex, a 38-billion-yuan ethylene cracker and a \$950-million oil storage site. In June 2012, local peasants and fishermen started to protest again on the injustice in land expropriation and unfair compensation for their land and their loss of livelihoods.

There are many conflicts related to the PX projects; complaints about the unfair compensations were reported through different online platforms. In January 2013, construction at the Zhangzhou plant was halted and the Xianglu Tenglong Group was fined 200,000 yuan by the MEP. The major investor in the project, Dragon Aromatics (Zhangzhou) Co., Ltd, a subsidiary of Taiwan’s Xianglu Tenglong Group, put in an application to alter the raw materials used in the plant. However, work on this section of the plant began before final approval had been given. Another subsidiary of the group, Xianglu Petrochemicals, also ran into problems at its purified terephthalic acid (PTA) plant in Xiamen. Residents who lived close to the plant frequently complained about a disturbing smell from the factory. The plant was reported to have been fined by the MEP when it first began production, but little has changed.

In fact, accidents in PX plants are frequent. A massive blast occurred at a PX plant in Zhangzhou City on 6 April 2015. Some 29,100 people were evacuated due to chemical plant fire. Firefighters extinguished fire at the chemical plant on the Gulei Peninsula in Zhangzhou on 8 April 2015, leaving 14 injured. Two years before, in 2013, a similar accident at the plant prompted a local official to promise that it would never happen again. The first explosion had ripped through this PX plant in Zhangzhou on 30 July 2013. It occurred after hydrogen leaked from a pipeline’s welding seam during a pressure test at the plant. On 29 June 2014, authorities in Fujian held nearly 30 people following clashes with angry local residents who blockaded

a chemical plant. The clashes came after riot police moved in to disperse thousands of residents of Xingzai village near Zhangzhou's Gulei township, who had been sitting outside the PX plant for several days. Photos of the scene posted online showed rows of riot police with shields, batons and helmets facing off with a crowd of local people. After the second explosion in April 2015, Dragon Aromatics (Zhangzhou) Co. took a second EIA for their production capacity change. Most of the local residents were displaced and repressed due to the development of the industry in Gulei Peninsula.

PX PLANT EXPANSION IN PENGZHOU, SICHUAN²

PX production in Pengzhou, Sichuan, started in 2005. But the Chengdu residents didn't begin to express their concern until the company started to choose an appropriate place in 2007. On 4 April 2013, because of the protest, the local government of Chengdu announced that the enterprise would not be allowed to produce anything until legal authorization, and the whole process would include public participation. Some people called for "taking a collective walk" (a silent protest) on 4 May, in Tianfu square, and the police warned they would watch the protests. **To silence the protest in Chengdu, the local government moved the weekend dates to Monday and Tuesday to prevent participation in the "silent march"**

The petrochemical enterprise posted statements arguing it was "scientific" rather than "harmful" to choose Pengzhou as location. The schools of Chengdu required the students to have class and forbade students to join the demonstration. The government closed the Tianfu square and all rooftops had police forces watching over the streets. Consequently, the protests didn't appear in public places. Hundreds of protesters expressed their anger and protested on the internet. And thousands of net-citizens left messages on Weibo (Figure 6.4).

According to internet public opinion, there were six main reasons for the protest. First, air and water pollution. Second, lack of transparency on production. Third, harmful impacts on crops. Fourth, Pengzhou is located in a seismic zone. Fifth, the period for the notice was too short. Last but not least, the project would negatively influence the cultural environment of Chengdu.

BANQIAO: A BURSTING DAM IN HENAN³

In China, there have been major conflicts over hydroelectric dams, like the Three Gorges Dam on the Yangtze or the Pubugou dam on the Dadu River, which even led to deaths of activists. Another one was Banqiao, with which we continue this chapter. It is an old case, shortly after the triumph of the Maoist revolution. The Banqiao dam in Henan province on the Huai River was built in response to the continuous flooding and the need to generate electricity. It was completed in 1952. However, no precautions were taken for the dangers that were to come. The dam suffered from some engineering and construction errors, and cracks soon appeared, which were repaired by Soviet engineers. Chen Xing, one of China's leading hydrologists, recommended 12 spillway gates, but only five were installed. He was eventually excluded because of his criticism and safety concerns.

In August 1975, Typhoon Nina hit the region with the heaviest rainfall ever recorded. The previous record was 800 mm, and Typhoon Nina dumped 1060 mm in one day. This storm caused flooding downstream of the dam and, as a result, a request to open the gates of the



Source: Weibo/djtclm

Figure 6.4 A little girl wears a mask with the word “Pengzhou”, another girl carries a poster: “Uncles and aunts, please give me clean air”

almost full dam was rejected on 6 August. The same request, repeated on 7 August, did not reach the decision-makers because the storm had knocked down the telegraph poles. The spillway gates could not absorb the amount of water stored and, on 8 August, the water overtopped the wall and the dam collapsed.

The Shimantan dam and 62 smaller dams on the Huai River also collapsed. The fall of the Banqiao dam caused a huge wave 10 km wide and between 3 and 7 metres high, which surged downstream at 50 km per hour, flooding the entire basin. An estimated 26,000 people died from the flooding and another 145,000 from epidemics and starvation. Nearly six million buildings collapsed and 11 million residents were affected. **In 1993, the dam was rebuilt a few metres higher.**

A government-sponsored book, *The Henan Flood Disaster of August 1975*, states:

The cascade of dams that had been built on the Huai River and its tributaries to reduce flood risks made the disaster greater and rescue more difficult. Two large dams, Banqiao and Shimantan, plus two medium-sized and 58 small dams were breached... More than four million people in thirty districts were trapped by the water, with five million houses and one million animals washed away.

Seven district capitals were flooded: Suiping, Xiping, Ru'nán, Pingyu, Xincai, Luohe and Linquan. Evacuation orders were not followed, because the telegraph failed and there were few telephones.

IRANIAN TANKER SANCHI SINKS IN THE EAST CHINA SEA⁴

Oil tankers of different nationalities sink with some regularity all over the world. The International Tanker Owners Pollution Federation (ITOPF) was established in 1968 in the wake of the Torrey Canyon oil spill to assess the damage, technically prevent accidents, and try to lower the payment of liabilities. The EJAtlas contains descriptions of about ten such disasters, with oil spills above 100,000 tonnes. On 6 January 2018, the tanker Sanchi collided with the Hong Kong freighter CF Crystal in the East China Sea, caught fire and sank, with 32 people dead or missing and a spill of some 130,000 tonnes of oil. Sanchi was travelling from Asaluyeh, Iran, to Daesan, South Korea. It was carrying natural-gas condensate (136,000 tonnes) for the South Korean petrochemical company Hanwha Total. Although oil spills happen all the time, they are not usually of this size, and natural gas condensate is more volatile than crude oil. It is estimated that 500,000 tonnes enter the sea each year as a result of shipwrecks. As a reference, the *Prestige*, sunk off the Galician coast in 2002, was carrying 77,000 tonnes of fuel oil.

The effects of oil spills depend on the distance from the coast. For example, when the *Atlantic Empress* sank after a collision in 1979 off Tobago in the Caribbean, it spilled 280,000 tonnes of oil that did not reach the coast. By contrast, when the *Exxon Valdez* sank in 1989 in Alaska, the spill was smaller, but it polluted 1,300 miles of coastline in Prince William Sound, wiping out much of the aquatic wildlife. The Iranian tanker Sanchi disaster in the East China Sea occurred about 100 miles offshore, and weeks later questions about the exact size of the spill, its chemical composition and the direction in which the spilled oil was moving – critical to understanding the short and long-term ecological consequences – could not be answered. The associated impacts on marine ecology, fisheries and human health led to a ban on fishing in a wide circle of many miles around the wreck.

COFCO, A ONE MILLION PIG FARM IN INNER MONGOLIA⁵

Concentrated animal feeding operations (CAFOs) and the livestock economy have expanded rapidly in China as incomes and demand for meat have risen. Many CAFOs are located near major cities on the east coast – closer to the market – rather than in rural areas where manure could be spread on land. However, the case under analysis was far from large cities and became conflictive because the land was being used by pastoralists. Local herders occupying a large part of this sparsely populated territory have protested at different times with low-intensity social movements against metal and coal mining. Regarding pig farming, their main arguments are the contamination of pastures by excrement, urine and carcasses.

Due to Inner Mongolia's broad horizons and the possibilities of growing pig feed, China's Ministry of Agriculture and Rural Affairs encourages new investment in pig farming. State-owned feed company COFCO Joycome and the Ongniud People's Government in Chifeng

City signed an agreement for the technologically advanced **Million Pig Project** to be completed in three phases by 2016. On 7 March 2014, **COFCO Joycome** was established with a registered capital of US\$71 million. Their **main businesses include feed and hog production, slaughtering and cutting, distribution, imports and sales of fresh pork and processed meat products.**

Throughout the phases of the project, there were waves of protests. In 2014, COFCO obtained land from the local government without the prior informed consent of local herders. The latter organized to defend themselves against the illegal appropriation of their land but they did not succeed. Two years later, in October 2016, some 200 herders marched to the COFCO pig farm under construction and blocked the road, as, for them, this supposedly “technologically model area for raising a million pigs” not only expelled them from their pastoral way of life, but involved destruction of the natural environment, already badly damaged in that area. The herders carried banners that read, “Our land, our territory, inherited from our ancestors, must be inherited by our children and grandchildren”, “We Mongolians are stronger when we unite” and “We will never give an inch of our land even if God asks us to”. The herders protested for four days until local authorities sent a dozen police vehicles to quell the protests. At least three herders were arrested.

The local environmental protection agency of Ongniud Banner (district in Mongolia) was continuously receiving complaints about pollution from COFCO Joycome Farms, and in July 2016, inspection found that requirements were missing. As a result, the Environmental Protection Agency ordered that pig production be suspended until all requirements were met by the end of the year, but that order was not complied with by the company. Another inspection in March 2017 found the absence of a biogas plant and other environmental facilities foreseen in the EIA of the second construction phase, so that liquid waste was discharged untreated to pasture land. In April 2017, COFCO Joycome Company was subjected to administrative punishment by the Ongniud Banner Environmental Protection Agency and had to pay a fine of 60,000 yuan for defects in each of the two phases of the project.

On 24 April 2017, hundreds of herders declared that they could no longer put up with pig farms. They displayed banners against the polluting companies and for the protection of life. The contamination affected the groundwater sources and not only the pastures. In May 2017, they blocked roads for several days; some were arrested. COFCO responded to the pollution allegations in June 2017, acknowledging that it failed to implement environmental protection measures. The company had already invested 500 million yuan in Chifeng to mitigate odours and protect the environment, and it would soon invest another 500 million yuan in environmental protection.

In December 2017, the People’s Government of Ongniud Banner brought out a conclusion:

after five months of rectification, the problems of prevention and control of water, soil and gas pollution have been basically rectified by COFCO Joycome Company [...]; sick and dead pigs will be treated in appropriate places set up for this purpose [...]; the company has paid another fine of 640,000 yuan [...]; the deputy director of COFCO Meat and the manager of COFCO Joycome have been replaced [...]; persons suspected of destroying property, starting agitation, obstructing official actions and investigations by voicing their own protests have been transferred for further investigation and prosecution to the prosecutorial apparatus.

In May 2018, the EIAs of the first and second construction phases of the project were officially cleared.

MELODY CHEMICALS, CONTAMINATING CHILDREN WITH LEAD IN HUNAN⁶

In 2014, a blood test of 315 children from around the Melody Chemical plant showed that 82 had excessive lead levels and another 10 had high levels, qualifying the situation as a serious contamination incident. In children, exposure to high levels of lead leads to delayed cognitive skills and behavioural problems. It can mean death if levels are extremely high. The effects are permanent and irreversible. This is a relatively small case, which is related to the Chinese “cancer villages” (Lora-Wainwright 2013) by contamination from heavy metals. When the news broke, attempts were made to deny the relevance of the case, insisting that the plant met emissions standards, or that it was impossible to confirm that the Melody Chemical factory was the sole source of lead emissions. In a CCTV broadcast, the mayor of Dapu claimed that perhaps the excess lead in blood came from children eating their pencils, which sparked strong discussions on Weibo.

On 15 June 2014, the party committee and the Hengdong District Government launched an investigation. The district Environmental Protection Agency ordered the polluting enterprises to shut down, and public security departments investigated them. The government appointed a special group to go to Dapu to inspect other industries and find out the number of children with excessive blood lead levels, distribute milk and other medicines, and deal with complaints from families. The next day, 16 June, on the instructions of the Hengdong District Party Committee, the deputy director of the district Environmental Protection Agency, Zhang Zhengguo, was investigated. The police detained the person in charge of Melody Chemical’s pollution affairs.

Almost a year later, a class-action lawsuit was filed in the Hengdong District People’s Court. More than 50 families were willing to participate in the lawsuit, but several were forced to withdraw due to pressure from local authorities: their minimum subsistence income could be suspended or their relatives working in government offices could lose their jobs. If they promised to withdraw, they could get compensation of 1,000 to 10,000 yuan. Hence, 42 families submitted written submissions to the court to withdraw the lawsuit.

In June 2015, this landmark trial began: 13 families from Dapu or nearby places accused Melody Chemical of causing the pollution that had produced high levels of lead in the blood of their children and grandchildren and demanded monetary compensation. Only two of the 13 plaintiffs obtained compensation. Seven plaintiffs refused to accept this decision and requested a retrial in the Hunan Provincial Higher People’s Court, which on 28 December 2016 determined that the evidence collected on the facts in the first trial was flawed and that the law had been misapplied. Another trial had to be held. In the meantime, the Melody Chemicals factory was permanently shut down; 117 factories using heavy metals had been shut down or converted, and 71 pollution control projects had been implemented in Hengdong. The water quality of the Xiangjiang River had improved significantly.

In September 2018, the lawsuit reached the Intermediate People’s Court of Hengdong District. After years of litigation, seven families signed a mediation agreement at the court in Hengyang, with each family receiving compensation of between 40,000 yuan (€5,000) and 90,000 yuan (€12,000) to end the case. Such compensation is less than what would be needed to provide practical solutions to the health damage to these children. The environmental protection law places the burden of proof on the plaintiffs, who must demonstrate that there has been damage, and this is beyond the social and economic capacity of peasant families. In

addition, the law states that a lawsuit must be filed within a maximum period of three years from the discovery of the health damage, but it may take them longer to realize that children are suffering from lead poisoning. These are typical cases of “slow violence” (Navas et al. 2018, 2022). Dai Renhui, a Beijing lawyer who represented the families, thought that this case would serve as a landmark reference for other families affected by industrial pollution and give them the confidence and courage to use the law to defend their rights. Pan Qing’an, an environmentalist concerned about heavy metal pollution, released a documentary on the case.

LEAD POISONING IN A BATTERY RECYCLING ENTERPRISE IN PIZHOU, NORTHERN JIANGSU⁷

In 1984, the Xuzhou Nonferrous Alloy Factory was established in Pizhou City. Its main activity was to recycle lead-acid batteries. In addition to providing local jobs, the enterprise paid substantial taxes to the Pizhou government. In 1997, it was restructured into a limited liability company and renamed Jiangsu Chunxing Alloy (Group) Co., Ltd. It continued to expand, and in 2006 it built extensive new facilities near Xinsanhe Village. Besides the expansion-related land disputes, these facilities have generated large amounts of dust. The wastewater containing lead and other toxic heavy metal elements flowed into the river running past Xinsanhe and into the groundwater, contaminating the villagers’ crops.

In 2008, in Xinshanhe Village, 41 children were diagnosed with lead poisoning, or plumbism and 65 were tested out with excessive blood lead levels. Villagers believed that Chunxing, located just 100 metres away from the village, was the polluter to be blamed. They had been asking for health compensations since 2006. No matter the medical proof, Chunxing kept on refusing, saying they had met the environmental standards.

Starting in August 2008, villagers of Xinsanhe embarked on a series of environmental protests against the Chunxing plant. They turned to the Internet for assistance; reports about the pollution in Xinshanhe Village began to appear online in October 2008. Jiangsu Chunxing Co. Ltd. and the Pizhou government reacted to the villagers’ protests by attempting to cover up the effects of pollution generated by the recycling of batteries. The enterprise allegedly bribed local hospitals, which falsified medical reports to state that the children of Xinshanhe were healthy. This motivated the villagers to continue mobilizing. On 10 November 2008, the villagers collectively complained about the pollution issues to the local government, and to the Petition Bureau of Pizhou City. Although the government conducted investigations for three days, it did not order the plant to shut down during the investigation. This oversight infuriated the villagers, who partially demolished walls of the plant on 13 November in an effort to prevent further manufacturing.

The villagers were unaware of any responses from the local government to address the environmental and health issue. They continued to complain to the Petition Bureau of the State. However, the Pizhou Government threatened the villagers and interfered with their attempts to seek medical treatment in Beijing. As a result, the fiercest confrontation occurred on 13 December 2008, when black smoke poured from the factory and more than a hundred furious villagers marched to the building and attempted to demolish the production lines. Finally, with mounting pressure and increasing reports from the media about this scandal, the Pizhou Government was forced to relocate the enterprise and to offer free medical treatments to children diagnosed with lead poisoning. In the end, the enterprise was simply relocated to

the Pizhou Renewable Economy Industrial Park, and it resumed its manufacturing practices under the new name, Jiangsu New Chunxing Resource Recycling Co., Ltd.

In February 2009, 18 children received professional lead expulsion treatments at the Shanghai Jiaotong University attached Xinhua Hospital. More and more people started to move out of the village to seek a safer place for their children.

ZIJINSHAN, COPPER AND GOLD MINING IN FUJIAN⁸

Toxic tailings from a mine owned by China's largest copper and gold producer contaminated the Tingjiang River, threatening the river's drinking water and fishing industry. The Zijin Mining Group produces and refines gold, copper and non-ferrous metals. The Zijinshan mine is their most important, covering an area of 30 km² and employing 1,900 people. It was discovered in 1980 containing two types of ore, with gold above and copper below.

This case presents a usual circumstance: a politically powerful and transnational company secures some local complicity by providing jobs and handing out some money as shareholders to some sectors of the population, but then a sudden and massive pollution accident turns the local population against it and leads to intervention of regulatory agencies and the government itself. Fines are imposed, technical measures are demanded and some monetary compensation is offered. In the meantime, the next "accident" in some other gold and copper mine in China or elsewhere in the world is expected.

The rapid growth of the company and its share price when floated on the Shanghai Stock Exchange enriched the major shareholders, including the Shanghang District Government and some officials. To the extent that everything was legal, that new wealth was welcome, except that it came at a high ecological cost. Many benefited economically, including the local resident population of Shanghang, but their fellow citizens paid the price of pollution. On 3 July 2010, a leak from a leachate dam dumped some 9,100 m³ of acidic water containing copper waste into the Ting River, killing at least two thousand tons of fish. The district government advanced some money to buy all the dead fish to compensate the losses to the farmer-fishermen. Nine days later, neither the Zijin company nor the Shanghang District Government had publicly announced the accident.

On 20 July, the Environmental Protection Department of Guangdong Province urgently warned its colleagues in Fujian that toxic water from the Zijinshan copper mine had reached the mouth of the Tingjiang River in Guangdong and that the copper content had risen dramatically, posing a great danger to fishermen and fish farmers. There was thus a trans-provincial conflict between Fujian and Guangdong. The Guangdong authorities were asking for coordination in order to have information and to monitor the elimination of pollution.

This was not the first Zijin accident. A report by the Institute of Public and Environmental Affairs identified Zijin as one of the 175 companies listed on the Hong Kong Stock Exchange that had the most records of environmental violations in China. Since 2005, Zijin had committed a series of violations and had caused environmental accidents in Hebei, Xinjiang, Guizhou and other provinces.

After the accident, the local villages had no water to drink for a while. Some who had money bought water; others had to walk a long way to fetch water from the mountain. They were afraid to eat fish and suffered from mineral dust when it was windy. Apart from the pollution, the people in the villages had gained little from the presence of the company: it

was difficult to get a job. Those who had obtained Zijin shares in the early 1980s made some money and moved elsewhere. Those who remained suffered from a high incidence of oesophageal, lung and stomach cancer, that drove families into debt. Although there were complaints about pollution, nothing was done until the 2010 accident took place.

Media scrutiny finally brought the Zijin company's pollution story to light, and the State Council sent a task force to investigate. The company first blamed what happened in 2010 on heavy rains, but then it became known that a government investigation had said the flow of water discharged from the mine was excessive. The company had also ignored the government's warning in September 2009 about the need to repair the automatic water quality monitoring system. Following the accident, in July 2010, Zijin's vice president and director of the copper mine were detained by the police.

According to China Mining News, by 2014, Zijin Mining had invested more than 1 billion yuan in "rectifying" its environmental facilities. As a reminder, 3 July was declared Environment and Safety Day, and the entire month of July is Safety Month at Zijin Company.

HAINAN CITIZENS AGAINST THE CONSTRUCTION OF A COAL-FIRED POWER PLANT⁹

Hundreds of CFPPs are built in and outside China by Chinese investors. They are often accepted without protest, but this is a case of resistance. In some coal conflicts, local resistance is complemented by an appeal to decrease coal burning to avoid climate change and this fits within the international Blockadia or LFFU movements (Chapter 16). The question arises in China whether local coal-related conflicts become "glocal". The answer seems to be "not yet". Coal has given rise to conflicts for many decades all over the world, much before climate change became a political issue.

A US\$ 300 million CFPP on Hainan Island was planned in 2007 and approved in Beijing in 2011. There was opposition from eight thousand residents who spoke out through a consultation organized in January 2012 by the regional division of state-owned China Power. It did not stop the project. There was an attempt to move the power plant to Fuluo and Huanliu, within the same district, but there too there was resistance, and it was returned to the initially designated site of Yinggehai. In March 2012, some ten thousand residents organized a protest in Ledong district, arrived at the construction ground-breaking event and closed stores and businesses to protest. They expressed their concerns about possible pollution caused by the plant, which would affect agriculture and fisheries. In April 2012, during protests in Foluo, news spread that some citizens had invaded a government building and destroyed offices. In both demonstrations, there were clashes between riot police and protesters.

In October 2012, CFPP construction continued in Yinggehai, and a thousand people gathered in protest for several days. The Hong Kong group Information Centre for Human Rights and Democracy reported that 50 people had been arrested and one hundred injured in the protests. Liu Futang, a former Chinese state official and environmental activist from Hainan, was one of those arrested, after he wrote and self-published a book about the protests. When he was released in December 2012, it was confirmed that the construction of the CFPP had indeed already started. The violence of repression does not always succeed in silencing protests, but it did in this case.

THE DISCHARGE PIPE OF POLLUTED WATER FROM OJI PAPER MILL FROM NANTONG TO QIDONG, JIANGSU¹⁰

In contrast to the Hainan CFPP, after mass protests in the city of Qidong, the project to discharge polluted water from the Japanese-owned paper mill Oji Paper Nantong into the sea was successfully stopped in 2012. This case will remind the reader of the Kochi paper mill conflict in Japan (Chapter 2).

The coastal city of Qidong is located at the mouth of the Yangtze River, about 100 km north of Shanghai. Its economy has been largely based on fishing and aquaculture, with production for export of lobsters and shrimp. The local authorities attracted other industries through tax incentives: pharmaceutical companies, chemical fertilizers and computer parts factories. In June 2003, the Japanese company Oji Paper announced that it would build a paper mill in Nantong, 100 km from the sea. It would be China's largest pulp project. To attract Oji's investment, Nantong municipal government offered to build a contaminated water pipeline to the sea. In 2007, the Oji company began the construction. The 104 km-long pipe would have a 6 km section in marine area with 2.2 km through wetlands rich in marine life and another 3.8 km to reach the sea. The outlet would be installed in Qidong city waters, and the capacity would be 150,000 tons of polluted water per day. With a large coastline and wetlands, the Qidong fishermen and fish farmers felt that the contaminated water pipeline was to harm them. There were also fears of a negative impact on the Qingcaosha Dam on the Yangtze, which supplies water to a large part of Shanghai.

Several Qidong People's Congress deputies spoke out against the project in 2005 and filed motions, questioning its legality and emphasizing the environmental risks to marine life. They failed to stop the project. At the end of 2008, the Jiangsu Environmental Protection Agency and the Oceanic and Fisheries Agency approved the EIAs of both the onshore and offshore parts. In February 2009, the Jiangsu Development and Reform Commission approved the feasibility study. Beginning in 2007, some Qidong citizens began posting reports and news to an online forum, Qi Wu Dong Jiang, expressing their opposition to the project, but their actions did not gain much attention. It was not until mid-2009 that concern really grew and moved from the online sphere to printed paper through leaflets, green bags with slogans and local press. The activists drew attention to the marine environmental and human health risks with petitions to the government and in the local press and initiated an administrative appeal to the Nanjing Intermediate People's Court and the Jiangsu Provincial High Court. These citizen class actions were successful and the project was suspended.

However, in May 2012, it was reported that the project was going to be built, so the activists decided to continue their actions in defence of their territory. There was a shift from the phase of intervention by administrative officials, political representatives and judges, to direct action by a social movement. Some Nantong officials went to Qidong to engage in dialogue with local citizens, including activists, deputies of the municipal people's congress, fishermen and retired Qidong political cadres. But no consensus was reached. Meanwhile, mass mobilization increased. In July, two activists sent a request to hold a demonstration. This request was rejected by the local government, which also sent messages to citizens and shopkeepers asking them not to participate. However, thousands continued spreading the call with flyers and on the Internet.

Despite the efforts of the local government to prevent it, the demonstration took place on 28 July 2012, and Sina Weibo gave the figure of 100,000 demonstrators, even though the

government stopped public transportation, sent letters announcing punishments and deployed many police. Demonstrators invaded the municipal government premises and some entered the main building, where they broke computers, turned tables upside down, threw documents out of windows amidst cheers from the crowd and at least one police car was turned upside down. The mayhem was halted in the afternoon, when the Nantong city party secretary announced over a loudspeaker that the project was “permanently suspended”. Sina Weibo showed some reactions expressed as Chinese nationalist comments mixed with calls for even more protests. Some Weibo users expressed sentiments like, “How is it possible for a Japanese paper mill to come to China to harm the health and natural environment of Chinese people? How can we 1.3 billion Chinese people be scared by tiny Japan? Our whole nation should boycott Japanese products”. “That doesn’t mean we hate Japan. We are alarmed by its blind economic development that is based on damaging our environment”.

After the Nantong government banned the pipeline project, the Jiangsu Oji Paper mill had no choice but to dump contaminated water into the Yangtze River, a practice that had been going on since it opened in 2011. The Yangtze already has a notorious pollution belt in its coastal waters, where there are numerous chemical factories on both banks. After receiving approval from local authorities to use a membrane method to clean contaminated wastewater, and reuse the water, Oji Paper restarted its large-scale manufacturing in 2014 in Nantong. In conclusion, this successful conflict shows a combination of citizen and popular environmentalism resorting to leaflets, Weibo, street marches, occupation of government offices through direct action, with technological improvements from “green modernization” that the company finally introduced despite its cost.

THE URBAN GARBAGE CRISIS AND THE GAOLING INCINERATOR, XI’AN, SHAANXI¹

Thousands of Gaoling citizens took to the streets for a week in October 2016 to protest against a garbage incinerator and, despite promises from local authorities, continued their protest at the risk of police repression and arrest. Gaoling is a district or neighbourhood of Xi’an, a great city, the cradle of China both geographically and historically because it was the ancient capital of the empire and the starting point of the Silk Road. **Today it is a city of ten million people, one of China’s dozens of megacities. And, like other metropolises, it is facing a garbage crisis and protests on incinerators.** In 2012, Xi’an was generating some 10,000 tons of garbage a day, and the Jiangcungou landfill was nearly full. In response, in 2015, the city government decided to build five incinerators in Hu, Lantian, Baqiao, Gaoling and Fengd Ong New Town districts.

Since 1998, there had been failed attempts to build an incinerator in the area. The first one was planned in Gaoling, a densely populated district more than 20 km from the centre of Xi’an. The project met strong resistance because of fears that incineration would produce carcinogenic dioxins. The neighbouring town of Liangcungou has a medical waste disposal centre and a growing number of cancers. It has been listed as one of China’s “cancer towns”. As a result, the citizens of Gaoling mobilized in order to defend their own interests and the environment.

The local press was unable to report the events and Hong Kong’s Apple Daily received a call from Gaoling asking them to cover the news. State authorities deleted the shared

information; however, more than enough remained to know what happened. The protests began on 11 October 2016, and culminated in clashes with police the following Sunday. Citizens made it known that many had been arrested and that police had beaten many people, including women and children.

A resident surnamed Zhang was arrested for claiming at **Radio Free Asia** that 300,000 local residents had blocked a government building in protest against the incinerator. Police and an official website accused her of manipulating photos and spreading rumours online that undermined public order. Another local citizen, Lu, told RFA that the streets were “full of riot police and armed police [...]; some people got overexcited during the protests and the police took them away in their vehicles or dragged them away”. Another resident said that people fear that the incinerator would cause deaths, “the smoke from those plants is toxic and there will certainly be cases of cancer [...]; many people cannot afford medical treatment [...] they just wait until they die”. Videos of the demonstrations on 16 October 2016 showed a march led by bicycle cabs carrying banners reading “Long Live the Communist Party, Long Live President Xi Jinping!” Other banners read “No to the garbage incinerator!”. Slogans chanted were “Defend Gaoling! Defend the blue sky and pure land!”. After the arrests, they shouted, “Let them go, let them go”.

The authorities’ strong response proved effective, at least temporarily. Most of the population stayed indoors on 17 October, and the authorities managed to curb information traffic on social media. They declined to comment on the protests and promised that the project would not start unless residents agreed to it. Local residents argued that it was the government’s lack of dialogue that led to the protests and, as Ma Xiaoming (human rights activist) said, “For ten thousand people to mobilize in a single district indicates the deep popular anger over this issue [...] the government does not allow information about this kind of situation to be disseminated because [...] water pollution would be a very serious issue”.

THOUSANDS PROTEST AGAINST THE CHINESE-FRENCH NUCLEAR REPROCESSING PLANT IN LIANYUNGANG, JIANGSU¹²

As elsewhere in the world (Chapter 10), nuclear energy has caused protests in China. One successful one was that of thousands against the proposed reprocessing plant in Lianyungang, Jiangsu. The French nuclear fuel group Areva agreed in 2012 to cooperate with the state-run China National Nuclear Corp (CNNC) to build a reprocessing facility in China. Locals say that Lianyungang, a port city in Jiangsu province, was a prime candidate because it hosts the Tianwan nuclear plant. A 2010 survey of 1,616 local residents showed widespread apprehension about the Russian-built Tianwan plant: 83.5 per cent of respondents said they “worried about improper handling of nuclear waste”.¹³ The French-built plant would be added to it, and when China’s premier, Li Keqiang, visited France in June 2015, there was an agreement “to finalize the negotiations in the shortest possible time frame”. The plant was to be built by China National Nuclear Corp., based on Areva technology. China wanted a plant to process 800 tonnes of spent fuel per year, as well as a MOX fuel fabrication plant modelled on Areva’s Melox plant in Marcoule, in southern France.

Thousands participated in protests. According to the *New York Times*, “the biggest protest in Lianyungang took place on Saturday [6 August 2016], when many thousands of people, including families with children, marched through the downtown area. Despite warnings



Source: EJAtlas

Figure 6.5 Banner: “For the next generation, refuse construction of the nuclear waste plant”

from the government, protests continued on a smaller scale this week, as residents defied ranks of riot officers with shields¹⁴. Meanwhile, citizens used social media platforms to denounce the proposed reprocessing plant while government censors did their best to remove critical comments.

On Sina Weibo, messages sprang up with an iconic picture of a face in a heavy protective mask holding up a nuclear radiation sign with a red X across it. “The people of Lianyungang don’t want radiation”, the picture read. Residents also used WeChat to share video footage showing downtown Lianyungang at night crowded with hundreds of people chanting loudly, “Oppose nuclear waste, defend our home” and “for the next generation, refuse construction of the nuclear waste plant”.

On Monday night [8 August], thousands of residents gathered in front of a primary school near Suning Plaza and yelled “Protest, protest!” at police wearing heavy riot gear and carrying riot shields. “We don’t want this project”, said a local citizen. Another local citizen said: “It is very important to choose a safe location to deal with nuclear waste since it is radioactive. Lianyungang is located in a seismically active area, and there is already a nuclear waste plant here”. The government decided to stop the project although this did not mean that the nuclear fuel-reprocessing proposal was dead.

PROTEST IN TONGPO, QINGHAI PROVINCE¹⁵

In November 2005, Qinghua Mining and Smelting Ltd. (QMS) began constructing a coking mill within the Tongpo district of Ulaan County in Qinghai province, a township home to nearly four hundred Mongol herding families. **This project caused anxiety among locals, who**

became concerned that it would contaminate their sacred mountain, Mount Tongpo, which is 4,633 m high, because the construction site was located at the mountain's foot.

More than 1,600 Mongols lived in Tongpo district in 2006. They constituted a majority of residents in the district's two pastoral villages, Chagaangol (White River) and Chagaannuur (White Lake). The lamas at the Dulaan Temple pray regularly. In addition, the Tongpo Ovoo is worshipped annually and local people pray to the deity for rainfall during times of drought. Ovoo, numerous stone heaps (cairns) decorated with colourful flags on mountains and hills, is a Mongol custom. Each year, Mongols gather to worship there on the fifteenth day of the sixth month of the lunar calendar. At this annual gathering, the *ovoon jangjun* declares that people should stop outsiders from hunting, logging and mining within the mountain area. For example, in 2000 local residents stopped a mining project on Mount Tongpo, even though the two Han Chinese businessmen who had funded the project had been given permission by the county government. Similar prohibitions applied in theory to the QMS company. They failed to stop the project.

Four protests were carried out by local Mongol herders against the construction of the coking mill at the end of 2005. Protestors were sentenced to short periods in jail. While QMS was constructing the coking mill, other companies started to mine on the mountain. In response, residents sent six representatives to the county government to ask authorities to prohibit mining on the mountain itself. The head of the county government, an ethnic Mongol, promised that they would stop all mining activities on Mount Tongpo. However, they did not keep their promise. Some residents then went directly to the mining companies and demanded they stop mining. Three small peaceful protests, in which the chairman of the Chagaangol village committee participated, took place in defence of the territory at the mining sites between February and June 2006. None of these protests succeeded.

Academic research on the case concluded that “the indigenous institutions of the Tongpo community have contributed to the daily conservation and protection of Mount Tongpo and the areas surrounding it. QMS and local authorities’ erasure of these indigenous institutions caused environmental injustice”. “The sacred mountain (Mount Tongpo with supernatural rules), the deity-worship institutions (with an executive body and associated rules), and the homeland tradition (with notions of protecting community land and restricting those who cause harm to it)” are “central religious and social institutions of the small, local Tongpo community. Notably, these institutions are not state or party-oriented institutions but the indigenous institutions of local Mongols” (Chuluu 2020).

TIBET: GYAMA COPPER MINE AND LANDSLIDE¹⁶

Due to its tectonic formation, Tibet has many different types of mineral resources like copper, gold, coal, crude oil, natural gas, lithium etc. Following China's occupation of Tibet in the 1950s, big mining companies have shown great interest in investing there. According to Article 9 of the Constitution of the People's Republic of China, Tibet's resources are state assets available to be exploited to meet the needs of national development. Other mining conflicts in the wide Tibet region are included in the EJAtlas, and some of them are analyzed in Chapter 22 on Religious Groups as Environmental Activists because their main protagonists are Buddhist monks.

Over the past 60 years, mineral exploitation has evolved from a marginal endeavour to a major phenomenon in China's economic growth driven by industrialization and urbanization.

As early as 1951, geological surveys were conducted and by 1991, a 3,600-m-long zone of copper-lead-zinc mineralization had been delineated. Between 1991 and 1999, Geological Brigade number 6 of the Tibet Geology and Mineral Resource Bureau conducted detailed exploration work. Based on this work, four mining licences were issued to Gyama Township, Lhasa Mining Company, Brigade 6 and Tibet Huatailong Mining Development between 2003 and 2005.

In 2005, there were local complaints about cattle dying after drinking wastewater released into community streams. The company acknowledged that cattle deaths were caused by chemical waste released by themselves but some other investigators denied the link and many farmers did not get compensation. In April 2007, mining activities by the previous operators in the four mining licence areas were stopped by the TAR (Tibet Autonomous Region) government. In accordance with an agreement between the TAR government and China National Gold Group Corporation, the four mining licences were consolidated under the Chinese government's policy for mining properties. Since then, there has been rapid expansion of the mining operations. The Gyama mine, located near Lhasa, is a large-scale polymetallic deposit consisting of copper, molybdenum, gold, silver, lead and zinc with the potential to become one of China's biggest copper producers.

In 2010, severe heavy metal contamination was documented in the stream water of Gyamaxung-chu and wastewater treatment facilities in the Gyama valley. The levels of metals represented high risks for the environment, human populations and their livestock. In March 2013, 83 miners were killed in a mine-induced landslide due to mismanagement or over-pilling of waste at the Gyama Copper Polymetallic Mine. The official statement about the mine landslide was published by *Xinhua News*. By August 2015, Radio Free Asia warned of possible new projects coming up in the region. On 23 September 2014, more than 1,000 local Tibetans of Dokar and Zibuk villages near the Tibetan capital city Lhasa protested against poisoning of their rivers by Gyama Copper Polymetallic Mine. But, as usual, the local officials conveniently declared that the water pollution in the rivers was caused by natural factors and not by the mine.

A BELT AND ROAD INVESTMENT IN PAKISTAN¹⁷

Here we turn to conflicts related to Chinese investments abroad. There are LFFU conflicts inside China but also in its economic area of influence. One great example in Pakistan is the Sindh Engro Coal Mining and Power Plant Project (SECMC) in the thirsty Thar Desert. It implies digging up one of the world's largest deposits of brown coal to fuel new power stations, with Chinese finance and engineering. While the rest of the world claims optimistically to be clamping down on coal, including China in theory, Pakistan is planning to increase lignite mining with five new power plants scheduled to start producing electricity soon and many more in the pipeline. These plants will spew 7 million tons of CO₂ per year per thousand MW of power, further jeopardizing the future. The China-Pakistan Economic Corridor (CPEC) is a bilateral deal under which the Chinese government and banks will financially support Chinese companies to build energy and infrastructure projects in Pakistan. China has often asked Pakistan to increase military presence to secure the CPEC.

The coal (lignite) reserves in Pakistan's Thar Desert spread over more than 9,000 km² of land, are estimated to be 175 billion tonnes in quantity and can produce 100,000 MW of electricity for three centuries. As Bloomberg news put it:



Source: Amar Guriro, Scroll-in

Figure 6.6 Operations in the Thar desert

In the dusty scrub of the Thar desert, Pakistan has begun to dig up one of the world's largest deposits of low-grade, brown, dirty coal to fuel new power stations that could revolutionize the country's economy. The project is one of the most expensive among an array of ambitious energy developments that China is helping the country to build as part of a \$55 billion economic partnership.¹⁸

Work on the Thar coal project has begun, but SECMC is facing criticism as there are concerns regarding land rights of the people of Thar, groundwater depletion and environmental deterioration.

In order to begin coal extraction, SECMC has started to dry the mine by extracting water from the area. The water will be transferred and stored in a large reservoir which spreads across 1,500 acres. Locals from Gorano village have their reservations: they have lost space for livestock grazing due to the construction of the reservoir and fear seepage from it will pollute groundwater which they are dependent on. "The entire village... our homes, utensils, clothes, trees, you name it ... everything is covered with a thick sheet of dust due to the digging and the dumping of soil". The 12 villages around Gorano feel cheated. They held a sit-in outside the press club in Islamkot in protest at the construction of the reservoir in Gorano. Women left their homes to join the protest.

An Indigenous Hindu minority of the area is also protesting. As reported in the *Guardian*,¹⁹ "as Pakistan seeks to address its power crisis by mining coal, villagers in the Thar desert are fighting to prevent state acquisition of their ancestral land. [...] Nabi Bux, a resident of Sehnri Dars in the province's Thar desert, can attest as much. His village, roughly 400 km from the port city of Karachi, has been acquired by the SECMC and, as a result, he and about 1,800 fellow residents are to be relocated 25 km away. **'Engro is making brand new homes for us, but the spiritual attachment we have to our ancestral land is lost to them'**, he says".

The Sindh government is backing the project, under which the villagers were coerced into selling their land in the "greater national interest". The CEO of the company dismisses concerns about climate change because "Pakistan's emissions are less than 0.5% of the world total carbon emissions. In contrast, our neighbour India's carbon emissions contribute over

9%”. Many are alarmed. Among them is **Dr Abid Suleri, executive director of the Islamabad-based Sustainable Development Policy Institute**, who likens the approach to “investing in an old gramophone”. Suleri believes coal cannot be exploited if the global temperature rise is to remain below 2°C.

In June 2016, the villagers filed a complaint in the high court invoking certain sections of the Land Acquisition Act of 1894, which allows the mining authority to acquire land only after seeking permission from the landowner. “But we never granted them permission”, says Leela Ram Manjiani, a local resident who is a lawyer and is representing the villagers. The villagers do not have papers to prove it’s their land. “And those who do still have it in the names of their forefathers. To get the land transferred to their name requires a lot of money which they don’t have”, says Manjiani, who fears that the infractions of the mining company will be ignored by the state – which is fully supporting the project – and marginalize the Indigenous people.

A 2016 report in *China Dialogue* explains that around 300 Chinese, including engineers, miners and experts were working on the site.²⁰ The Chinese team started excavating the first pit. In the first phase, SECMC was to relocate five villages. SECMC started paying villagers for their homes and agricultural land. SECMC’s chief executive officer, Shamsuddin Ahmed Shaikh, said that the company was paying villagers above market prices for their land. However, locals said they do not want to be relocated to the new towns, the exact location of which is yet to be decided. “We lived in this village for centuries, we spent our childhood here and our forefathers are buried here; to leave all this is very difficult”, said Muhammad Hassan Halepoto, a resident of the Thario Halepoto. “We have dozens of trees on each acre of land. We feed our livestock from these trees [...]. These lands are our permanent source of livelihood”, said one villager. The Thar Desert is home to 7 million cows, goats, sheep and camels. Villagers fear that the project, which will cut thousands of trees, will be an environmental disaster for the desert.

CHINESE BUILT CFPP IN CILACAP IN CENTRAL JAVA²¹

In another Belt and Road investment, the operation and expansion of the CFPP in Cilacap is met by protests from local communities as a response to perceived negative health impacts and livelihood losses. In 2003, a Chinese-Indonesian consortium of companies was granted a construction permit for a 600 MW coal power station. The construction of the first two units was financed through a loan from the Bank of China, and the plant was inaugurated in 2006. The power station is owned and operated by PT Sumber Segara Primadya (S2P). In 2013, S2P was officially granted a loan from China Development Bank to expand the current power plant with an additional 660 MW unit. Moreover, PT S2P started a second phase of the expansion including a fourth unit with a capacity of 1000 MW, which was expected to commence commercial operations in 2020. This is one of several CFPP in Indonesia financed by China (as researched by Bowen Gu).

Residents of the surrounding villages have suffered severe adverse impacts since the plant was put into use. Due to soil excavation and drilling, the water table has been depleted and villagers find it increasingly difficult to access clean drinking water, especially since many wells have dried out. Families have been forced to divert money from other uses – such as education for their children – in order to afford to drill deeper. Furthermore, air pollution and ash rains

caused health impacts such as skin rashes, bronchitis, coughs, and other respiratory diseases. The dust pollution worsens during the dry season, but throughout the year villagers are forced to sweep and clean their houses and terraces several times a day. In addition, the noise from the facility – which operates 24 hours a day – impacts life in the surrounding communities.

Before, local residents used to support their livelihoods mainly through farming and fishing. Since the construction of the power plant, these activities have become increasingly difficult to pursue. The coast is more complicated to access, and widespread water pollution has effects on catches. Further, productive agricultural land has been acquired by the company. In the adjacent Winong village, the total amount of viable agricultural land has decreased by as much as 75 per cent.

Mobilization has taken place in the form of rallies and protests in villages affected by the operations of the plant. Posters have also been put up at the Cilacap Regent's office. A group of residents supported by Walhi Central Java and LBH Yogyakarta met with the Cilacap Regent to voice their complaints. The communities also claim public consultation to have been inadequate throughout the process. In 2018, in response to the claims made by citizens and supporting organizations, the Cilacap Regent promised to conduct an investigation of the circumstances around the construction and operation of the plant, as well as an evaluation of the company practices. However, the results of the investigation were never made public, and the evaluation was not conducted. In 2019, people marched outside PT S2P's office and hundreds gathered outside the district environment agency's office demanding sanctions on the company. However, the plant is in operation and its expansion is underway.

There is also the issue of climate change. Indonesia's per capita emissions are low compared to rich industrial countries, but deforestation and land use change, particularly the burning of carbon-rich peatlands to make way for plantations, has meant carbon dioxide emissions. Now, electricity generation for Indonesia's demand is increasing and the government is relying mostly on CFPP. In 2019, there were 39 CFPP under construction in Indonesia, and 68 have been announced, which will maintain coal's dominance of the energy mix at nearly 55 per cent by 2025. How many of them will be financed by China is under debate (Custer et al. 2021).

CONCLUSION

Yifei Li and Judith Shapiro's subtitle for their book on China is "**Coercive environmentalism for a troubled planet**" (2020). They focus on whether this state will make "China go green". As sources of eventual green policies, they look mainly at the state and the Communist Party (which admittedly is not monolithic). Nobody can doubt the great power of the state and its considerable legitimacy gained not only by spectacular economic growth but also because of the degree of redistribution of incomes and land. It is crucial, nevertheless, to look at resistance to evictions caused by economic growth, to uncompensated damages from coal mining and burning, to unsolved complaints about pollution and respiratory illnesses, and to debates on pneumoconiosis (Juan Liu 2021). There is alarm about toxic waste from lead in battery factories. There was, and perhaps still is, a particular obsession with PX in petrochemical industries and with the threat of dioxin from urban incinerators. Otherwise, the alarm at the effects of big hydropower structures, at nuclear power, metal mining and polluting industries, of biomass production through uniform tree plantations and intensive farming and livestock raising, are not different in kind of those of other countries, although larger in scale.

A theory on China's political ecology must be based on the comparative study of many environmental conflicts and not on homespun cultural history. **It is misleading to discuss environmentalism in China today in the light of an assumed "ecological civilization" of the past.** One objective of the present book is to help to place political ecology at the centre of politics (Charbonnier 2020). This is a moot point in China, for two reasons: political debate is rather restricted to the limits set by the Communist Party and the Marxist-Leninist tradition in the Communist Party does not help the ecological views. On the contrary, it rather helps the idea of the "development of the productive forces", even when they are destructive. Attempts to build up an eco-Marxism might be relevant in China (Saito 2020) as political discourses will hopefully have some impact on reality, as is discussed elsewhere in this book (Chapter 30).

One can conclude from this chapter that the causes of the environmental conflicts in China are not very different from other countries. But there are Chinese characteristics: the predominance of coal as a source of energy, the large size of the country and its internal diversity combined with the rule of a single political party. Also, the economic and political stability of its government in the last decades and the foreseeable future, the end of population growth together with rapid urbanization, the disrespect for ethnic minorities, the investments along the Belt and Road initiative that make China so conspicuous in Africa and Latin America, the difficult life of Chinese environmental organizations and the growing international academic exchanges that inevitably will produce environmental social scientists specialized in ecological economics, political ecology and possibly ecological Marxism.

Grassroots environmental movements of protest operate with short-lived ad-hoc organizations born from the concrete grievances in each conflict. No need for permanent, conspicuous national organizations, liable to be co-opted or disbanded. However, national environmental organizations have made appearances in the cases here described, like Friends of Nature, Global Village Beijing or Green Earth Volunteers. Among the participants in conflicts, net-citizens (using Weibo and other networks), journalists, college students, have appeared together with farmers, peasants, neighbours and citizens, local EJOs, pastoralists, fisherfolk, and sometimes children. They display a usual variety of social instruments of contention, from letter writing, disputing the EIAs and litigation in courts to street marches (with their own camouflage terminology: collective walks, or marching as turtles), invading government offices and blockading roads.

China's economic growth is happening at the same time as the use of energy and materials is growing. There are conflicts on the extraction, transport (pipelines, oil spills) and final use of the materials. Coal still dominates the production of energy. Not all energy sources are equally harmful or dangerous, but there are sometimes local protests against all of them. All the materials that enter the economy become waste or are accumulated as stocks that quickly or slowly partially become waste and, as we have seen, conflicts arise over the use of such materials and over the management of such waste. China has a great problem of pneumoconiosis (Juan Liu 2021). It has also witnessed many conflicts over urban incinerators.

The cases considered in this chapter are grouped in the years 2010–18 (with the exception of the Banqiao dam disaster). We could classify them between those that are solved, after the protests, with technological improvements in a pattern of "ecological modernization", and those that have no other "solution" than to charge the damages to the poor population and the natural environment after repressing the protests, perhaps offering a modicum of "economic compensation" with a big dose of "coercive environmentalism".

We also see that, as elsewhere, sometimes protests occur before investment projects are installed; at other times, protests are for damage that accumulates from the regular operation of projects, calling for repairs; and, in some cases, protests arise from sporadic accidents that often occur at mining operations or dams. Then there is a call for reparations. The data we collect in the EJAtlas is already being used by other researchers. We recommend the master's thesis by Porter Lyons,²² which compared 41 environmental "incidents". **An interesting hypothesis is that there is a clear divide between eastern and western China in terms of the type of conflicts and of conflict outcomes** ("successes" or "failures"). **The west is more extractivist, whereas the east suffers more from industrial pollution** (e.g. lead contamination, urban production of dioxine). The case of Tongpo in Qinghai province is very much a "western" case. In this chapter we have tentatively traced a distinctive geography of Chinese environmental conflicts: inside China, in the coastal industrial areas; in the "extractive peripheries"; and outside China, because of extractivist investments but also urban CFPP under the Belt and Road scheme.

Eco-compensation in China, an Infantile Neoclassical Malady?

Despite the criticism of "commensurability of values" in ecological economics since its beginnings in the 1980s, and the application to many real-world situations of multicriteria methods (Martinez-Alier et al. 1998), there is a fashion in China for deciding environmental conflicts by Government power to which so-called eco-compensation is added. For instance, the article by Liu et al. (2018) announced that eco-compensation "offers an effective means to alleviate current ecological problems and a way to coordinate sustainable economic and social development with protection of the environment". The examples could be scrutinized one by one as cases to be included in the EJAtlas, and the application of eco-compensation to them (crowding out of non-economic values) could be discussed. I find it interesting that the neoclassical economic language of environmental externalities and circular economy seems to become respectable to the point that research projects are funded under the call "Formation of a circular economy and resolution of environmental conflicts". The intention is plain, the environmental externalities are recognized and compensated for, and the circular economy can continue its growth.

Without denying that eco-compensation can be appropriate – for instance, in court cases after damage has been done –, the fact is that economic valuation and compensation in practice excludes social values which cannot be expressed in money terms, or which the protagonists prefer to express in other terms. For instance, damage to health from the coal industry can certainly be expressed in years of labour lost or years of taking care of respiratory illness in children and old people. However, some people might much prefer to count the damage directly, without money translation, in units of human health and life. Not least because we know that "the poor sell cheap".

NOTES

1. Opposition to PX plant in Zhangzhou and explosion accidents, Fujian, China, EJAtlas.
2. Paraxylene (PX) plant expansion in Pengzhou, Sichuan, China, EJAtlas.
Opposing paraxylene (PX) plant in the PetroChina 10 Million tons/year Refinery, Kunming, Yunnan, China, EJAtlas.

3. Banqiao dam failure in 1975, Henan, China (Joan Martínez-Alier), EJAtlas.
Three Gorges Dam on the Yangtze River, China (EJOLT team at School of Geography and China Centre, University of Oxford), EJAtlas.
Violent protests over development of the Pubugou Dam, China (EJOLT team at School of Geography and China Centre, University of Oxford), EJAtlas.
4. Iranian tanker disaster and oil spill in East China Sea, China (EnvJustice, ICTA-UAB/NWAFU master students), EJAtlas.
Prestige Oil Spill in Galician coast, Spain (Amaranta Herrero), EJAtlas.
5. COFCO Joycome pig farms in Chifeng City, Inner Mongolia, China (EnvJustice, ICTA-UAB/NWAFU master students), EJAtlas.
6. Lead poisoning by Melody Chemical plant in Hengdong, Hunan, China (EnvJustice, ICTA-UAB/NWAFU master students), EJAtlas.
7. Lead poisoning by Jiangsu Chunxing, Pizhou, China (EnvJustice, ICTA-UAB/NWAFU master students), EJAtlas.
8. Toxic waste leak at Zijinshan Gold & Copper Mine, Fujian, China, EJAtlas.
Yang, C. (2011). Zijin's poisoned legacy, *China Dialogue*, 14 April.
9. Hainan residents against construction of coal-fired power plant, China, EJAtlas.
10. Oji paper mill's sewage project in Qidong, Jiangsu, China, EJAtlas.
Water Management in Flint, Michigan, USA (Grettel Navas), EJAtlas.
11. Gaoling waste incinerator in Xi'an, Shaanxi, China (Federico Demaria), EJAtlas.
12. Thousands protest against the proposed Sino-French nuclear reprocessing plant in Lianyungang, Jiangsu, China, EJAtlas.
Daya Bay nuclear power plant, Guangdong, China, EJAtlas.
China National Nuclear Corporation Longwan industrial park, Jiangmen, Guangdong, China, EJAtlas.
13. Buckley, C. (2016). Chinese city backs down on proposed nuclear fuel plant after protests, *New York Times*, 10 August.
14. Buckley, C. (2016). Thousands in Eastern Chinese city protest nuclear waste project, *New York Times*, 8 August.
15. Protecting Tongpo sacred mountain from coal coking mill, Qinghai province, China, EJAtlas.
16. Gyama mine and landslide accident, Tibet, China (Environment & Development Desk, Tibet Policy Institute), EJAtlas.
17. Sindh Engro coal mining and power plant project, Thar Desert, Pakistan, EJAtlas.
Qasim, M. (2016). The dangers of Pakistan's coal revival, *The Third Pole*, 26 February.
Kunbhar, Z. (2016). The water this desert doesn't want. *The Friday Times*, 30 December.
Ebrahim, Z.T. (2017). Gwadar fisherfolk worry about One Belt One Road, *Dawn*, 19 May.
18. Mangi, F. (2017). This mile-wide hole could revolutionize Pakistan's economy, *Bloomberg*, 21 March.
19. Zofeen, E. (2017). Locals accuse Pakistan of doing the dirty by turning to coal to meet energy needs, *The Guardian*, 27 February.
20. Amar Guriro, A. (2016). Pakistan's coal expansion brings misery to villagers in Thar desert, *China Dialogue*, 12 September.
21. Protest against pollution from coal power plant, Cilacap, Central Java Indonesia (Emmy Iwarsson), EJAtlas.
22. Lyons, P. (2018). Red skies: The impact of environmental protests in the People's Republic of China, 2004–2016, M.A., Department of Political Science, Wright State University.