Environmental Compliance for US Companies in China

Challenges and Best Practices | March 2019

USCBC
THE US-CHINA BUSINESS COUNCIL
美 中 贸 易 全 国 委 员 会

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Table of Contents

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Executive Summary

Since China declared a "war on pollution" in 2014, environmental protection has become a top political priority, evidenced by tough regulations, enforcement campaigns, and an emphasis in official rhetoric. Stronger environmental enforcement has had mixed effects on US-China Business Council (USCBC) members. In many cases, it has helped level the playing field for foreign companies that already had strong pollution controls, since domestic companies are increasingly held to the same environmental standards as foreign companies. At the same time, the speed of regulatory change and sudden intensity of enforcement has increased costs and uncertainty throughout the supply chain.

Core Challenges

- One-size-fits-all enforcement: Chinese regulators sometimes demand production capacity cuts regardless of environmental efficiency. Some industrial parks require all companies to shut down on heavy pollution days with short notice, even those whose individual facility emissions comply with local regulations, rendering companies unable to meet their contractual obligations in some cases.
- Excessively stringent, non-science-based requirements: Some local environmental requirements are more stringent than international standards and can be difficult or impossible to meet, even with the most advanced environmental technologies.
- Insufficient transparency: Local environmental standards can sometimes be difficult to obtain and new policies often have short implementation timelines.
- Hazardous waste disposal capacity: A longstanding shortage of certified hazardous waste disposal companies affects members in a range of industries, leading to increased costs, compliance challenges, and disruptions in supply chains.

Best Practices

- Proactively engage with regulators: Companies find success in engaging closely with regulators at all levels to understand their goals, communicate difficulties and policy recommendations, and follow up on inspection results.
- Closely monitor regulatory changes: Leveraging internal and external resources to monitor policy changes can help identify risks to current operations or future plans. Some companies have also developed processes to inform their suppliers and customers about changing policies.
- Mitigate supply chain risks: Diversifying suppliers and creating contingency plans for diverting capacity or stockpiling goods can lessen the impact of shutdowns.
- Conduct due diligence and regular audits: To maintain supply chain integrity and ensure regulatory compliance, companies should conduct robust due diligence and regular audits of suppliers, industrial parks, JV partners, and M&A targets.

Introduction

Stricter environmental enforcement has had varied consequences for US-China Business Council (USCBC) member companies. Increased enforcement has helped level the playing field between foreign companies and domestic competitors with poorer compliance records. It also has created new opportunities for US companies to sell environmental technologies in China. At the same time, increased enforcement has led to supply chain disruptions and necessitates that companies consider new strategies to manage risk.

China's increasingly complex web of environmental policies has also generated other challenges. Companies face more inspections, slow and unpredictable approvals, inconsistent enforcement, opaque local environmental standards and notifications, and insufficient hazardous waste management capacity. In 2018, 29 percent of member companies identified rising environmental compliance costs as a top cost concern, compared to 25 percent the previous year.

To better understand these developments, USCBC interviewed 30 member company representatives and other stakeholders from a variety of industries about environmental enforcement challenges, effective mitigation strategies, and policy recommendations. Interviewees came from a variety of positions within member companies, including environment, health, and safety (EHS); legal; government affairs; and supply chain functions at the local, China, Asia-Pacific, and global level.

Environmental Policy and Enforcement in China

As with most policymaking in China, recent efforts to improve environmental protection began with high-level commitments and priority statements, and have since filtered down into more specific policies. Enforcement campaigns for these new, stricter environmental policies have been led by central-level regulators.

Development of China's high-level environmental policies

China's central government declared a "war on pollution" in 2014 in an effort to transition to a more environmentally sustainable economic model and stem China's deteriorating water, air, and soil quality. Around this time, the central government also released pollution prevention and control action plans, starting with an air pollution action plan in (2013) and followed by similar action plans for water pollution (2015) and soil pollution (2016). These plans have served as a guide for many of the regulations that followed.

In 2015, China implemented an updated Environmental Protection Law, the first revision in 26 years. Updates include enhanced polluter punishments and allow qualified NGOs to file environmental public interest lawsuits.

The following year, China ratified the Paris Agreement on climate change, committing to significantly cut carbon emissions and bolstering the government's commitment to environmental protection. China's Paris Agreement targets and others were reflected in the government's 13th Five Year Plan, covering the period from 2016-2020.

At China's 2017 Central Economic Work Conference, an annual meeting outlining top economic priorities, environmental protection environmental protection was labeled one of three "tough battles" that must be won over the following three years, along with financial risk and poverty alleviation.

Recent and upcoming policies tighten requirements

Policies promulgated in 2018 have further tightened environmental requirements, and a number taking effect in 2019 continue this trend.

- Taxation: China implemented its new Environmental Tax Law in 2018 to further institutionalize costs for polluting. Although most companies determined that their financial liabilities will remain equivalent to costs under the previous pollutant discharge fee system, many reported needing additional resources to ensure full compliance and avoid severe penalties.
- Air emissions: As a continuation of the 2013 air pollution action plan, China's State Council released a Three Year Action Plan to Win the Battle for Blue Skies in 2018 which focuses on reducing air pollution in regions where it is most severe.
- Water pollution: The revised Water Pollution Prevention and Control Law which took effect in 2018 applies a discharge quota to key water pollutants and increases penalties for excessive discharges. It also further institutionalizes the "river chiefs" system, which holds local officials accountable for the condition of rivers and lakes under their jurisdictions.

- **Solid waste:** In July 2018, China's central environmental regulator released a draft revision to the Solid Waste Pollution Prevention and Control Law which would increase penalties for polluters, institutionalize a ban on scrap imports, and incorporate solid waste into the emissions permitting system.
- **Soil pollution:** A new Soil Pollution Prevention and Control Law took effect in January 2019. The law creates a standalone legal framework for soil pollution, which was previously addressed through a patchwork of laws and regulations.

Increasingly centralized oversight and enforcement regime

In recent years, China has devoted more central government attention and resources to local environmental enforcement. In 2016, China began a national environmental inspection campaign covering all 31 provinces. These inspections were led by the Chinese Communist Party (CCP) Central Committee and the State Council, shielding the work from local government influence—a perennial challenge, as local officials have a record of prioritizing economic development over environmental protection. Compared to previous efforts, the central inspections have had more teeth.

Enforcement Statistics for the First Round of China's National Environmental Inspection Campaign (2016-2017)

Reports from the public	135,000
Environmental cases investigated	1,518
Individuals detained	1,527
Number of businesses fined	29,000
Value of fines	RMB 1.43 billion
Leaders held accountable	18,199

Source: Xinhua

A second round of nationwide inspections began on January 1, 2019 and is scheduled to last around three years.

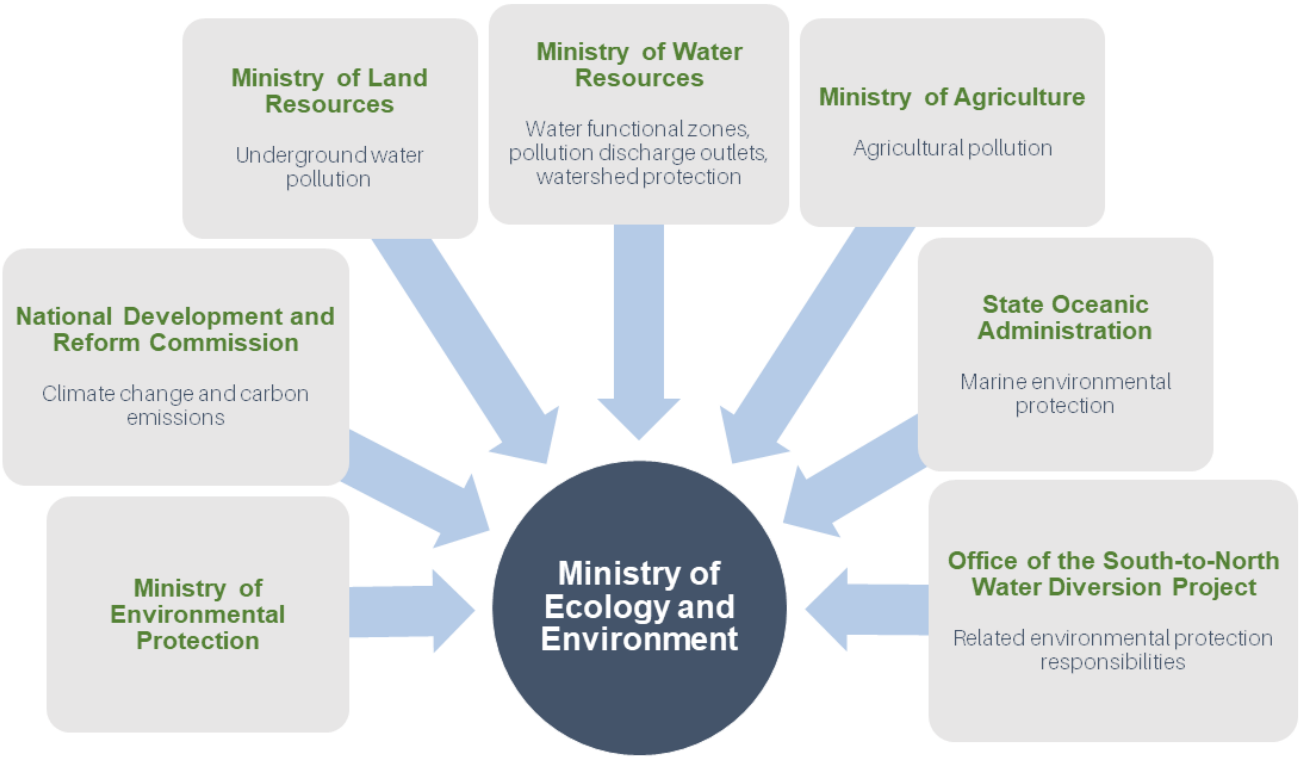
The central government has also undertaken regionally targeted inspection campaigns, including a 2017 air pollution inspection campaign focused on Beijing, Tianjin, and 26 cities in surrounding provinces (the "2+26 cities"). The second round of this campaign is currently underway and will last until April 2019. It involves 18,000 personnel and has been expanded to cover 11 additional cities in China's Fenhe and Weihe Plain area, along with limited coverage of the Yangtze River Delta.

These centralized campaigns correlate with an overall increase in nationwide environmental enforcement borne out in official data. In 2016, the number of cases involving daily fines, property seizure, suspension or restriction of production, administrative detention, or criminal investigations for environmental infractions increased 93 percent to a total of 22,730 cases. In 2017, use of these five types of enforcement measures increased again by 74 percent to 39,593 cases. It does, however, appear that enforcement tapered off in 2018, likely due to regulators balancing growth and environmental protection objectives as China's economy slows and taking more nuanced enforcement measures. From January to November 2018, the number of cases involving these five types of enforcement increased only 1.78 percent. However, the intensity of enforcement remains high compared to historical levels.

Government reorganization increases clout of China's central environmental regulator

In March 2018, China's central government underwent a sweeping restructuring aimed at streamlining the bureaucracy and increasing central authority. The new central environmental regulator, the Ministry of Ecology and Environment (MEE), incorporates the responsibilities of the now-defunct Ministry of Environmental Protection (MEP) as well as certain functions of six other government bodies. MEE's restructuring plan places a Central Ecology and Environment Protection Inspection Office in the new ministry, indicating that the nationwide central-level inspections of the past few years have become a permanent institution rather than a temporary campaign.

Functions Absorbed by the New Ministry of Ecology and Environment



Source: Xinhua

Environmental Compliance Challenges

Varied, divergent, and sometimes hastily crafted or poorly conceived policies and implementation efforts have created a variety of compliance-related challenges for US companies in China.

Challenge: One-size-fits-all enforcement

Especially during months with heavy pollution, ahead of national events, and during targeted environmental enforcement campaigns, capacity cuts and temporary shutdowns are often ordered without discretion.

Top Ten Provinces Where Production was Suspended or Restricted (Jan. - Nov. 2018)

Province	Cases
Jiangsu	1004
Shanxi	606
Shaanxi	499
Sichuan	470
Anhui	462
Guangdong	365
Guangxi	310
Jiangxi	275
Hubei	222
Zhejiang	203

Source: MEE

Even when authorities do not issue blanket shutdowns, they may still take other measures with a similar effect, such as shutting down boilers that supply steam to an industrial park or refusing to accept wastewater generated by company operations. During the fall 2018 China International Import Expo in Shanghai, temporary area restrictions on the transport of hazardous waste forced some companies to reduce output despite not having been directly ordered to reduce capacity or shut down operations.

Not only are such inflexible enforcement measures costly and inefficient, they also discourage companies from meeting high environmental standards. When companies that have employed superior environmental technologies and minimized their operation's environmental footprint are nevertheless subject to the same capacity cuts and shutdown orders as heavy polluters that have not incurred the same expenses, they suffer an unfair cost disadvantage.

When the regional air pollution action plan for Beijing, Tianjin, and surrounding cities was implemented in the fall and winter of 2017-2018, USCBC members with operations in the area reported an uptick in indiscriminate enforcement measures. In August 2018, USCBC advocated that senior central government officials adopt science-based enforcement techniques, instead of relying on such one-size-fits-all approaches, and the Chinese government has since taken steps in that direction. The current action plan improved upon the previous year's by explicitly prohibiting of one-size-fits-all measures. Companies with emissions levels "clearly better than peer companies" are also exempt from mandated capacity cuts. USCBC member companies noted improvement in transparency of regulators in the winter of 2018-2019 and less disruptive enforcement actions compared to the previous winter.

Case Study: Responding to Arbitrary Pollution Reduction Requests

One company was approached by industrial park regulators to formulate an emergency plan for periods with heavy air pollution. Despite not providing a specific emissions target, the regulators demanded emissions reductions and wanted the company to freeze production during high air pollution alerts.

The company had already significantly reduced nitrogen oxide emissions and limited overall emissions by undertaking a recent boiler upgrade. It had also completed a modification so that two buildings could share the same boiler instead of each running their own, allowing for one of the boilers to shut down on heavy pollution days.

The company protested, arguing that its emissions had already been significantly curtailed, to such an extent that it would be difficult to improve any further. After careful consideration, the regulators were persuaded that further upgrades were not necessary and allowed the company to run a single boiler on high pollution days instead of completely shutting down some of its production lines.

By effectively communicating with regulators about its environmental technology and production methods, the company was able to reach a solution that minimized the impact on their business operations while meeting the objectives of regulators

To the extent this plan is enforced, it would constitute a more nuanced policy approach that incentivizes companies to employ advanced environmental technologies. Despite this example, and recent public statements from China's environmental regulator about prohibiting one-size-fits-all approaches, companies report that this is still occurring in 2019, particularly during major central government events.

Such shutdowns and capacity cuts resulting from one-size-fits-all enforcement have disrupted supply chains in China, both at the supplier and customer ends. In one example, during centrally-led inspections, a company's suppliers were shut down for months with little information about when they could restart operations. During this period, the company needed alternative suppliers, which doubled costs in some cases, and in others made necessary materials impossible to obtain. With advance notice, they could have taken steps to mitigate the impact.

Companies supplying inputs for manufacturing processes have also reported lost sales when customers' factories are shut down. When steel mill operations halt, for example, companies that supply environmental technologies lose business.

Best practice: Maintain close contact with regulators on operational issues

Keeping in close contact with district-level officials and industrial park management to communicate measures to protect the environment and understand regulatory objectives can lay the groundwork for mutually amenable solutions when regulators must cut emissions. Companies also recommend proactively proposing solutions to regulators, instead of merely waiting for the regulator to make a judgment.

Best practice: Track potentially disruptive events

While it is difficult to predict shutdowns based on pollution subject to weather patterns, companies can keep a calendar of important national and local events in China that may lead to production restrictions, along with a timeline and plan for the company to respond. This can reduce the risk of unexpected supply chain disruptions, allowing companies to prepare for mandatory capacity cuts by stockpiling or diverting capacity to other operations.

Best practice: Communicate with suppliers and diversify where possible

Companies recommend anticipating future inspections, maintaining strong communication with suppliers, conducting appropriate due diligence on suppliers, and helping suppliers and customers ensure they are in compliance when appropriate. Larger companies noted that having diverse suppliers in some cases allowed them to divert capacity to other operations when a supplier was shut down.

Challenge: Inexpert inspectors and inspection practices

The supply of technical environmental professionals has not kept up with demand. As a result, the government often uses third-party consultants to conduct inspections or accompany their inspectors. Expertise is inconsistent, and multiple companies report interactions with technically inexperienced inspectors that have resulted in significant, and sometimes costly, misunderstandings.

Companies have mentioned instances of inspectors misinterpreting testing requirements, in some cases conducting tests that lack common logic. In one example, inspectors found that one company's water samples did not meet environmental standards for wastewater. It later turned out that the sampled water was not wastewater at all, but instead, was being reused in an industrial process, and had no sensible reason to be tested for wastewater standards.

Companies also cite examples of regulators making unreasonable demands, such as ordering a facility to install a major environmental control in a time frame that was technically infeasible. The regulators did not factor in time needed to search for vendors, conduct project assessment and design, and install the control.

Inspectors do not always follow record-keeping practices common in other countries. One company said local regulators required the company's representative to sign environmental compliance-related documents, but would not provide the company with a copy. Similarly, while environmental inspectors at US operations often share their testing methods with companies and collect two samples of everything—one for their labs and one for the company—this is not a common practice in China. One company reports that a Chinese regulator, when asked to share testing data and methods, admonished company personnel, saying, "our data is the law, you can only accept it."

Best practice: Train staff on how to respond to inspections

Companies can educate their frontline staff—from security guards at the plant entrance to operation supervisors—on how to answer frequently asked environmental questions and direct inspectors to the right resource in the company. They also noted the importance of having environmental permits and operational records well organized and accessible not only by the EHS manager, but the entire operations team.

Best practice: Shadow inspectors

Several companies have staff shadow environmental inspectors, collecting the same samples that they do so that they can test for discrepancies with official results in case environmental violations are found and verify the metrics used.

Best practice: Conduct prompt post-inspection follow up

If issues come up during an inspection, it is best to communicate with the relevant government officials immediately afterward, as violations identified in inspections can result in action required by a certain deadline, fines, or a requirement to shut down operations until the issue is resolved. One company requires each of their facilities to register every regulatory inspection they receive into an internal database. Follow up actions are then tracked in the database to ensure appropriate measures are taken to address concerns.

Challenge: Unpredictable, often delayed environmental approvals

With central authorities focusing heightened scrutiny on local officials, local regulators are often afraid of being held accountable for inadvertent missteps. As a result, many have opted to take a "wait and see" approach and do the minimum possible while national-level regulatory changes are underway. This atmosphere of hesitancy and caution has slowed environmental approval processes. In one example, a company's wastewater discharge permit application was held up because national targets for priority industries, which they were included in, had not been released yet.

Multiple companies have reported challenges obtaining approval or even approval timelines for their environmental impact assessments (EIAs), which are required for new operations and expansions. The resulting uncertainty has been costly for some companies, disrupting their investment plans. The Chinese government seems to recognize this issue and is taking measures to improve it. At a September 2018 State Council executive meeting, Premier Li Keqiang promised accelerated EIA approvals for large-scale foreign investments.

Best practice: Foster strong relationships with individual regulators

Companies note that environmental approvals in China are much more relationship-based than other jurisdictions. In one case, when there had been a leadership change in the department issuing a company's environmental approval changed, the administrative shuffle restarted the clock for the approvals process. In order to move forward, the company had to mobilize a senior executive to visit China and speak personally with the regulator.

Challenge: Intellectual property protection

Some companies are concerned about protecting intellectual property (IP). In some cases, reviewers with conflicting interests participate in EIA expert review panels, a mandatory process that can involve divulging proprietary business information. Companies overall note improved transparency in this process, and that regulators are increasingly understanding of corporate IP protection measures, such as limiting the sharing of sensitive production process information. Still, companies remain cautious during inspections to avoid revealing proprietary manufacturing processes.

Best practice: Communicate IP concerns

One environmental compliance expert noted that to help relieve concerns, companies can be more engaged in the EIA approval process and request to see the list of experts in advance. In some cases, they can then recommend changes to the panel due to conflicts of interest.

Case Study: Relocation Pressure Based on Politics Instead of Science

The Yangtze River Delta is a hub for China's chemical industry. In an April 2018 speech, President Xi Jinping said that China should "place the restoration of the Yangtze River's ecology and environment in a dominant position, make significant efforts on protection, and forbid large-scale development."

In response to President Xi's remarks, the Jiangsu provincial party committee and government in September 2018 released a policy forbidding new chemical parks and chemical plants from being built within 1 kilometer of the Yangtze River and its major tributaries, and encouraging those within 1 kilometer to relocate away from the river or enter qualified industrial parks. Jiangsu officials further stated in a press conference that, over the next three years, they would close 1,000 chemical plants that were noncompliant or had major safety risks. Hubei, Anhui, Jiangxi, and other locations bordering the Yangtze have enacted similar restrictions.

Despite maintaining high environmental standards themselves, companies now report restrictions on EIAs in the Yangtze River Delta area without a clear timeline of when local regulators may be able to process them. The resulting uncertainty makes it difficult for companies to conduct operational planning and make future investment decisions.

Challenge: Relocation pressure

Companies can experience pressure to relocate from the Chinese government for a variety of reasons such as a new policy direction for the development of certain industries, other plans for the land, zoning issues, or complaints from the surrounding community.

Relocation is complicated by the government's push to close down some small and medium-sized industrial parks, many of which have less developed infrastructure, leaving companies with limited options to relocate. Because only certain parks can accept applications for new chemical industry projects, park shutdowns inject an element of uncertainty into new and expansionary projects and are a concern for future investment.

Best practice: Be vigilant for signs of relocation pressure

Companies should actively monitor local government policies and engage with regulators to monitor signals that may be encouraging relocation. It is not difficult for the government to find pressure points to force companies to relocate (e.g., zoning or emissions that can make a company non-compliant with regulations). Some companies have found success negotiating with local governments to receive compensation for forced relocations.

Challenge: Excessively stringent, non science-based requirements

The overhaul of China's environmental regime has resulted in standards that are sometimes far more stringent than international norms. For decades it was sufficient for US companies to bring best practices and advanced environmental technologies from the United States to their China operations. But now, if companies operate at the same standard as they do in the United States, it no longer guarantees they will be compliant in China.

EHS experts and engineers note that some environmental standards cannot be met even with the most advanced environmental technologies. Requirements are not always based on hard science, and can be the result of political pressure, hastily issued regulations, drafters who lack technical expertise, or a lack of industry input. Certain jurisdictions are also imposing requirements far stricter than national standards that companies cannot realistically meet.

Best practice: Use technical reasoning to communicate about unreasonable standards

When engaging with regulators, companies should focus on the technical reasoning for changing a standard. Some companies have had success referencing US standards as part of broader advocacy efforts with Chinese regulators, while others caution that it can come across as arrogant.

Challenge: Lack of transparency

Despite modest improvement, a lack of transparency surrounding regulations, enforcement, and timelines remains an issue. Although, MEE publishes lists of violators and more advanced industrial parks often publish their own environmental ratings of companies to help inform about the environmental practices of their suppliers, significant challenges remain.

Case Study: Overly Strict Scrap Import Ban has Adverse Environmental Impacts

Stricter is not always better, and the rush to adopt higher standards sometimes runs counter to environmental goals. In January 2018, China began to implement significant restrictions on the import of scrap materials, including paper and plastic, with little time for transition. The government then imposed what some companies have described as technically infeasible contamination tolerances for all scrap imports. The government also implemented a licensing scheme and requires 100 percent of shipments to be inspected.

The restrictions have forced the closure of smaller, inefficient recycling companies, but also have reduced China's scrap imports so drastically that there is now a shortage of recyclable raw materials available to China-based manufacturers. As a result, many companies have resorted to using more energy-intensive raw materials, which has increased the environmental impact of their operations.

Local environmental guidelines are difficult to obtain

At the central level, policies are often released online with a 30- to 60-day comment period and companies may sometimes even receive earlier draft versions through industry associations. However, at the municipal level and below, many final versions of environmental standards are not even available online, much less at the draft stage, and hard copies must be purchased locally, if available at all. To complicate matters more, standards are sometimes vague, either intentionally or unintentionally, to allow regulators more discretion in enforcement or because the drafters lack the appropriate technical expertise.

Inadequate notification practices for shutdowns and relocations

Local regulators often provide little notice before implementing temporary shutdowns or capacity reduction requirements. When operations are ordered to shut down due to high air pollution levels, companies often have only as much notice as the weather forecast provides, and when they are allowed to restart production can be unpredictable. It is also difficult to anticipate what operations might be shut down for major national events. When lead time is short, the options of stockpiling products beforehand or shifting production to facilities elsewhere are off the table.

Case Study: Difficult-to-Find Relocation Notice

One company learned it was being relocated not from a government authority, but from one of its suppliers. Only then was it eventually able to find the notification online. Even local officials were unaware that the company had to relocate because the directive came straight from the provincial government. This case highlights the importance of maintaining close contact with regulators at multiple levels of government.

Insufficient lead time before policy implementation

Late notification challenges are not confined to circumstances where temporary shutdowns or capacity reductions are ordered. They also occur with announcements of permanent policy and regulatory changes. Here too, late notice can result in significant operational disruptions. For example, the rapid implementation of restrictions on imported waste in 2018 left companies scrambling to adjust their complex supply chains.

It is not uncommon for implementation timelines and transparency surrounding them to differ depending on location. After the release of national Stage VI emissions standards for light duty vehicles in 2016, some localities released plans to formulate separate local standards or implement the national standards prior to nationwide implementation, posing significant potential operational disruptions to automobile manufacturers.

When implementation of the Environmental Tax Law began in 2018, companies report that while the Shanghai government had clear implementation timelines and organized roundtables and conferences to communicate with companies, other localities provided short timelines and few details.

Case Study: Engaging with Regulators to Challenge Unreasonable Standards

Companies report that regulators are often open to industry input on environmental standards. In one example, when discussing zero tolerance standards for lead discharges, regulators had the impression that their rules matched those in the United States, where in reality, US regulations have more flexibility. The company intends to work with regulators to refine the regulations based on scientific reasoning and bring Chinese legal obligations closer to Western standards. They share their best practices with the regulators, ensuring they are seen as partners, not polluters.

Issue Spotlight: Hazardous Waste Management Capacity

Nearly every company interviewed by USCBC identified hazardous waste disposal as a core challenge. While this has been a longstanding issue for multinational companies (MNCs), the increasingly strict enforcement of hazardous waste disposal requirements in recent years has further stressed an already limited disposal capacity.

Challenge: Limited hazardous waste vendor capacity

Hazardous waste disposal is limited to a handful of central government-approved SOEs, which often do not have the capacity to accommodate large industrial parks. This shortage makes it difficult for companies to comply with industrial waste disposal requirements and has led to yearly increases in costs. One company reported cost increases of 20 percent per year for hazardous waste management services. Some areas cap hazardous waste disposal for companies at a particular tonnage, even if the company can afford other waste disposal solutions.

Even dealing with small amounts of hazardous waste can be challenging, as waste disposal vendors are not interested because it is not cost effective. One life sciences company reported that they struggle with the availability of licensed transportation and disposal services for very small amounts of esoteric chemicals from their laboratories.

Challenge: Transportation

There are strict rules for transporting hazardous waste in China. Some provinces and municipalities place restrictions on hazardous waste moving through or ending up in their jurisdiction, and China cannot export hazardous waste to other countries because of the United Nations' Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal. This creates administrative challenges for companies to obtain the proper local permit should they need to find a solution for waste disposal. As a result, waste often remains stuck at the facility.

Challenge: Storage limits

Local regulations limit hazardous waste storage at production facilities both in terms of quantity and time, depending on the waste product and the location. Companies may have to shut down their operations until they can dispose of their hazardous waste to stay in compliance with storage limits, which can also be disruptive because customers who come to audit their sites will flag the storage as a sustainability concern. Government audits may also flag excess waste storage that could lead to more in-depth scrutiny.

Best practice: Make operational adjustments and conduct audits

In addition to engaging with new hazardous waste vendors where possible, it can be helpful to explore operational adjustments to reduce the amounts of hazardous waste that they produce. It is also important to audit waste vendors to make sure they are compliant and not dumping or disposing hazardous waste as regular waste.

Emerging Trends in Environmental Enforcement and Policy

A changing competitive landscape

Intensified environmental enforcement has affected small and large companies differently. It has forced smaller compliant companies out of the market because they are unable to absorb the costs of relocating or upgrading their equipment to reduce emissions. Most large MNCs already had strong pollution controls in place, which has lessened the impact of increased enforcement.

The consolidation resulting from smaller, polluting companies being forced out has reduced competition and made the remaining suppliers more reliable, but it has also increased input costs and uncertainty throughout supply chains.

Stricter enforcement has helped level the playing field on environmental enforcement as the domestic competitors of foreign companies are increasingly held to the same standards. Some companies noted that in the past, foreign companies were held to a different standard. However, nearly all of the companies interviewed agreed that China's recent intensified environmental enforcement affected foreign and domestic companies equally.

Previously, weak environmental enforcement served as a subsidy to decrease costs for industry, but led to serious environmental degradation. As China's priorities have shifted to include both economic development and environmental protection, the incentive for local governments to be lenient toward polluting domestic firms to protect employment has diminished. One company that has JV partnerships with large SOEs feels that even SOEs are facing the same intensity of inspections.

Despite the high-level of US-China trade tensions, no companies interviewed reported feeling that regulators were using environmental inspections as a tool to retaliate against them. Equally stringent enforcement against domestic companies indicates that inspections tend to be focused on legitimate environmental issues.

Increased legal recourse to challenge enforcement actions

As China's environmental enforcement regime matures, so has the ability for companies to give feedback. One environmental compliance consultant noted that it is becoming easier to use legal channels for disputes, such as when a company may be falsely accused of emitting. Some companies prefer caution when disputing a judgement or report from local regulators, and are judicious in pursuing court action on environmental issues, and one member company noted that it depends on the location and a company's overall investment, as companies with more substantial investments may have more leverage to raise a dispute with the local government.

Non-government stakeholders taking on a larger role

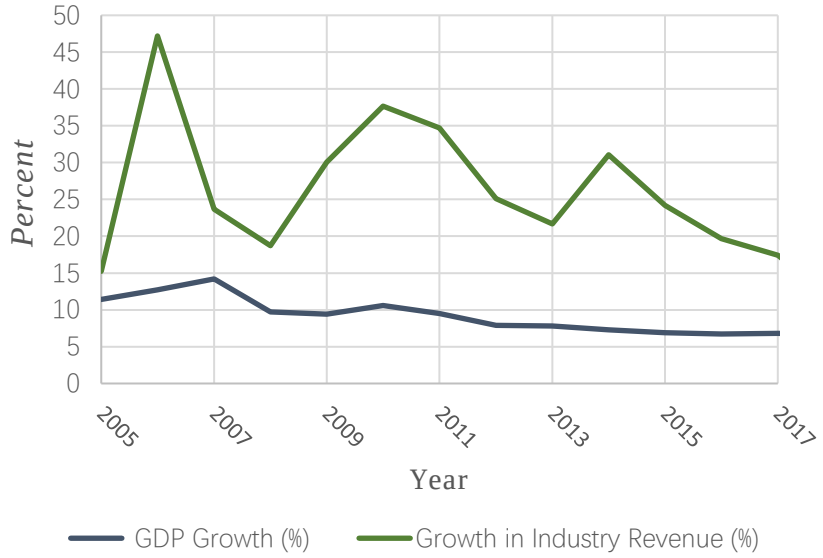
Companies report greater involvement by non-governmental organizations (NGOs) in environmental enforcement efforts. While the 2015 Environmental Protection Law for the first time allows legally-registered NGOs to file public interest lawsuits, companies report that NGOs usually employ other strategies, including bringing violations to the attention of regulators, the public, or company management. For example, the Institute of Public and Environmental Affairs (IPE), a Chinese NGO, maintains a public database of companies with environmental violations and requires third-party inspections for those companies to be removed from their blacklist.

Still, NGOs do not always have the technical expertise to conduct investigations properly, which can cause unjustified reputational damage and misunderstandings with regulators. In one example, an NGO reported a company to local regulators after conducting soil tests, but they had tested for the wrong contaminant and the discharge point belonged to a neighboring company.

New markets for environmental technology

Stronger environmental enforcement in China necessitates that companies employ more advanced technologies. Companies have seen higher demand for technologies in areas such as pollution detection instrumentation, waste treatment, emissions control, and energy conservation. China's environmental protection industry has experienced double-digit growth in recent years, with revenue of RMB 1.35 trillion in 2017, a 17.4 percent increase from the previous year, and exceeding China's GDP growth each year since 2005.

Environmental Protection Industry Growth vs. GDP Growth



Source: China Association of Environmental Protection Industry

One company reported that deteriorating US-China engagement has had detrimental effects for US companies selling environmental technologies in China. In the past, US government-led efforts to encourage China to meet similar technical standards facilitated sales.

Carbon trading platforms

Under carbon trading platforms, companies are assigned emissions quotas, and those emitting more than their share must purchase credits from companies with unused quota. US companies with low emissions may therefore be able to profit by selling credits to heavier polluters. China first started piloting emissions trading schemes in 2011, and in December 2017, the National Development and Reform Commission (NDRC) published a plan to implement a trading scheme in the power sector, creating what will be the world's largest carbon trading platform. China plans to eventually extend the initiative to other industries, although rollout still faces many challenges such as establishing a

comprehensive data collection system and a monitoring and verification system. It is not clear when credit trading will begin. Once credits are received, power companies will first test the system through simulated credit trading before actual trading begins.

Environmental liability insurance

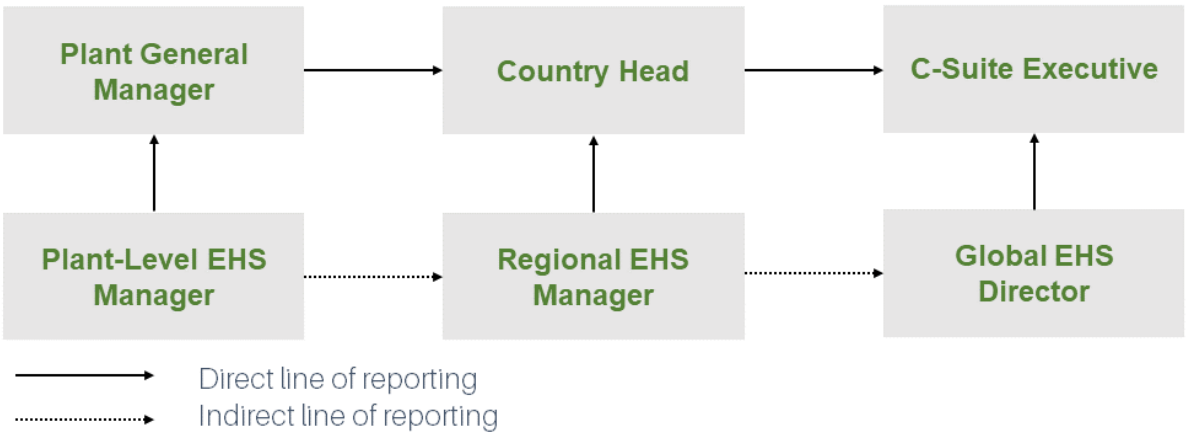
Because the environmental performance of policyholders affects availability of insurance and premium costs, environmental liability insurance can incentivize improved environmental practices. The Chinese government began testing environmental pollution liability insurance with pilots in 2007, and in 2017, released draft requirements that would make this insurance mandatory nationwide for eight industries with a high risk for pollution, including oil and gas exploration, hazardous waste processing, and active pharmaceutical ingredients. Under the draft rules, companies in these industries that do not purchase insurance would be fined. It remains unclear when the final version of these requirements will be implemented. Significant steps toward establishing a functional system for environmental liability insurance still remain, for example, developing a variety of products to serve different needs, creating a platform to compare vendors, and clarifying compensation criteria.

Corporate Practices for Optimizing Environmental Compliance

Developing an effective environmental compliance team

The structure of company environmental compliance functions can vary widely. For most companies, an EHS officer or team reports to the factory general manager, who then reports to the country head (usually responsible for engaging with central environmental regulators) who reports to corporate headquarters. Site-level EHS officers handle legal obligations, licenses, and permits at the plant level. Many companies also have a regional and/or country EHS head who can provide guidance, troubleshooting, training, and additional capacity for EHS officers at their operating companies. The site-level officers often have an indirect, functional line of reporting to the country or regional EHS head.

Typical EHS Function Reporting Structure



Of course, there are many exceptions to the typical EHS team structure. Some companies with limited or decentralized operations choose not to employ a regional EHS officer. Depending on the industry, companies may not decide to group environment, health, and safety together in one function. One company separates environment from health and safety to provide additional resources to both without emphasizing one over the other. Another company in the manufacturing sector does not have a separate environmental compliance function; it is incorporated into their supply chain management team.

While every company structure is different, most companies find success empowering local management and EHS officers at the plant level to engage with local environmental regulators since most companies do not have a plant-level government affairs function. Close communication with local regulators to understand their expectations for compliance can help to avoid misunderstandings and build trust that facilitates approval processes. Having a dedicated leader in charge of environmental compliance at each site can also help to foster a culture of compliance in the company.

Sharing information to reduce risk

Despite differences in their reporting structures, companies recommend monitoring environmental policy changes and sharing information promptly in order to mitigate risk. Many suggest involving different functions within their company, as well as external sources, to help track policy changes at the central and local level. Companies note the importance creating a system where relevant teams are informed in advance of policy changes and are able to take necessary action. Several companies find value in holding meetings that include legal, EHS, supply chain management/procurement teams, and government affairs teams to review environmental policies.

Some companies with more complicated supply chains in China have a regional coordinator also track broader macro environmental policies. This position could be in the form of a regional EHS head or a regional government affairs head.

Leveraging third parties to gain local insights

For many companies, service providers are a key resource for environmental compliance functions. Companies use external resources such as law firms or consultants to keep apprised of regulatory developments and assist clients with applying for new licenses and transferring old licenses.

Industry associations can also add value. Domestic industry associations are regularly involved in drafting environmental standards, and can often provide detailed insight into compliance best practices. Government ministries will often delegate technical regulatory drafting tasks to experts, including those in associations.

Building trust through corporate social responsibility initiatives

Many companies incorporate corporate social responsibility efforts in their environmental strategy in China. While US companies are often involved in corporate social responsibility projects, companies in industries with high risk for pollution recommend public engagement to demonstrate environmental compliance and build trust. A number of companies note success in hosting “open house” events to demonstrate their environmental and safety practices. As one company put it, “it is not just important to have strong relationships with regulators, but also with the community.”

Volunteer opportunities include tree planting projects, conducting waste pickups, and getting involved in recycling.

Mitigating risk with effective due diligence and self-assessments

Companies emphasize the importance of conducting due diligence on suppliers, industrial parks, and JV partners to avoid risks to continuity of operations and corporate reputation. While in the past, companies may have relied more on cost as the determining factor in choosing suppliers or locations for operations, they increasingly must consider environmental risk as well.

Due diligence on suppliers to promote supply chain stability

There are a range of criteria that companies reported using to evaluate the compliance risk of their suppliers:

- Location: Based on company experience, factories operating outside of industrial parks or in smaller industrial parks are at a greater risk of shut down.
- Licenses: Companies will often check to make sure their suppliers have the required environmental licenses to operate, such as discharge permits. Without a pollutant discharge permit, a company could be shut down at any time. One company maintains a database that tracks the expiration dates of all of their suppliers' discharge permits so that they can follow up six months prior to the expiration.
- Regulatory checklists: Maintaining a checklist of regulatory requirements that is updated constantly and released to suppliers can serve as an extra verification mechanism.
- Technical capacity: It is important to ensure that new suppliers have the technical capacity to deliver the promised product while maintaining environmental compliance.

Aside from conducting due diligence themselves, companies can also reference third-party resources to proactively learn about the environmental practices of their suppliers. Some NGOs release information on environmental violators. For example, companies can search the database of environmental violators maintained by IPE to see if there are any mentions of their business partners. Some of the more advanced industrial parks will also publish their own environmental ratings of resident companies. Companies can also reach out to other customers of a supplier to learn about their reputation.

Business can also conduct training for their suppliers, although interactions with suppliers will depend on the companies' relationship. It may not be appropriate for a customer to give their suppliers opinions or advice on how to stay compliant as if they were consultants. Typically, though, companies still suggest sharing their experience and company standards with their suppliers.

Due diligence for site selection to hedge long term risks

As environmental enforcement has intensified, the process for selecting a site for operations has become more challenging. Companies should take ample time to understand the short and long term regulations on potential site locations, analyzing both central government goals as well as local district or industrial zone policies to better understand if their specific industry or operation will be supported. Often, local development plans for the next few years may be available publicly, but engagement with regulators also helps companies learn about future policy trends that may discourage investment in specific industries.

When choosing a site for new operations, companies noted the importance of:

- Checking liability for legacy issues: The government now requires companies in high-risk industries to purchase liability insurance for legacy issues. One company conducts a document review and arranges third-party tests if they determine there is a risk at that location. If they do find heavy metal pollution, for example, they will contact the environmental regulators to make sure that all parties are aware, though this would not necessarily stop them from using the site.
- Knowing your neighbors: This is especially important in industrial parks. Even if a company's own emissions are low, the park could be shut down if it hosts heavy polluters or the park's overall emissions are high.
- Understanding shutdown policies: Companies in industrial parks recommend understanding the park's policies for shutdowns and how a company's emissions are considered. Companies can often negotiate with parks for their interests in the case of a shutdown; for example, demanding compensation if the entire park is shut down but their emissions in particular are low.
- Exploring waste disposal options: Companies should ensure there are options to dispose of hazardous waste before committing to a site, and also be aware of local hazardous waste capacity storage and transportation policies. If a company already has operations in a park and hazardous waste disposal becomes an issue, it can join with other companies to negotiate with the park administrators.
- Accessing talent, raw materials, and customers: Because some industries are clustered regionally in China (e.g., the chemical industry in Jiangsu), it may be difficult to find qualified workers and obtain raw materials for production elsewhere depending on site location, even if other provinces may have lower environmental standards. Companies might also face logistical issues delivering the final product to customers.
- Negotiating industrial park agreements: Agreements that clearly delineate the obligations of the park and the company can help avoid disputes later.

Many of the same best practices for picking an industrial park and vetting suppliers apply to due diligence on potential JV partners or acquisition targets. If a company inherits noncompliant practices through an acquisition, its reputation can suffer.

Internal auditing/self-assessments to create an additional buffer for risks

Companies report implementing environmental management systems that include internal reviews and risk assessments as well as validation through audits conducted by external resources. One company noted that by using internal requirements stricter than government-mandated standards, they are able to limit the issues with government inspections.

Case Study: Different Levels of Internal Audits

Some companies conduct internal audits of their plants on both the operating company level and the corporate level. One company regularly conducts three levels of audits: self-evaluations at the plant level, audits of their JV operating companies by their corporate China office, and formal audits by their overseas headquarters audit service group every three-to-four years. Audits by headquarters employ local consultants for additional on-the-ground support. In other countries, the company only conducts two levels of audits—local site audits and international headquarters audits—but because their individual operations are managed by their JV partners in China, they have an additional layer of China corporate audits. The company conducts audits using Chinese regulatory requirements and employs third-party consulting companies to create a checklist of regulatory requirements that must be met.

Bringing in third-party inspectors reduces the chance of official inspectors finding violations. One company reported using third party inspectors for general inspections, checkups before government inspections, and reviews to verify results of government inspections. Multiple companies report that their third-party EHS consultants are very localized, which helps ensure that they are familiar with local standards and regulatory practices that often differ from location to location.

Companies can also conduct in-house self-assessments. One company described internal assessment teams that are often composed of EHS team safety and environment engineers, firefighting personnel, and other experts, mostly from the site undergoing inspection. If issues are identified, they create a proposal for the site general manager and request any additional funds needed to meet government requirements. If their assessment finds that their system is adequate, they reach out to the authorities to showcase their compliance and build support.

Conclusion

China has been long overdue for more stringent environmental enforcement. In some respects, the increased focus on environmental protection in recent years has helped level the playing field for foreign companies with high environmental standards. At the same time, though, the speed of regulatory change and sudden intensity of enforcement has dramatically increased uncertainty in the business environment.

Industry can adopt the best practices outlined in this report to mitigate environmental enforcement impacts. Many companies find success in engaging closely with regulators at all levels to provide input, conducting due diligence to mitigate environmental risk, diversifying suppliers and stockpiling goods to lessen the impact of shutdowns on their supply chains, and proactively reading policy signals to identify emerging compliance risks.

The Chinese government can also take measures to lessen the side effects of its intensified environmental enforcement. USCBC's list of recommendations for Chinese policymakers outlines effective steps that the government could take to address its environmental challenges while minimizing the economic impact.

While in recent years, China has focused its environmental enforcement efforts on central-level campaigns, this is not a substitute for a predictable, rules-based system. Inspection campaigns place an enormous amount of pressure on local officials without providing clear guidance or sufficient time to address issues comprehensively, leading to unintended consequences such as slow approvals and unjustified shutdowns. For China to successfully tackle its environmental challenges while maintaining strong economic development in the long term, it will have to continue developing a robust regulatory framework with the personnel to enforce it properly.

Appendix

Timeline of China's Major Recent Environmental Policies and Enforcement Actions

2013

- September 12, 2013: The State Council issues an Air Pollution Prevention and Control Action Plan (commonly known as the "air ten measures"), covering the period of 2013-2018.

2014

- March 5, 2014: Premier Li Keqiang declares a "war on pollution" when he delivers the government's work report to China's legislature, the National People's Congress (NPC).

2015

- January 1, 2015: Amended Environmental Protection Law goes into effect.
- April 16, 2015: The State Council issues a Water Pollution Prevention and Control Action Plan (commonly known as the "water ten measures" because of its ten sections).
- December 31, 2015-February 4, 2016: Pilot central environmental inspection campaign takes place in Hebei Province.

2016

- January 1, 2016: Revised Air Pollution Prevention and Control Law takes effect.
- April 22, 2016: China signs the Paris Climate Agreement, which the NPC ratifies on September 3, 2016.
- May 31, 2016: The State Council issues a Soil Pollution Prevention and Control Action Plan (commonly known as the "soil ten measures").
- July 12-August 19, 2016: First batch of Chinese Communist Party (CCP) and State Council-led environmental inspections takes place, covering the regions of Inner Mongolia, Heilongjiang, Jiangsu, Jiangxi, Henan, Guangxi, Yunnan, and Ningxia.
- November 24-December 30, 2016: Second batch of central environmental inspections takes place, covering the regions of Shaanxi, Gansu, Guangdong, Hubei, Shanghai, Beijing, and Chongqing.

2017

- April 5, 2017: MEP announces it will begin year-long inspections of air pollution in Beijing, Tianjin, and 26 surrounding cities.
- April 24-May 28, 2017: Third batch of central environmental inspections takes place, covering the regions of Tianjin, Shanxi, Liaoning, Anhui, Fujian, Hunan, and Guizhou.
- June 9, 2017: China issues draft regulations that would make environmental liability insurance mandatory nationwide in eight industries with high pollution risk.
- August 7-September 15, 2017: Fourth batch of central environmental inspections takes place, covering the regions of Jilin, Zhejiang, Shandong, Hainan, Sichuan, Qinghai, Tibet, and Xinjiang, concluding the first round of central inspections.
- August 18, 2017: China issues for the first time a comprehensive 2017-2018 winter air pollution action plan for the Beijing-Tianjin-Hebei region with steep reduction targets and capacity cuts.

- December 18, 2017: The NDRC releases a plan to establish a nationwide carbon trading platform for the power industry.
- December 20, 2017: Environmental protection is identified as one of China's three "tough battles" at the annual Central Economic Work Conference.
- December 31, 2017: With less than five months' notice, China bans the import of 24 types of scrap materials, including several types of plastic scrap, one type of unsorted scrap paper, several types of used textiles, and metal slag containing vanadium.

2018

- January 1, 2018: Environmental Protection Tax Law takes effect.
- January 1, 2018: Revised Water Pollution Prevention and Control Law takes effect.
- March 1, 2018: China implements technically infeasible contamination standards for a wide array of scrap materials products including metals, wood, electrical components, plastic, and automobiles.
- May 30-July 7, 2018: CCP and State Council launch the first batch of "look back" inspections to follow up on the central inspections of the previous two years, conducting inspections in the 10 regions of Hebei, Henan, Inner Mongolia, Ningxia, Heilongjiang, Jiangsu, Jiangxi, Guangdong, Guangxi, and Yunnan.
- June 11, 2018: MEE announces the launch of a second round of its regional air pollution inspection campaign, planned to last through April 28, 2019. This time around, the regional focus is expanded from the 2+26 cities to include 11 cities in the Fenhe and Weihe Plain area and irregular inspections in the Yangtze River Delta.
- July 3, 2018: China's State Council releases a Three Year Action Plan to Win the Battle for Blue Skies covering the period from 2018-2020.
- July 11, 2018: MEE issues a revised draft Solid Waste Pollution Prevention and Control Law for public comment.
- September 12, 2018: Jiangsu Province issues a policy banning new chemical parks and chemical plants within one kilometer of the Yangtze river and its major tributaries.
- September 18, 2018: China issues a Beijing-Tianjin-Hebei regional air pollution action plan for the winter of 2018-2019 with significantly less ambitious targets compared to the previous year that grants localities more flexibility and contains warnings against one-size-fits-all enforcement.
- October 30-November 6, 2018: Central regulators conduct a second batch of "look back" environmental inspections in another 10 provinces: Shanxi, Liaoning, Jilin, Anhui, Shandong, Hubei, Hunan, Sichuan, Guizhou, and Shaanxi.

2019

- January 1, 2019: Soil Pollution Prevention and Control Law takes effect.
- January 1, 2019: Second round of central environmental inspections begin, focusing on key areas with targeted inspections.

Glossary

Abbreviation	Term
2+26 Cities	Beijing, Tianjin, and 26 cities in the surrounding provinces targeted for air pollution campaigns
CCP	Chinese Communist Party
EHS	Environment, health, and safety
EIA	Environmental impact assessment
IP	Intellectual property
IPE	Institute of Public and Environmental Affairs
MEE	Ministry of Ecology and Environment
MEP	Ministry of Environmental Protection
MNC	Multinational corporation
NDRC	National Development and Reform Commission
NGO	Non-governmental organization
NPC	National People's Congress
USCBC	US-China Business Council