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#### Citation

XIANG, C. and VAN GEVELT, Terry. Central inspection teams and the enforcement of environmental regulations in China. (2020). *Environmental Science & Policy*. 112, 431-439.

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# Central inspection teams and the enforcement of environmental regulations in China



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## ARTICLE INFO

### Keywords:

Environmental regulation  
Environmental governance  
Campaign-style enforcement  
Central environment inspection teams  
China

## ABSTRACT

Despite the existence of a comprehensive set of environmental regulations, China's environmental issues continue largely unabated and are increasingly leading to discontent among its citizens. Mirroring recent governance trends in China, the central government has increasingly taken a more hands-on role to ensure the enforcement of environmental regulations by local government officials. One manifestation of this effort to re-centralize environmental institutions has been the establishment and deployment of Central Environmental Inspection Teams (CEITs). CEITs report directly to the central government and are dispatched to carry out crackdowns where the central government has reason to believe that environmental regulations are not being enforced. With over 29,000 companies fined and around 18,000 local government officials disciplined, the CEIT has been heralded as a great success by the central government. Using a combination of primary and secondary data, we partially reconstruct the inaugural CEIT deployment in Hebei province in 2016 from the perspectives of government officials, private and state-owned companies, and local residents. While we generally find that the CEIT has proven effective in identifying and rectifying violations of environmental regulations, as an institutional solution it is inefficient and highly-resource intensive, likely to generate unintended governance outcomes in the medium-to-longer run, and has significant social justice implications.

## 1. Introduction

In 2017, 239 out of 338 of China's cities<sup>1</sup> failed to meet the national air quality standard and at least 67 % of China's groundwater sites were rated as of poor or extremely poor quality (MEE, 2018). These are some of the striking environmental issues facing China. With an estimated 710,000 public complaints to environmental authorities in 2018 – a 40-fold increase from 2015 – there is evidence suggesting that China's environmental issues are leading to discontent among its citizens (MEE, 2019). China's environmental issues continue largely unabated despite the existence of a comprehensive set of environmental regulations (Beyer, 2006; Ran, 2013; Kostka and Nahm, 2017). Indeed, there is a convincing body of literature suggesting that while China has made significant strides forward in terms of its environmental governance regulations, these regulations have largely been ineffective due to a decentralized governance structure where implementation is delegated to local government officials who operate in a system that incentivizes

officials for not robustly enforcing environmental regulations (Zhou, 2004; Mol and Carter, 2006; van Rooij and Lo, 2010; Xu, 2011; Lo, 2015; Ran, 2017).

Mirroring recent governance trends in China, there is evidence that the central government is taking a more hands-on role to ensure the enforcement of environmental regulations by local government officials (Eaton and Kostka, 2018; Kostka and Zhang, 2018; Shen and Ahlers, 2019). One manifestation of this effort to re-centralize environmental institutions has been the establishment and deployment of *ad hoc* Central Environmental Inspection Teams (CEITs). Arguably best seen as a form of campaign-style enforcement, CEITs report directly to the central committee of the central government and are dispatched to carry out random spot checks in areas where the central government has reason to believe that environmental regulations are not being enforced (Perry, 2019). Since their inception in 2016, the central government has seen the deployment of CEITs as a great success<sup>2</sup>, with official records suggesting that CEITs have fined more than 29,000

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<sup>1</sup> At the prefectural level and above.

<sup>2</sup> The empirical literature, however, is mixed. For example, Jia and Chen (2019) use a quasi-experimental methodology and suggest that CEITs were effective in improving performance in both the short and long run. Meanwhile, Karplus and Wu (2019), also using a quasi-experimental methodology, suggest that CEITs were only effective in the short run with environmental indicators returning to pre-enforcement levels shortly after.

companies and recommended that over 18,000 local party officials be disciplined for violating environmental regulations (MEP, 2017).

Recognizing that there is no universal institutional solution to ensuring compliance with environmental regulations, there is now a more explicit understanding of the need to analyze the strengths and weaknesses of alternative regulatory regimes and the situations and contexts in which they are effective in order to inform policymaking (Steinberg and van de Veer, 2012; Duit, 2014; van Gevelt, 2020). Such an approach can allow us to use a comparative lens to better understand the limits of alternative regulatory approaches and to potentially introduce adjustments that may address shortcomings (Young et al., 2015). We contribute to our understanding of alternatively regulatory regimes by using China's CEITs as a vehicle to understand the works of and effectiveness of campaign-style enforcement in an authoritarian regime, where the mechanisms underpinning the enforcement of environmental regulation and their effectiveness are often difficult to discern (Gilley, 2012; Young et al., 2015; Stromseth et al., 2017). We do so by adopting a case-study approach centered on the pilot CEIT deployment in Hebei province in 2016.

Our paper is structured as follows. In Section 2, we provide a brief overview of environmental regulation and campaign style enforcement in China, with a focus on CEITs. In Section 3, we describe our data and methods. In Section 4, we present our findings. In Section 5, we discuss our findings and their importance, both in terms of their contribution to the wider literature on environmental regulation and to environmental policymaking in China. We conclude in Section 6.

## 2. Environmental regulation and campaign-style enforcement in China

Until recently, enforcement of China's environmental regulations has generally operated under the principle of 'dual leadership' (Lieberthal, 1997; Shapiro, 2016; van Rooij et al., 2017; Habich-Sobiegalla, 2018), where a functional agency – who was overseen by the corresponding local government – worked in tandem with a functional organ of the central government. Under this arrangement, the local government was responsible for the practical aspects of enforcing environmental regulations, including resource allocation and the deployment of inspectors. The central government was tasked with a supervisory role and provided technical assistance to the local government. In practice, enforcement of environmental regulation was largely left to the local government with little effective oversight from the central government (Kostka and Nahm, 2017; van Rooij et al., 2017). This resulted in few resources being devoted by local governments towards the enforcement of environmental regulations and tacit agreements between local government officials and local businesses that were breaching environmental regulations (Economy, 2007; van der Kamp et al., 2017).

The ineffective enforcement of environmental regulations under the 'dual leadership' principle led to a number of wide-ranging reforms in recent years (Liu et al., 2015). Among such reforms is the increasing use of campaign-style enforcement<sup>3</sup> to ensure compliance with environmental regulations (Jia and Chen, 2019; Li et al., 2020). Defined by Liu et al. (2015) as "a type of policy implementation involving extraordinary mobilization of administrative resources under political sponsorship to achieve a specific policy target within a defined period of time," campaign-style enforcement can be thought to recouple regulatory demands with enforcement practices through power redistribution and resource mobilization. That is, resource mobilization enhances the economic efficiency of enforcement, and the

<sup>3</sup> While campaign-style enforcement can be traced back to ancient times in China, its present-day prevalence is arguably attributable to the existence of a top-down, authoritarian political structure and the absence of rule of law (Zhou, 2012).

redistribution of power strengthens regulatory perceptions of environmental legitimacy.<sup>4</sup>

The CEITs are a form of campaign-style enforcement mobilized by the central government to investigate and rectify suspected cases of non-compliance of environmental regulations. CEITs are *ad hoc* inspection teams under the jurisdiction of the highest party authority of the State Council. A CEIT consists of around 30 high-level officials. Each CEIT is led by a high ranking official of (deputy-)ministerial level. Other members of the team include a deputy-leader<sup>5</sup>, two members from the central government<sup>6</sup>, and trained environmental inspectors and environmental experts who have no pre-existing relationships with each other or any stakeholders in the deployment area. CEITs lie outside the formal organizational structure of the government and are assigned sweeping powers<sup>7</sup> to fulfil their inspection tasks. Upon completing their initial one-month deployment, the CEIT is recalled. In the following months, follow-up CEIT teams are deployed. These teams are staffed by different members and are tasked with both following-up on previously identified violations and investigating further violations of environmental regulations (GOSC and GOCCP, 2019; Jia and Chen, 2019; Karplus and Wu, 2019; Li et al., 2020).

## 3. Methods

We use a case-study approach to shed light on the mechanisms underpinning the operation of CEITs and to analyze the effectiveness of CEITs as a means to enforce environmental regulations in China. Given the sensitivity and opaqueness of the policymaking process in China, we rely on a novel set of primary and secondary data sources centered on the pilot CEIT deployment in Hebei province in 2016 that, taken together, allow us to engage with our research questions. We selected Hebei province as our case study due to data availability concerns. Specifically, as the CEIT deployment in Hebei province was effectively a pilot case for CEITs, there is substantially more secondary data available than with other CEIT deployments allowing for triangulation of our data.

### 3.1. Study site

Hebei is located in northern China and encloses the capital city of Beijing. A major center of iron and steel production, its highly energy-intensive industrial economic structure has led to Hebei being known as a 'province of haze,' with six of China's ten most polluted cities being located in the province: Tangshan, Baoding, Shijiazhuang, Hengshui, Xingtai and Handan (see Fig. 1). (MEP, 2016).

### 3.2. Data

We rely on both primary and secondary sources of data to construct our case-study and engage with our research questions. Starting with our primary data, we conducted 15 detailed semi-structured interviews with three groups of stakeholders from government<sup>8</sup>, industry and the

<sup>4</sup> Van Aken (2015) suggests that the effectiveness of campaign-style enforcement may be tempered by political economic realities.

<sup>5</sup> The deputy leader is usually of deputy-ministerial level, with a specialization in environmental issues.

<sup>6</sup> For example, members from the General Office of the Central Committee of the Party (GOCCP) and the General Office of the State Council (GOSC).

<sup>7</sup> These powers include unrestricted access to undertake unannounced on-site inspections, request confidential records from local government, conduct individual hearings with relevant officials, report suspected misconduct to the central government, and order local officials to issue disciplinary measures to those found guilty of misconduct. Disciplinary measures include, among others: fines, rectification orders, administrative suspensions or demotions, and civil and criminal detention (GOSC and GOCCP, 2019).

<sup>8</sup> These included officials from the MEE, as well as Hebei-based officials from

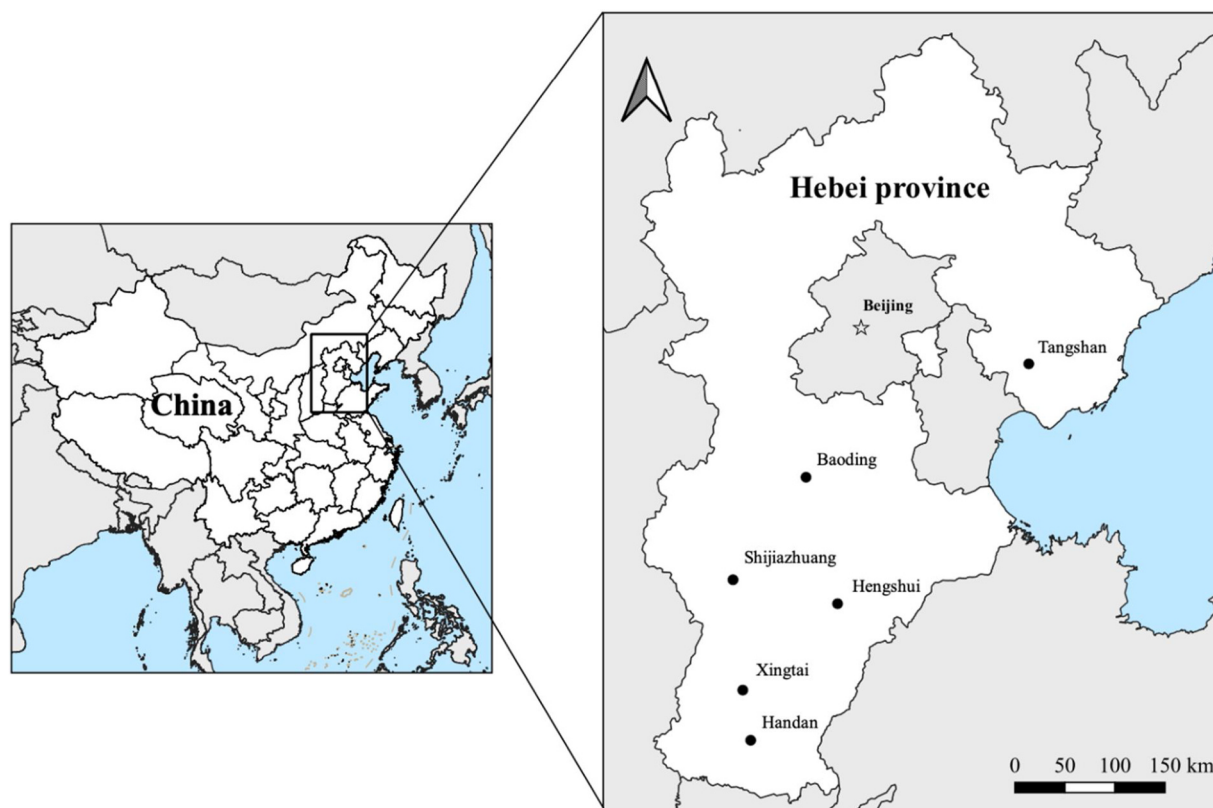


Fig. 1. Hebei province.

community (see Appendix A). Given the opaqueness surrounding CEITs and, more generally, the implementation of environmental policy in China, we adopted a snowball sampling strategy<sup>9</sup> and undertook our interviews under strict anonymity conditions. Using existing research and professional networks, we were able to identify a total of 86 potential interviewees of which 20 preliminarily agreed to be interviewed. Five interviewees subsequently requested to stop the interviews shortly prior to or during the interview due to the sensitivity of the topic leaving us with a sample of 15 interviewees spread across the three stakeholder groups. Our interviews were undertaken in-person from May to November 2019 (see Appendix B for interview questions).

Turning to our secondary data, we reviewed published news articles by journalists who were granted special permits to cover the Hebei CEIT from 2016 to 2018. Additionally, we further reviewed relevant articles published by Chinese news outlets from June 2015 to December 2019. In total, we reviewed 84 secondary news reports of which 36 were included in our analysis (see appendices C and D). We further reviewed

(footnote continued)

the Hebei Provincial Department of Ecology and Environment (HPDEE), the Hebei Provincial Development and Reform Committee (HPDRC), the Municipal Bureau of Water Resources (MBWR) in Baoding and Handan, and the Municipal Bureau of Public Security (MBPS) in Handan and Shijiazhuang.

<sup>9</sup> Using existing research and professional networks, we were able to initially identify 38 potential interviewees from our first two stakeholder groups: government officials and companies. We asked each of the 38 potential interviewees for further interviewee recommendations and were recommended an additional 34 potential interviewees, this time including 16 government officials, nine stakeholders from companies, and nine local residents who had made tip-offs to the CEIT. Again, we asked each of the 34 potential interviewees for further recommendations and were recommended a further 12 potential interviewees, including eight government officials, one company stakeholders, and three local residents. From these 12 potential interviewees, upon asking, we received a further two recommendations of potential interviewees, consisting of one government official and one local resident.

all publicly available official documents published by the CEIT and the Hebei government from 2016 to 2018 (see appendix E).

Our data are subject to three main limitations. Starting with our primary data, the first of our data limitations is a result of the sensitivity of discussing CEITs and their effectiveness. Despite our best efforts to interview as representative a sample of stakeholders as possible, there is a possibility that our findings may be systematically biased due to the necessity of adopting a snowball sampling approach. There are two further limitations pertaining to our secondary data. Firstly, we are unable to vouch for the objectivity of journalist reports. It is probable that negative aspects of CEITs and their effectiveness have either been omitted or have been addressed with a ‘light touch’ given the sensitivity and importance of the CEITs to the central government. Secondly, we are aware that a number of government documents pertaining to CEITs are not accessible to the general public. It is possible that these documents may contain further insights into the workings of CEITs and their effectiveness.

### 3.3. Data analysis

We analyzed our primary and secondary data using thematic analysis (Herzog et al., 2019). Starting with our primary data, we coded our interview data into four main categories and 18 further sub-categories. Our approach to identifying and coding our themes was informed by our research questions and the related literature on campaign-style enforcement.<sup>10</sup> Specifically, our main and sub-categories were selected to reconstruct the CEIT process and to evaluate the effectiveness of the CEIT from the perspectives of three sets of stakeholders. Our main

<sup>10</sup> Our methodological approach is informed by the literature on campaign-style enforcement, specifically the case-study approach used by Liu et al. (2015) in their operationalization of their theory of recoupling processes whereby resource mobilization and power redistribution lead to the alignment of regulatory demands and enforcement practices.

categories consisted of environmental issues in Hebei; CEIT mechanisms; actions taken in response to the CEIT; evaluating the CEIT; and examples of a CEIT investigation (see appendix F). For our data collected from media sources we applied the same coding protocol as for our interviewee data. Our analysis of official documents did not benefit from using the same themes as above. Instead, we selected the following themes: general evaluation statements; examples of CEIT investigations; rectification plans and their enforcement. To test the robustness of our results, we triangulated our data using both primary and secondary sources and used respondent validation, where we shared interview transcripts with the appropriate interviewee.

## 4. Results

### 4.1. The Hebei CEIT

The Hebei CEIT was the first CEIT to be dispatched by the central government. Functioning as a high-profile pilot, the CEIT reported directly to the highest levels of the central government: the State Council. According to an official from the HPDEE, Hebei was selected for two reasons: its severe air pollution levels and its close proximity to Beijing (HB0109062019). The CEIT consisted of around thirty individuals and was led by a former deputy minister of the MEP and a current deputy minister of the MEE. Two high-ranking officials from the General Office of the State Council and the General Office of the Central Committee were further included in the team. The remaining members<sup>11</sup> of the CEIT were full-time inspectors from the North Regional Supervision Centre for Environmental Protection (NRSCEP) and technical consultants (Su, 2016). Logistically, the CEIT was assisted by the Central Commission for Discipline Inspection (CCDI), the Organization Department of the Central Committee of the Communist Party (ODCCCP) and the Ministry of Public Security (MPS). The Hebei CEIT was noted for being unprecedented in its political mandate which, according to our respondents, allowed it to investigate government officials up to the provincial level. Indeed, an official from the HPDRC suggested that the CEIT was targeted at government officials rather than at companies or entrepreneurs:

...we lived and ate in our offices. Once anything happened, we all rushed to the scene to deal with it immediately and solve the problem ourselves. We were the targets of the CEIT. What the companies do is secondary (HB0718112019).

The Hebei CEIT was formally deployed in January 2016 for a period of one month. The team was operationally divided into several sub-teams who were in charge of coordinating between the CEIT and provincial/local government officials, identifying cases for further investigation, and conducting field inspections, respectively (Lu, 2016). For the first ten days, the CEIT focused on identifying and prioritizing suspected cases of environmental violations through analyzing documents held by local government and various other official bodies<sup>12</sup> and compiling and verifying tip-offs received from local residents. Interestingly, the CEIT interviewed senior provincial officials regarding their roles in ensuring that environmental regulations were complied with. According to officials from the BWR and BPS, this was the first time that such high-ranking provincial officials had been systematically interviewed regarding cases of violating environmental regulations (HB0307072019; HB0506112019). For the remaining twenty days, the

<sup>11</sup> One of our respondents recounted “I don’t know exactly how many inspectors were included, but I have never seen so many environmental inspectors dispatched in my entire career” (HB05016112019).

<sup>12</sup> For example, according to an official at the HPDRC, the Hebei CEIT was recorded to have called on the Provincial Department of Industry and Information Technology (HPDIIT) to provide documents concerning iron and steel producers in Hebei (HB0818112019).

CEIT systematically catalogued likely cases of environmental regulations being violated. For the majority of cases, details were passed to the provincial government, who were mandated to investigate these suspected violations and ensure their immediate rectification.

At the end of its one-month deployment, the CEIT authored a final report which was submitted to the State Council. After being approved by the State Council, the report was sent to the Hebei provincial government, which was in-turn mandated to submit detailed responses and rectification plans for each violation recorded during the CEITs deployment. The provincial government was given a deadline of one month to submit its responses and rectification plans and a deadline of six months to provide a further update regarding the progress of its rectification plans (CEIT, 2016; HPG, 2016). In 2018, a follow-up CEIT was deployed to Hebei. According to an official at the HPDEE, the composition of the team was structured so as to have almost no members present who had served on the initial Hebei CEIT to ensure its objectivity (HB0109062019). The CEIT followed the same protocols as its predecessor, with the additional responsibility of revisiting previous inspections to ensure that violations had been rectified.<sup>13</sup>

### 4.2. Engagement with local residents

Prior to the deployment of the CEIT, telephone hotlines and PO box addresses were set-up for Hebei residents to provide information on suspected environmental violations. According to three residents located in three different cities of Hebei, these channels were well advertised to the general public through information briefings on local TV channels, in newspapers and on social media. According to these three residents – who provided information to the CEIT on suspected environmental violations – they were guaranteed anonymity.

We often saw the arrival of the CEIT on the news. Weibo and Wechat [social media] also sent out information encouraging people to report violations. They said it would be anonymous (HB1114112019).

One of our interviewees, who had used the telephone hotline, recounted that they were required to give as much information as they were able concerning the suspected environmental violation, and to leave their name and phone number. The individual was then thanked and told that the CEIT would investigate the case and that interim and final results would be published in both the local media and on the official website of the local Bureau of Environmental Protection (BEP). In our interview, the individual recounted their surprise when they checked the BEP website a few days later to see that the company that they had reported was found guilty of violating environmental regulations and suspended from all activities pending rectification.

I called and the line was busy. It took me a few tries to get through but then I was connected to an operator who asked my name, phone number and for details about the case I was reporting. The whole process took around three minutes from when I was connected. The operator told me to pay attention to government websites for updates on my case. I checked the websites a few days later, and sure enough, the case had been documented and the factory had stopped production (HB0911052019).

It was estimated that the Hebei CEIT received over 100 ‘tip-offs’ from local residents per day (HPG, 2016). An official from the HPDEE that we interviewed recounted the enthusiasm that local residents showed in being given a channel through which they could report violations to inspectors from Beijing. He said that not only did the CEIT receive a number of tip-offs concerning extremely minor environmental

<sup>13</sup> One interviewee recounted that “the follow-up inspection team was very similar in form to the original. They also came to Shijiazhuang [where the respondent was located] and I interacted with them. But they were not the same batch of inspectors (HB0109062019).



issues, they also received phone-calls or messages from the general public concerning non-environmental issues. The HPDEE official suggested that this represented a hope that the CEIT would be able to communicate their views or requests to the central government.<sup>14</sup>

Local residents were very active in calling the CEIT. They would tell the inspection team all the problems around them, no matter how trivial the problems were. Sometimes they complained about very trivial problems (HB0109062019).

Another of our government interviewees stated that much of the enthusiasm at the grassroots level was due to the confidence that local residents had in the central government being able to address environmental violations.<sup>15</sup> This was seconded by the views of a local Hebei resident who had lodged a tip-off to the CEIT:

I trust the central government more than the local government. Local government officials are more concerned with their own career prospects and meeting GDP targets – they collude with businessmen. When the CEIT is here, you can really see a difference in terms of the environment. I really hope that the CEIT can stay here all the time as companies will start to discharge pollutants and waste again when they leave (HB1114112019).

According to CEIT protocols, tip-offs from the general public were recorded on its inspection log and then transferred to the HPDEP<sup>16</sup> for investigation and attribution of liability. Severe cases were handed over to the MEP and any cases involving misconduct by government officials were handed over to the provincial government (e.g. the Hebei Provincial CCDI), where local officials – especially members of the communist party – faced a variety of punishment measures, including: graduate warnings, dismissal and expulsion from the communist party. The HPDEP was mandated to update local government websites and ensure that local media publicized the results of the investigation (CEIT, 2016; HPG, 2016).

The CEIT played an important role in ensuring that tip-offs were investigated and acted on. For example, the CEIT received 77 tip-offs from residents in Gaocheng district of Shijiazhuang city. However, the Gaocheng BEP stated in its report to the CEIT that only seven tip-offs were verified and found to be legitimate. The CEIT enlisted the provincial DEP and DPS, and the Shijiazhuang BEP and BPS, to further investigate tip-offs through conducting night raids, interviewing neighbors and through remote sensing. This resulted in all 77 tip-offs being found to have been valid and consequently acted upon. Six local government officials were handed official warnings for the parts they were found to have played in the investigation process (CEIT, 2016).

#### 4.3. Field inspections

For some cases, a sub-team from the CEIT investigated potential violations themselves, with assistance from the provincial government. As the CEIT did not announce which cases would be investigated directly by them to local government officials, it appears that pre-emptive action was taken across Hebei province. For example, according to an official at the local BWR in Hebei, even though the city he was based in

<sup>14</sup> Similarly, another of our government interviewees suggested that local residents were very enthusiastic and grasped the opportunity to communicate their concerns to the central government: “People engaged with environmental governance. They used all available channels to report problems” (HB0408072019).

<sup>15</sup> “The public’s response to the CEIT was enthusiastic. My personal feeling is that people generally trust the central government. They want the central government to put pressure on the local government to solve environmental problems” (HB0506112019).

<sup>16</sup> The Hebei Provincial Department of Environmental Protection (HPDEP) was re-organized into the Hebei Provincial Department of Ecology and Environment (HPDEE) in March 2018.

did not see any field inspections from the CEIT, preparations were made just in case a random spot check was to be conducted.

We had a meeting before the CEIT moved in. As Hebei is a pilot case, there was no reference for us. We were confused. We decided that we should prepare for the coming inspection and try to prevent any possible environmental violations beforehand (HB0408062019).

Examples corroborating this observation are detailed by journalists. For example, in a village populated by cottage industries, the village committee was directed by local government officials not to burn coal in case the CEIT visited. The village committee took this recommendation seriously and formed a sub-committee that went door-to-door in the evenings to make sure that no coal was being burned so as not to violate strict air pollution regulations. The sub-committee stopped their evening patrols only when the CEIT was recalled after its month-long deployment (Gong et al., 2016). A strikingly illustrative example of the pre-emptive actions taken is found in Xingtai, where the local government contacted all taxi drivers and instructed the drivers to ensure that their cars were clean. This is reported to have been to avoid CEIT inspectors thinking negatively of the city (Ho, 2017).

Despite field inspections being designed to serve effectively as ‘spot-checks’, with no advance warning being given, an owner of a private company in Hebei, suggested that there were cases where companies that were to be investigated were notified in advance.<sup>17</sup> The interviewee speculated that such companies were probably notified by local government officials who were tasked with assisting the logistics of the CEIT’s field inspections.

[We] have a close relationship with the ‘upper-level’ [local government] officials. When they told us to expect inspectors, we stopped work (HB1309062019).

##### 4.3.1. Hutuo River

One of the CEITs field inspections<sup>18</sup> concerned the Hutuo River in Shijiazhuang. The Hutuo River is a vital source of national drinking water and no construction projects beyond those ensuring the provision of its water supply are permitted.<sup>19</sup> Inspectors from the CEIT found that 142 villas and other facilities (including a residential management

<sup>17</sup> Such tip-offs appear to not have been limited to companies, but also to government institutions. For example there are newspaper accounts suggesting that a local government official tasked with assisting the CEITs field inspections contacted their colleagues saying that “...for the time being, there is no obvious sign of [the CEIT] visiting your office” (Liu and Gao, 2016).

<sup>18</sup> Another example of a CEIT field inspection documented in the secondary literature is that of Yangmei chemical company. Located in Shenzhou, the CEIT organised a spot-check after receiving information that the company was producing around 220,000 tonnes of coal-based ethylene glycol (CEG) annually. According to article 2.2. of the Notice on Standardisation and Orderly Development of the Coal-Chemical Industry (2011) – an environmental regulation pertaining to energy conservation and emissions reductions – required all companies producing more than 200,000 tonnes of CEG per year to gain approval from the National DRC. Upon arriving for its inspection of the company, the CEIT requested access to documents relevant to the company’s compliance with the above regulation. This included, among others: an approval document and corresponding environmental impact assessment reports. Company staff refused to give the CEIT access to these documents until the CEIT, with help from provincial government officials, requested to meet with and question senior executives of the company. The CEIT found that the company did not obtain approval from the National DRC as required by article 2.2. Instead, inspectors found that approval was granted by the Shenzhou DRC at the request of the then-mayor of the city. This procedural contravention was relayed to the provincial government, who acted by immediately suspending the company’s activities and issuing a ‘severe’ warning to the then-mayor (CEIT, 2016, 2018; HPG, 2016).

<sup>19</sup> As per article 12 of the Regulations on the Prevention and Control of Pollution in Drinking Water Reservoirs.

office, tennis courts, playgrounds and a commercial theme park) had been built by several developers along the Hutuo River in clear contravention of the regulations. Upon documenting the violations and obtaining and analyzing all-related documents (e.g. Environmental Impact Assessments (EIA), purchase and leasehold documents), the CEIT passed on its findings to the provincial government (CEIT, 2016). The provincial government acted on the CEITs field investigation and ordered the Shijiazhuang municipal government to demolish all ancillary facilities and to repurpose the villas into public spaces that can contribute to public welfare by the end of 2016 (HPG, 2016). In 2018, the follow-up CEIT revisited the Hutuo River to ensure that the municipal government had complied with the provincial government's instructions (CEIT, 2018).

Upon closer inspection, however, the Hutuo River case provides an insight into the distributive impacts of the CEITs crackdown on the implementation of environmental regulations. Our interviews with Hebei-based officials at the BWR and at the HPDRC – two officials who were indirectly involved with the Hutuo River case – revealed that the commercial theme park (occupying 20,000 m<sup>2</sup>) had been collectively financed by the community of Tayuanzhuang<sup>20</sup> using RMB 10 million (US\$1.45 million) of their own pooled funds, and only after having received approval from the local government before beginning construction. This included the undertaking of an EIA that was approved by the local government. The CEITs inspection resulted in the clearing of the amusement park with the community not receiving any compensation for their investment. Regarding the 142 villas that had been built by the private real estate developer – Shenneng – one of our interviewees recounted that the developer had obtained all of the required licenses from the local government and that the majority of the villas had been 'legally' sold. The interviewee noted that, given the luxury nature of these villas, only members of the 'privileged class' in Hebei were able to afford them. The interviewee continued by saying that these were powerful families in Hebei and that is therefore why the rectification plans involved a state-owned company purchasing the development and compensating the owners of the villas a combined amount exceeding RMB 1.2 billion (US\$174 million).<sup>21</sup>

Local governments need companies to function. If all companies are shut down, how will they generate tax revenue? Take the Hutuo villa construction problem as an example. The people who buy these villas are all rich and powerful. They own and run local companies with good reputations. Who dares to let them suffer? The government will pay the bill (HB0818112019).

#### 4.4. Outcomes

According to official records, during its one-month deployment in 2016 the Hebei CEIT acted on 2854 tip-offs from local residents (CEIT, 2016). The CEITs inspections led to the provincial and local governments suspending or closing down 200 companies that were found to have been violating environmental regulations. A further 125 companies were punished with severe fines. Meanwhile, 366 individuals were investigated with 123 individuals having been held in administrative detention<sup>22</sup> after having been found to have violated environmental

regulations. A further 13,784 illegal structures were torn down by the end of 2016 (HPG, 2016). The CEITs report to the provincial government further identified 47 severe environmental violations that had been found during their inspections. By the end of 2016, the provincial government had rectified 41 of these issues, with the remaining six issues rectified in early 2017 (HPG, 2016).

The Hebei CEIT was seen by the government as a successful pilot case. Soon after the completion of the first round of the Hebei CEIT in 2016, the central government deployed CEITs to 21 provinces, four municipalities and five autonomous regions. To date, four rounds of CEIT inspections have taken place. These rounds have resulted in 135,000 'tip-offs' from local residents being investigated. These investigations have resulted in over RMB2.5 billion (US\$358 million) worth of fines being issued to companies found to have violated environmental regulations, and disciplinary measures being taken against over 18,000 government officials (see Fig. 2).<sup>23</sup>

While the central government found the Hebei CEIT to have been a successful pilot, our interviews with stakeholders in government and companies, as well as with local residents, suggests a more nuanced picture. Starting with our government interviewees, all but one of our interviewees suggested that the CEIT had a positive effect. Our interviewees saw two primary benefits. Firstly, the CEIT had positively raised awareness of the importance of environmental protection among officials.

No local cadre now dares to belittle the issues of environmental protection after the CEIT came (HB0718112019).

Secondly, our interviewees stated that the CEIT had increased their capacity to enforce environmental regulations.

The period when the CEIT were stationed here was indeed the most frequent period for our bureau to carry out [implementing environmental regulation] tasks. But we continued afterwards to launch special targeted operations against the illegal collection and disposal of lead batteries, medical waste, hazardous waste, and other environmental crimes (HB0506112019).

At the same time, however, one of our government interviewees expressed concerns about the negative effect that the CEIT had on local government officials, particularly through altering the incentives surrounding their promotion processes.

The CEIT was too radical a change for us. Any decision we make now will have to consider its impact on the environment. Many local officials are now held accountable for environmental protection, and this accountability will be reflected in the promotion process. This means that many officials do not do anything now, because there is a risk of accountability once they do something [related to the environment] (HB0109062019).

Our interviewees from both private and state-owned companies were less positive about the outcomes of the CEIT. While understanding the need to ensure environmental regulations are implemented, our interviewees found the standards being applied by the CEIT to be unreasonable. Our interviewees further stressed that the environmental regulations had led to significant economic difficulties.

Environmental protection standards previously were not too high. Now the standards require us to account for everything. I can't make any money anymore. I can't even pay my labor costs. We have just bought some boilers that do not conform to environmental policy because the policy has changed. We have to get rid of our boilers –

(footnote continued)

individuals who have committed minor offences pertaining to public order, social stability and political stability (Biddulph, 2007).

<sup>23</sup> Due to data limitations, Fig. 2 only shows the results of the third and fourth rounds of CEIT deployments.

<sup>20</sup> A village of around 2000 inhabitants located in southwest Hebei province.

<sup>21</sup> Our interviewee noted a similarly illustrative case concerning the demolition of chimneys belonging to a private company as part of the rectification strategy decided upon after the CEITs inspection. These chimneys were recently constructed and were designed to be used for a lifetime of 50 years. The recent introduction of an updated production capability policy – the Hebei Action Plan for Air Pollution Prevention and Control (2013) – had recently rendered them illegal leading to the private company having borne high costs in dismantling and then reinstalling new chimneys that met the new standards (HB0408072019).

<sup>22</sup> Administrative detention is an intermediary punishment imposed on

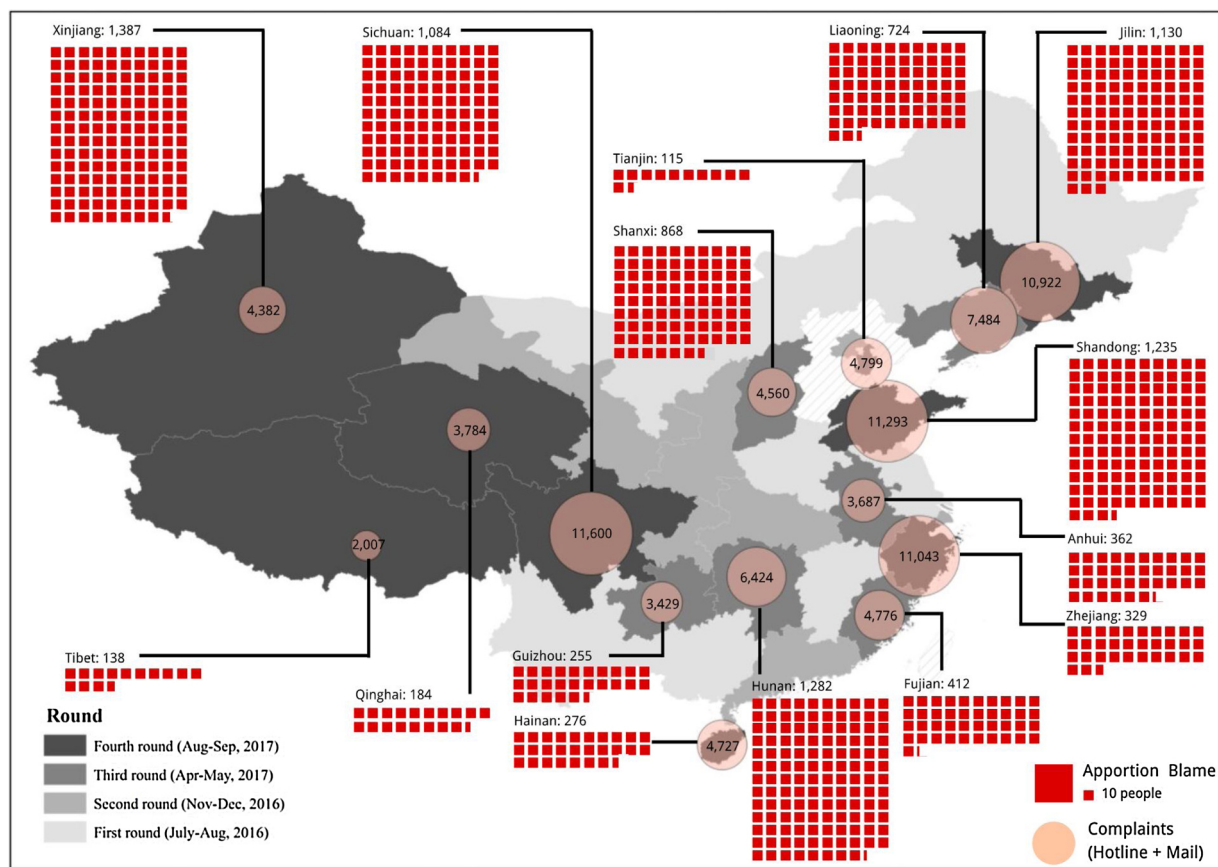


Fig. 2. ‘Tip-offs’ and numbers of officials penalized in the 3rd and 4th batches of CEITs. Data Source: Ministry of Environmental Protection, 2017.

this is another big loss (HB1309062019).

Many companies have been forced to close. The CEIT are too punitive. How can we protect the environment if we are unable to get a square meal? (HB1515112019).

At the grassroots level, our three interviewees viewed the CEIT as a great success. One of our interviewees was impressed with how her tip-off had been addressed within a few days. Another of our interviewees hoped that the CEIT would remain in Hebei to ensure that environmental regulations are enforced. Our third interviewee was similarly effusive in their praise for the CEITs stating that

The achievements of the CEIT in improving the air and environmental quality in Hebei are worthy of great recognition (HB1026062019).

## 5. Discussion

Officially, the Hebei CEIT was seen by the central government as a highly effective approach to enforce environmental regulations across the country. This is largely corroborated by our results, where we generally find that the Hebei CEIT has proven effective in identifying and rectifying violations of environmental regulations within China’s environmental governance landscape. We suggest that the effectiveness of the Hebei CEIT is likely due to three main factors. Firstly, the design of the Hebei CEIT arguably reduces transaction costs. Specifically, the small size and multi-functional abilities of the team, its strict protocols, and clear lines of communications with local residents and provincial and local government officials can be seen to increase its effectiveness in collecting and aggregating information, rectifying issues and enforcing said rectification (Tilt, 2019). Secondly, the CEIT is a politically

powerful institution that has been given sweeping powers to fulfil their inspection tasks. Critically, these powers enabled the CEIT to leverage a key mechanism through which the central government traditionally incentivizes officials to follow and implement its regulations: the personnel appointment, promotion and demotion process (Burns, 1994; van Aken, 2015). Indeed, if an official is found to have been party to the violation of an environmental regulation by the CEIT, their career prospects will be heavily damaged. Finally, while being a top-down institution, the CEIT is designed to actively engage local residents. Not only does this arguably create local buy-in into the CEIT process and generate local political support for the central government, it provided a means by which to bypass potential local government-industry collusion and is likely to have revealed far more instances of violations than through a solely top-down approach (Zeng, 2019).

Our findings, however, suggest that while the Hebei CEIT has been broadly effective in identifying and rectifying violations of environmental regulations, as an institutional solution it is inefficient and highly-resource intensive, likely to generate unintended governance outcomes in the medium-to-longer run, and is lacking from a social justice perspective. Firstly, the Hebei CEIT was extremely resource intensive. Indeed, being a large-scale crackdown, the CEIT required significant logistical assistance by numerous provincial and local government officials. Indeed, our results suggest that government activities (as they directly or indirectly relate to the environment) and the economic activities of both private and state-owned companies effectively came to a halt for the duration of the CEIT deployment. This is further reflected in evidence suggesting that resources were allocated in an attempt to lessen any negative effects of the crackdown at numerous scales (e.g. village patrols, taxi drivers being instructed to keep their taxis clean, and warnings to government agencies concerning the likelihood of the CEIT visiting them as part of an investigation).



Secondly, while the CEIT is designed so as to be able to leverage a key incentive mechanism for officials – the personnel appointment, promotion and demotion process – it is possible that this may have inadvertently lead officials to shy away from engaging with environmental regulation, both directly and indirectly. This is likely as the CEIT penalizes officials found to be responsible for allowing the violation of environmental regulations but does not reward officials who have been found to comply or enforce environmental regulations. This arguably leads to a situation where officials are faced with high risks and little incentive to actively ensure the enforcement of environmental regulations. Instead, officials are likely to avoid engaging with tasks related to the environment so as to avoid the possibility of being blamed for the violation of environmental regulations. It is conceivable that officials will prioritize other tasks that are positively rewarded (with respect to promotion and recognition), such as poverty alleviation and anti-corruption measures and steer clear of measures concerning the environment (Ran, 2017).

Thirdly, while the CEIT approach with its engagement of local residents and authority to discipline provincial and local government officials without exception can be seen as being broadly procedurally just in the Chinese governance context, the inspections, verdicts and rectification plans may have significant distributive impacts. These are arguably best seen in our reconstruction of the CEITs field investigations along the Hutuo river, where the community – who had to the best of their knowledge seemingly made every effort to comply with environmental regulations – did not receive any compensation for their sizeable investment. At the same time, the owners of the luxury villas built along the Hutuo river – who have been suggested to be politically influential – were compensated for their losses due to the CEITs investigation. Similarly, our interviews with stakeholders from private and state-owned companies provides a further illustration of the distributive implications of the CEIT. Indeed, while our interviewees were understanding of the general need to ensure that environmental regulations be implemented, they stated that the enforcement of these regulations by the CEIT had led to significant economic difficulties, with many companies having gone out of business as a result.

## 6. Conclusions

The institutional designs and mechanisms underpinning the enforcement of environmental regulations in China are difficult to discern. This affects our ability to analyze the effectiveness of China's environmental regulatory regimes, which differ from regulatory regimes in many other countries. Using a novel combination of primary and secondary data, we partially reconstruct the deployment of the CEITs in Hebei province to shed light on the workings of and effectiveness of China's contemporary approach to enforcing environmental regulations. We find that the CEITs represent a relatively blunt yet effective institutional solution to ensuring the implementation and adherence to environmental regulations within the Chinese context. The CEIT – a form of campaign-style enforcement – marks a notable departure to the previously decentralized approaches that contributed to rampant violations of environmental regulations. Our findings suggest that the success of the CEITs – as perceived by government officials, private and state-owned companies, and local residents – can be largely attributed to reduced transaction costs, sweeping political powers, and the engagement of local residents. At the same time, we find that the CEITs are broadly inefficient and highly resource intensive, may generate unintended governance outcomes in the medium-to-long run, and have significant distributive justice implications.

## CRedit authorship contribution statement

**C. Xiang:** Conceptualization, Methodology, Data curation, Validation, Formal analysis, Investigation, Writing - original draft, Writing - review & editing, Project administration. **T. van Gevelt:**

Conceptualization, Methodology, Formal analysis, Supervision, Writing - original draft, Writing - review & editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Acknowledgements

We thank Zhu Jiejun, Xin Qiang, Jeremy Paltiel, Wen Shaobiao, Cheng Zhisen, Andrew Woods and three anonymous referees for feedback on earlier drafts. We are especially thankful to our interviewees. Ethical approval was granted by the University of Hong Kong (Ref: EA1910030).

## Appendices A–E. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.envsci.2020.06.018>.

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