

# Enforcing in the Dark

Combatting environmental crime  
and violations, part 2

2021

 Netherlands  
Court of Audit

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# 1. Summary

Environmental crime and environmental violations can cause serious harm to people and the environment. In the Netherlands, the Human Environment and Transport Inspectorate (ILT) has calculated the losses at several billion euros per annum (ILT, 2020a). Corporate compliance with the applicable rules and effective supervision are therefore exceedingly important. We have audited the situation at 482 companies that are subject or not-quite subject to the Seveso directive. These Seveso companies work with large volumes of hazardous substances (mainly in the chemical and petrochemical industries) and therefore deserve close scrutiny from an environmental perspective.

We conclude from our audit that the supervision and enforcement system in place to combat environmental crime and violations functions inadequately.

## 1.1 Little insight into the extent of the problem

The nature and extent of environmental crime and violations are not known to the minister and state secretary concerned or to the lower-tier supervisor, the ILT. There is also no overarching understanding of the supervision and enforcement regime, to say nothing of its effectiveness. Our audit, however, does provide some insight.

The lack of insight not only leads to a poor understanding of the problem but also prevents the government from taking appropriate policy measures. Policy can remain in place without anyone realising it is ineffective. Companies can also be treated unequally when, for instance, a violation is detected.

## 1.2 Poor compliance with environmental laws

18% of the inspections at the companies we audited found at least 1 environmental violation. There was a relatively small group of 'repeat violators': 17% of the companies we audited were responsible for 50% of the violations found. And 6% of the companies were involved in 56% of the criminal proceedings instigated.

## 1.3 Enforcement and supervision decisions far from understandable

On average, every company we audited underwent 8 environmental inspections each year, but the variation is significant and cannot always be justified on the grounds of risk-based supervision. Companies that commit relatively more violations are supervised less intensely than companies that commit fewer. Furthermore, the national enforcement strategy is not applied consistently: how many violations a company has already committed does not affect the intensity of supervision. Whether a company commits its first or its tenth violation does not matter. Finally, we found that criminal proceedings were a poor deterrent. They usually ended with an out-of-court settlement (without guilt being established) or with the public prosecutor imposing a penalty of less than €10,000 – often less than 1% of the profit or turnover of the company concerned. If one of the aims of the criminal law system is retribution, the system is failing. Furthermore, the declining number of environmental cases delivered by the police and their slow progress through the system (public prosecutor, criminal court) is problematic.

## 1.4 Interventions seldom improve compliance

Our audit provides, for the first time, more insight not only into the nature and extent of the problem but also into the effectiveness of the approach. It explains which interventions help reduce environmental violations in the year following an intervention.

We found that 2 interventions were effective: follow-up checks and warning notices. Our model shows that follow-up checks in response to nearly 750 inspections prevented 1 or more violations per inspection and warning notices issued in response to about 160 inspections prevented 1 or more violations per inspection. Two interventions (penalty payments and fines issued by the Public Prosecution Service) were effective only in medium to serious cases. Other interventions to influence conduct, usually

involving persuasion, publicity and other forms of communication, are not administered systematically and their effectiveness cannot be measured in the current situation. Some interventions, such as criminal fines, are not effective.

## 1.5 Improvements needed in information management

A significant cause of the poor information is the way in which legal persons are registered in the relevant data systems. Poor registration often makes it impossible to identify legal persons correctly. It is thus not clear what inspection and enforcement data relate to which company. Furthermore, a lot of information is not recorded. For instance, there is no record of the enforcement method applied in a third of recorded violations. How serious a violation is, moreover, is not recorded in a third of cases. The ILT's information position is inadequate. It cannot exercise its function as supervisor correctly. The State Secretary for Infrastructure and Water Management (I&W) therefore cannot determine whether the systems works.

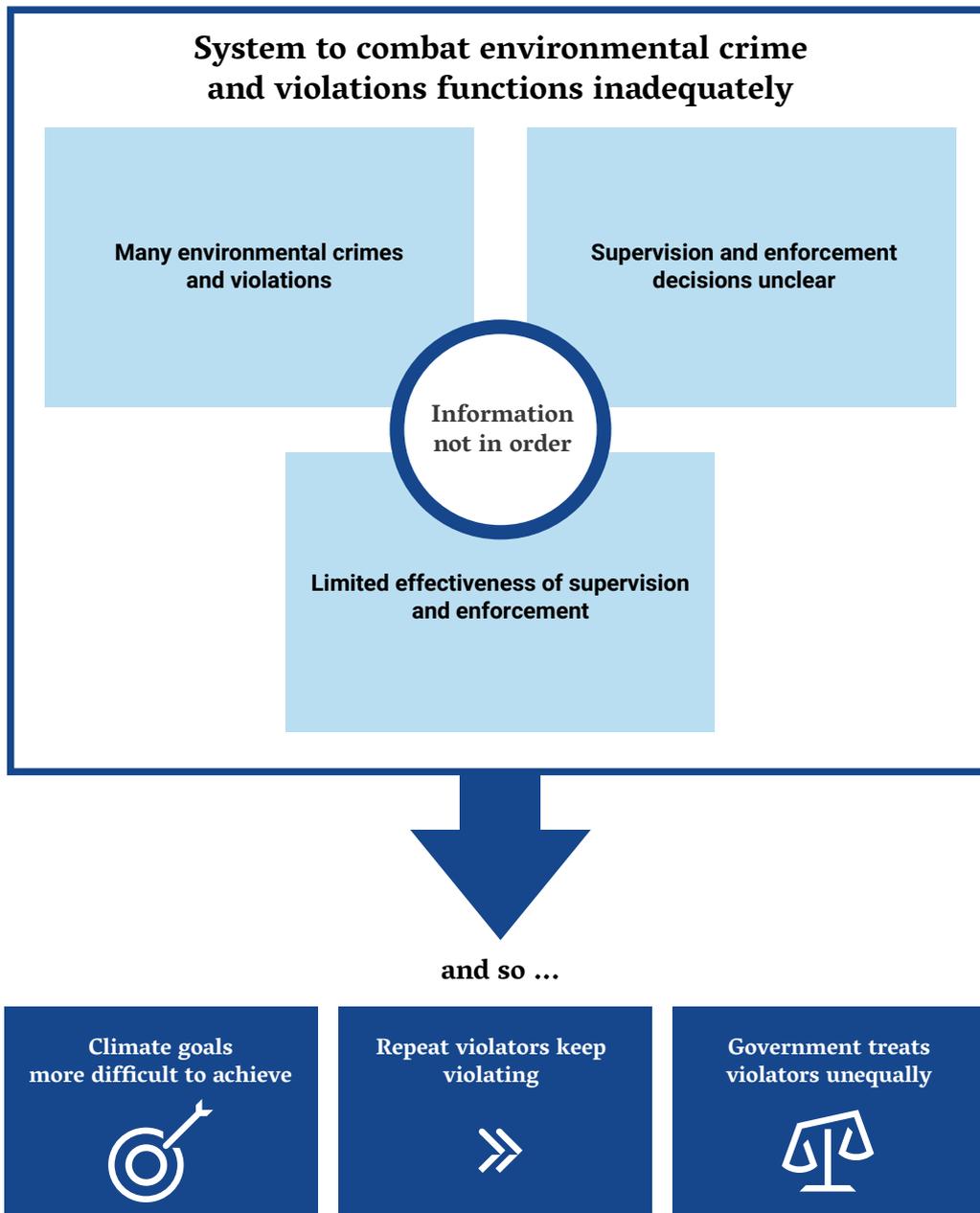
For the purposes of this audit, we had to thoroughly edit and analyse the registration data we collected in order to determine how many environmental violations had been detected, whether supervision and enforcement decisions were understandable and whether the approach was effective.

## 1.6 Conclusion

Our main audit conclusion is that the supervision and enforcement system in place to combat environmental crime and violations functions inadequately. The Minister of Justice and Security (J&V) and the State Secretary for I&W are responsible for the supervision and enforcement system. Without information, they cannot know whether the system functions. Owing to the current lack of information, they are fumbling in the dark. To implement the right policy measures, they must know which companies are disproportionately repeat violators, where there are weaknesses in supervision, why the government treats companies unequally and how effective interventions are. In addition, besides prevention and deterrence, one of the aims of criminal law is to seek retribution for criminal conduct. The minister, state secretary, Public Prosecution Service and the judiciary must give higher priority to this aim and so censure environmental crime more forcefully.

Combatting environmental crime and violations can play a significant role in achieving climate goals. The implementation of supervision and enforcement must therefore be improved, as must, with a view to effectiveness, the supervision of implementation.

**Figure 1** Key findings



# 2.

# Introduction

## 2.1 Introduction to the subject

Most environmental crimes and environmental violations are invisible. The police in the Netherlands refer to them as ‘discovered crimes’. The environment does not report them, they are discovered by searching for them. Environmental crime is a collective term for a diverse range of phenomena including the illegal export of industrial waste (Netherlands Court of Audit, 2012a), the illegal blending of heavy fuel oil for sea-going vessels (ILT, 2018) and fraud with fertilisers (Spapens, 2019). In this audit, we use the following definition of environmental crime and environmental violations:

*‘Criminal, administrative or morally culpable conduct in the field of environmental law that will likely result in environmental damage in the concomitant pursuit of commercial or economic gain and/or an intangible benefit’.* This definition is also used in the National Environmental Crime Threat Assessment (National Police of the Netherlands, 2016).

According to the State Secretary for Infrastructure and Water Management (I&W), it is difficult to give a reasonable estimate of the extent (House of Representatives, 2020a) but there are indications that environmental crime and violations are committed exceedingly frequently. The Human Environment and Transport Inspectorate (ILT) estimates the loss and damage due to environmental violations in the Netherlands at several billion euros a year (ILT, 2020a). Worldwide, too, the financial interests involved in environmental crime are enormous. A joint Interpol/UN report names environmental crime as the fourth largest form of crime in financial terms (Interpol/UN-Environment, 2016).

The impact of environmental crime on people and the environment is not always visible or easy to establish. The damage caused by various forms of pollution, however, can be estimated. The ILT put the annual damage in the Netherlands due to:

- the incorrect use of chemicals at €760 million,
- the emission of ozone-depleting and other climate-damaging substances at €190 million,
- groundwater and surface water pollution at €1.6 billion,
- incorrect waste processing at €1.8 billion (ILT, 2020a).

The damage relates to:

- environmental degradation, e.g. reduced quality of groundwater, air or soil or of flora and fauna. This can also reduce the quality of drinking water;
- decline in the physical or psychological health of people who work directly with dangerous materials or on polluted land but also of the general public who come into contact with hazardous substances via the air, water or land;
- financial loss: companies that comply with the rules are financially disadvantaged by companies that do not (National Police of the Netherlands, 2016).

Environmental violations are sometimes the unintended consequence of an industrial accident. Companies may also be unaware of environmental law and break the rules unintentionally, for instance if the rules change. Companies might also find it financially rewarding to break environmental rules because legal processing of industrial waste is more expensive than illegal processing. How serious an incident is and how wilfully it was committed will determine whether an incident is a crime or a violation.

Appropriate supervision is needed to gain a proper understanding of environmental crime and violations. Various parties are involved at different levels of government (municipal, provincial, national); they issue permits, exercise supervision and enforce the rules. They include environmental services, the police and the Public Prosecution Service (Berenschot, 2017; Netherlands Court of Audit, 2021).

Various interventions are available to combat environmental crime and violations. The government can enforce the rules under criminal or administrative law. The interventions include warning notices, penalty orders issued by the public prosecutor and criminal fines. There are also alternative interventions, such as providing information or carrying out follow-up checks. The Court of Audit investigated whether the various interventions encouraged companies to improve their compliance with environmental law. This is the first effectiveness study in this area in the Netherlands.

## 2.2 Problem definition and audit questions

This audit looked at companies that are subject to the Major Accidents (Risks) Decree (BRZO; internationally known as the Seveso directive) and companies that fall just outside the Decree's scope (not-quite Seveso companies). These are companies that work with large quantities of hazardous substances, such as those in the chemical and storage industries. The environmental risks of a violation at such companies are huge. It is therefore a highly relevant group of companies for our audit. Environmental incidents have given some Seveso companies a bad press recently. Odfjell, for instance, was shut down after it was established that its chemical storage was unsafe (OVV, 2017), and a fire at Chemiepak in Moerdijk released large volumes of poisonous substances in 2011.

Our audit considered environmental inspections, not inspections required under the Seveso directive or of the overall safety measures companies take, which can include, for instance, working conditions.<sup>1</sup> Environmental inspections are carried out mainly under the Environmental Permitting (General Provisions) Act (WABO). The ILT's inspections of the production and use of chemical substances under the EU REACH regulation also fall under the WABO.

At central government level there is no overall understanding of the results of environmental inspections. We noted at the beginning of this report that the State Secretary for I&W has acknowledged that it is difficult to estimate the extent of environmental crime and violations (House of Representatives, 2020a). It appears from the state secretary's letter to the House that she does not know the extent to which Seveso companies and not-quite Seveso companies comply with environmental regulations or how the government responds to violations. There are inevitably concerns about this situation, both among these companies and more widely. This is confirmed by several recent publications. One of them, *De Markt De Baas* [The Market is the Boss] (Centre for Crime Prevention and Safety (CCV), 2019), was commissioned by the Ministries of I&W and Justice and Security (J&V). Others include a report by the Human Environment and Transport Inspectorate (ILT, 2019) and the programme launched by the Ministries of I&W and J&V, *Liever een goede buur!* [A Good Neighbour is Worth More!], to tackle environmental violations more effectively (Ministry of I&W, 2020). The State Secretary for I&W set up the Van Aartsen Committee in mid-2020 to improve the environmental permitting, supervision and enforcement (VTH) system (House of Representatives, 2020b). The committee presented its findings at the beginning of March 2021. It wrote, '*The advisory VTH committee has studied the performance of the VTH system with growing astonishment and alarm*'. And also,

*'The package deal between the authorities, the scaling up of the police regions, the proven butter-soft agreements on strengthening the criminal law system and, in particular, the reticence of local and provincial authorities to create the right conditions for the environmental services to carry out their work optimally have produced a system that does not meet expectations'*. The committee also expressed its concerns about the environmental services' lack of independence from the competent authority (in the case of Seveso companies, the provincial executive). Furthermore, some environmental services are too small to carry out complex tasks. In the criminal law approach, the police's delivery of environmental cases and their progress through the system (prosecution, trial) is surrounded by many problems (see also Netherlands Court of Audit, 2018; Berenschot, 2017; CCV, 2019).

One of the Van Aartsen Committee's findings was that little quantitative information was available on the system's performance. This finding agrees with those in the Court of Audit's report entitled *An Invisible Problem*, the first part of this audit. We note in the report that the quality of data on environmental crime and violations is inadequate (Netherlands Court of Audit, 2021). Information is available but in its current form it cannot be used to determine how many environmental violations are committed, the status of supervision and enforcement or the effectiveness of the approach.

Nevertheless, these questions can be answered. In this follow-up audit we show how intensive editing and analysis can improve the quality of the data so that we can draw conclusions on the approach to environmental crime and violations. The greatest challenge we faced was to link the right data between and in the datasets to the right company. The data analysis is considered in appendix 3. The solutions we found to the various data problems enabled us to answer the audit questions in a responsible manner.

The problem definition and audit questions we used are explained below.

### **Problem definition**

To what extent does the supervision and enforcement system combat environmental crime and violations at Seveso and not-quite Seveso companies?

### **Audit questions**

- Do supervisors, the minister and state secretary adequately understand the extent of environmental crime, the supervision exercised and the effectiveness of the approach (chapter 4)?

- How many environmental violations are detected (chapter 5)?
- Are enforcement and supervision decisions understandable (chapter 6)?
- Are interventions adequate deterrents to prevent repetition (chapter 7)?
- Do interventions improve compliance (chapter 7)?

The standards we applied in this audit are referred to in several chapters in order to test our findings.

## 2.3 Conduct of the audit

For the purposes of this audit, we investigated the situation at 482 companies, 352 (73%) of which we classified as Seveso companies and 130 (27%) as not-quite Seveso companies. We refer to them in this report as companies but they are in fact company *locations*. Some of the 482 locations we audited were members of the same company.

To answer the audit questions we used data from the following information systems:

- Inspectieview (containing data on environmental inspections, violations, administrative enforcement),
- registration data of the local environmental services responsible for Seveso companies, if not entered in Inspectieview (as above),
- the criminal records register (JDS) (criminal law enforcement),
- databanks of the Chamber of Commerce (company details).

The data related to the period 2015-2019.

By linking the data from these information systems to each other, we could see whether a company that committed multiple environmental offences was subject to criminal enforcement.

We used both qualitative and quantitative audit methods. Analysis of the above data sources revealed patterns in the extent of compliance with the rules, the traceability of supervision and enforcement and the effectiveness of interventions. We also held interviews with the parties involved in the supervision and enforcement system in place for environmental crime and violations, such as the police, the Association of Provincial Authorities and the ministries concerned (I&W and J&V). We also organised expert sessions to learn from the field (public authorities, research centres, business sector). Finally, an online survey of the Seveso companies' 13 trade associations revealed their thoughts about the supervision and enforcement system in place for environmental crimes and violations.

## 2.4 Structure of this report

This report comprises the following chapters: chapter 3 describes the companies we audited, the relevant laws and regulations and the parties involved in supervision and enforcement. Chapters 4 to 7 address the audit questions (see section 2.2), with the answers being accompanied by an audit opinion. The report closes with our overall conclusions and recommendations based on our findings (Chapter 8), the responses of the responsible Minister and State Secretary, and the Court of Audit's afterword (Chapter 9).

# 3.

# Organisation of supervision and enforcement

## 3.1 Introduction

This chapter describes the companies we audited and outlines how the approach to environmental crime and violations is formally organised. Section 3.2 considers the Seveso and not-quite Seveso companies. Section 3.3 briefly looks at the Environmental Permitting (General Provisions) Act (WABO). Its application in the permitting, supervision and enforcement (VTH) system is considered in section 3.4. The various steps in the system are outlined in section 3.5.

## 3.2 Definition of the auditees: Seveso companies and not-quite Seveso companies

We looked at companies where an environmental crime or violation can have a high negative impact on the environment: Seveso and not-quite Seveso companies. The relevant Dutch legislation for the former is the Major Accidents Risks Decree (BRZO) of 2015. This decree transposes the EU Seveso Directive III 2012/18/EU on the control of major-accident hazards involving dangerous substances into Dutch law. The threshold values for the amount of these substances present at a company determine whether it is subject to the BRZO 2015. The BRZO 2015's objectives are to prevent major incidents, protect the environment and employee and public health and safety, and limit the consequences of any incidents. Not-quite Seveso companies are not subject to the decree but are subject to other safety regulations, such as the Installations (Public Safety) Decree (BEVI).

There is no hard and fast definition of a not-quite Seveso company in the Netherlands. On the basis of lists of current and former Seveso companies compiled by Bureau BRZO+ (part of Rijkswaterstaat, the Ministry of I&W's Directorate-General for Public Works and Water Management), a company qualifies as a Seveso company if it had been subject to the BRZO (i.e. fell under the Seveso directive) on the reference date of 1 March at least 3 times between 2015 and 2019. For the purposes of this audit, a company included in the lists that did not meet this criterion qualifies as a not-quite Seveso company. We consider this group further in appendix 2, Methodology. The Netherlands currently counts about 400 Seveso companies.<sup>2</sup>

### 3.3 Legislation

As not all laws and rules are of equal importance for our audit, this section considers only the Environmental Permitting (General Provisions) Act (WABO) in detail. The next section looks at the VTH system and the related Environmental Permitting, Supervision and Enforcement Act (the VTH Act).

Many permits relating to the physical environment are issued under the WABO. The WABO lays down which companies must have a permit. If a company works with a dangerous substance, such as a Seveso or not-quite Seveso company, the activity and the substance are specified in the permit, as is the quantity of the substance involved in the activity. Safety regulations in the WABO legislation for not-quite Seveso companies, such as those subject to the BEVI, relate principally to construction and installation safety measures. Seveso companies are subject to additional safety requirements (IFV, 2019). In most cases, the competent authority for decisions on environmental permits is the municipal executive (WABO, section 2.14 (1)). The competent authority for Seveso companies, however, is the provincial executive. The provincial executive is also the competent authority for many not-quite Seveso companies that represent a substantially higher environmental risk (Environmental Permitting Decree, article 3.3 (1)).

Under the WABO, local environmental services carry out environmental inspections to check compliance with the conditions attaching to a permit. The inspections can take the form of administrative checks or on-site company visits. The service checks whether the company complies with the environmental rules and whether the required measures are in place. It points out any violations and sets a term within which the company must take remedial action. In extreme situations, action must be taken immediately. At the end of the term, the environmental service carries out a follow-up check. If a rule is still being violated, remedies can be imposed under administrative

law (see also section 3.5). Furthermore, some environmental services have special investigation officers who investigate serious violations and draw up official reports.

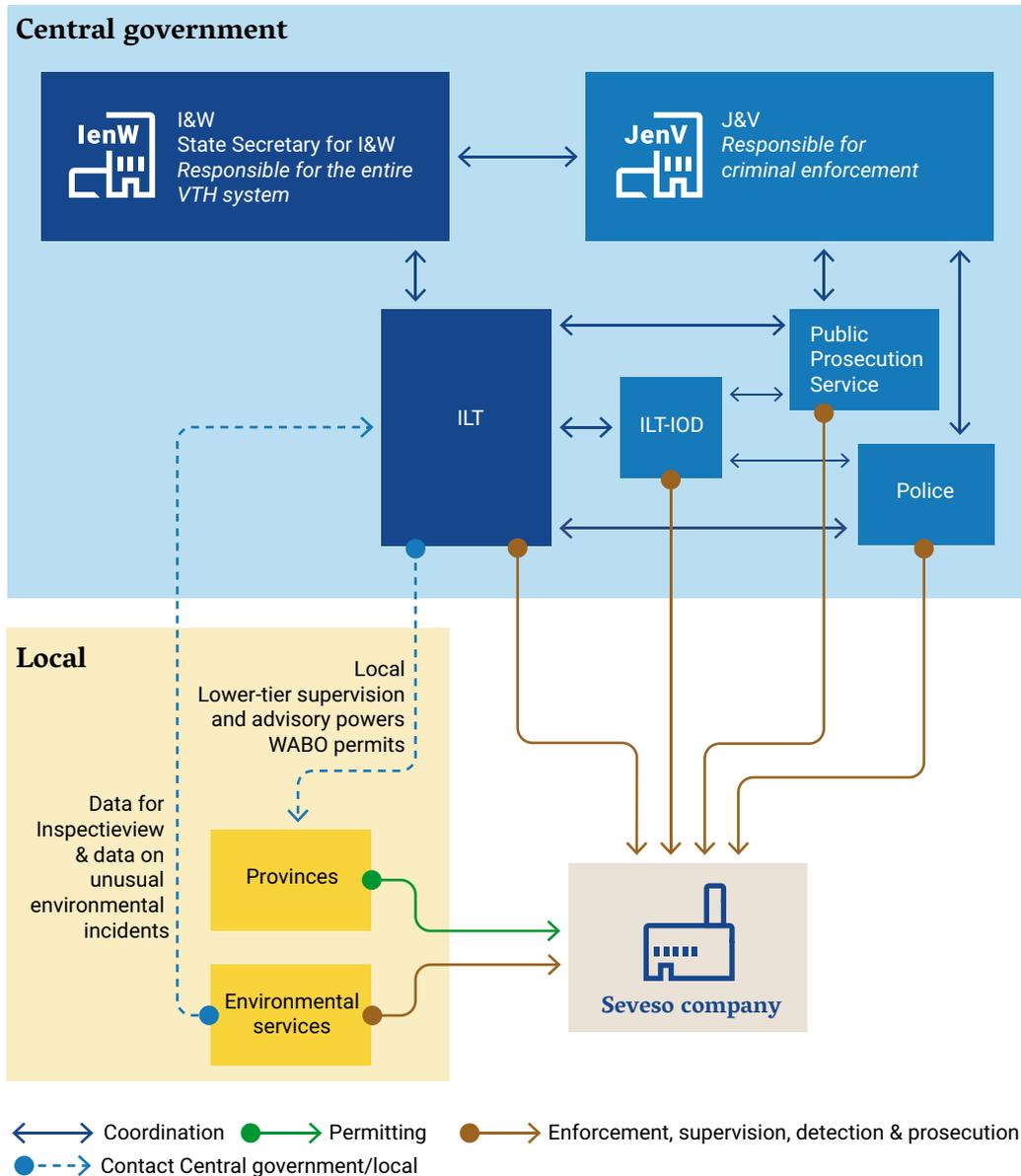
In addition, the ILT, like the Netherlands Food and Consumer Product Safety Authority (NVWA) and the Social Affairs and Employment (SZW) Inspectorate, oversees compliance with REACH, an EU regulation on the registration, evaluation and authorisation of chemicals.<sup>3</sup> The environmental inspections we audited included such REACH inspections.

### 3.4 VTH system

Seveso and not-quite Seveso companies must apply to the provincial executive for a permit to work with hazardous substances. The applicable conditions are laid down in the WABO. Seveso and not-quite Seveso companies fall under the VTH system. The system is designed to ensure that permits are issued correctly, that compliance with the WABO is supervised and that enforcement measures are taken in the event of a violation. The system is based on the VTH Act of 2016, a supplement to the WABO. A general impression of the VTH system and the parties relevant to our audit is given in figure 2.

**Figure 2** Parties in the VTH system for Seveso companies

### Minister and state secretary's insight is informed by many links



#### 3.4.1 Local environmental services

The competent authority for VTH tasks at Seveso and not-quite Seveso companies is the provincial executive. It mandates local environmental services to supervise compliance with the rules and enforce them where necessary. Besides being the competent authority, the provincial executives also own the local environmental services and act as commissioning authority. The provincial executives account to the provincial council for the performance of these tasks. In total, there are 29 local environmental services tasked with issuing permits, exercising supervision and conducting administrative enforcement. For Seveso companies, 6 of these 29

services have been designated to perform VTH tasks (Groningen, Central West Brabant, Rijnmond, Nijmegen, South Limburg and North Sea Canal Zone).

### **3.4.2 The Human Environment and Transport Inspectorate (ILT)**

Environmental services are mandated by provincial executives to issue permits under the WABO. The ILT has advisory powers regarding Seveso companies. It checks whether applications for WABO permits and the permits themselves comply with the law.

In addition, under the Revitalisation of General Supervision Act (WRGT) and the Provinces Act, the ILT can exercise lower-tier supervision of provincial executives in its capacity as a state inspectorate. This supervision is largely administrative in nature, and is conducted by means of analyses of available information and other data sources. As part of this lower-tier supervision, the ILT also uses data on unusual environmental incidents. Seveso companies must report unusual incidents (accidents or departures from ordinary operations) to the provincial executive, which in turn must immediately report the incident to the ILT. The ILT also uses information from public sources for its supervision. It can then determine whether the competent authority has neglected its duties. It can intervene if the competent authority has not performed its statutory tasks correctly and if decisions are contrary to the public interest or the law. The most extreme option is substitution, with the ILT carrying out the activity concerned. Such a far-reaching intervention must, of course, be justified (OVV, 2017).

The ILT has set up and owns an information system, *Inspectieview*, which enables environmental services, state inspectorates and other supervisors to access information on each other's inspections. *Inspectieview* is formally not part of the ILT's role as the lower-tier supervisor but it is an important source of information on environmental violations and enforcement.

### **3.4.3 The Public Prosecution Service and national police force**

The Minister of Justice and Security is responsible for the Public Prosecution Service and the national police force, and for national investigation and prosecution policy.

The National Public Prosecutor's Office for Serious Fraud, Environmental Crime and Asset Confiscation oversees the criminal enforcement of environmental law. The police enforce the law through their environmental investigators, environmental officers in the basic teams and intelligence experts. Each police unit (including the national force) has environmental criminal investigation teams and each basic police

team includes environmental officers. The police force also has an environmental expertise centre, which is part of the national unit. Like the police, special investigative services of the national inspectorates (such as the ILT's Information and Intelligence Service (ILT-IOD)) have general investigative powers. Furthermore, some environmental services, the water authorities and state inspectorates have special investigation officers.

The National Environmental Chamber considers individual environmental cases and decides which ones will be investigated further. This does not include 'smoking gun' or standard cases. The National Environmental Chamber is steered by the Strategic Environmental Chamber (SMK). The SMK sets the policy and the priorities for the investigative approach to environmental crimes.

#### **3.4.4 Central government responsibilities**

Under the WABO, the Minister of I&W is responsible for the VTH system. The present government (2017-to date) has delegated the tasks and responsibilities to the State Secretary for I&W (Government Gazette, 2017). In addition, the Minister of J&V is responsible for the criminal enforcement and prosecution components of the VTH system.

The state secretary and minister's statutory tasks and responsibilities are laid down in various sections of the WABO.

#### **3.4.5 Summary of interventions**

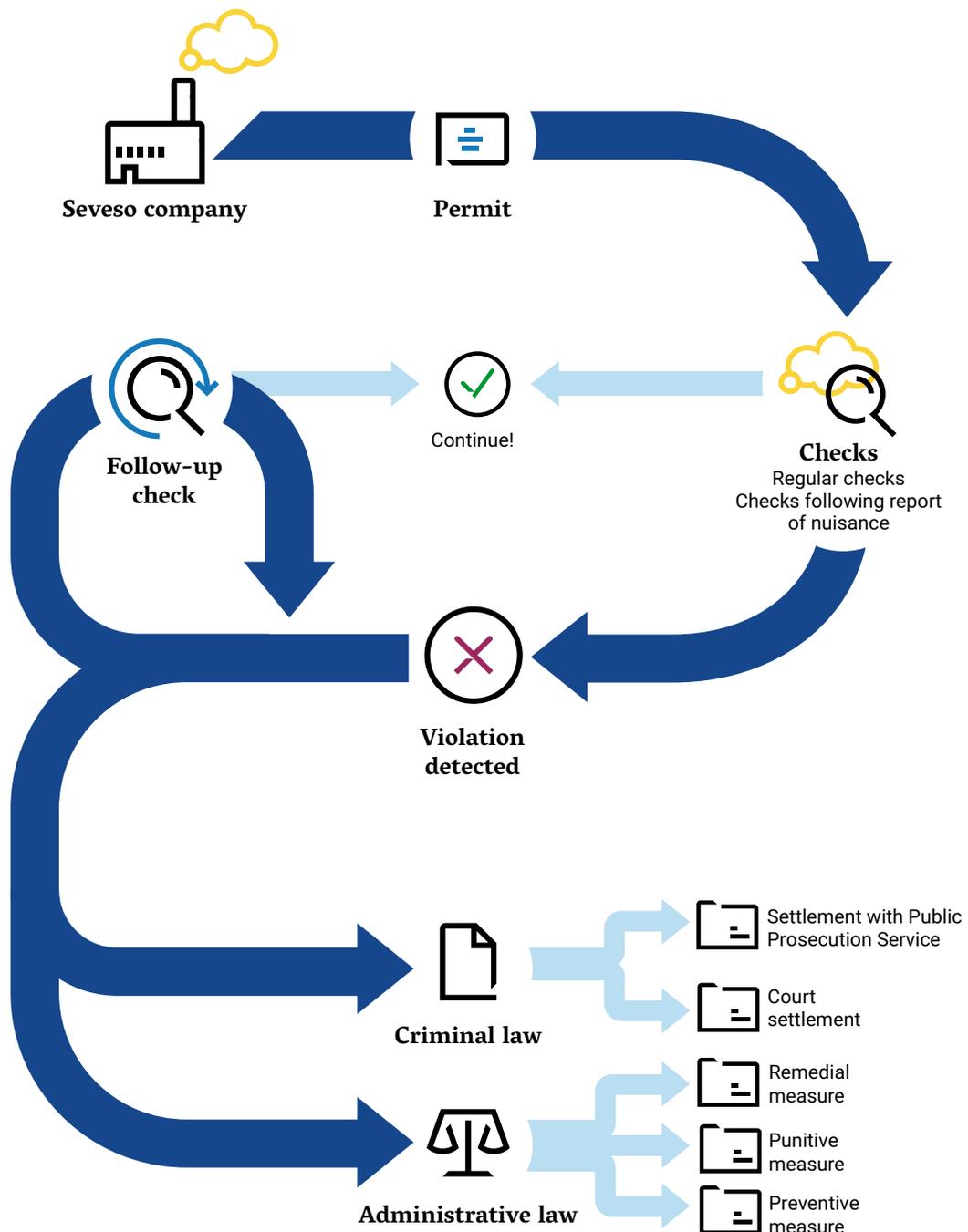
If a company commits a violation, the competent authority can intervene under administrative law, whether or not one or more follow-up checks have been carried out. It can also decide to raise the case with the Public Prosecution Service (by means of a report, notification, letter or consultation meeting) so that it can be dealt with under criminal law. The various intervention options can be broadly categorised as:

- administrative remedies, e.g. a penalty order,
- punitive administrative measures, e.g. an administrative fine,
- preventive administrative law, e.g. under the Public Administration (Probity Screening) Act,
- criminal law, e.g. a settlement with the Public Prosecution Service.

### 3.5 From permit to inspection, violation and conclusion

Figure 3 shows the steps a Seveso or not-quite Seveso company may have to take. A company must be issued with a permit to carry out its activities and must observe certain conditions. It must then undergo environmental inspections, as described in section 3.3. If an inspection detects a violation, it will be followed up. The appropriate intervention depends on the incident and the company's previous conduct. We return to this in chapter 6.

**Figure 3** From violation to intervention at a Seveso company



# 4.

## An invisible problem

This chapter asks whether the information received by the minister, state secretary and supervisors provides an appropriate insight into the extent of the problem, the supervision exercised and the effectiveness of the approach.

We briefly look at the problems with information systems revealed by our audit *An Invisible Problem*: the poor quality of data hampers insight into the violations committed by companies and the enforcement measures taken against them (section 4.1). We then look at how the supervisors and enforcement organisations share information (section 4.2) and the role of information in lower-tier supervision (section 4.3). We close the chapter with a preliminary audit opinion on the above standards (section 4.4).

### 4.1 Data problems

In its report entitled *For the Living Environment*, the Van Aartsen Committee (2021) notes that quantitative information on the VTH system was ‘unfortunately largely’ absent. The Court of Audit (2021) had reached a similar conclusion in a report it published earlier in the same year. More precisely, it concluded that the Inspectieview and JDS information systems contained a lot of information that was of poor quality. The reasons for this were:

- company identification data, such as names and addresses, were not linked to a unique identifier, such as the 12-figure registration number with the Chamber of Commerce. Information systems were not connected to a basic records database for legal persons, making it difficult to identify companies. This was true of both Inspectieview and JDS;

- some environmental services were not connected to Inspectieview (including half of the local Seveso inspection services). There is therefore no central point with data on environmental inspections and enforcement;
- some data in Inspectieview were incorrect. Many data were completely missing.

We consider the quality of the data in the Inspectieview and JDS systems to be inadequate.

#### **Response of the state secretary and minister to *An Invisible Problem***

In response to the Court of Audit's report on these problems, the State Secretary for I&W wrote, as the responsible politician, that:

- she would place data quality on the agenda of the Environmental Council (BOB);
- the ILT would set up a taskforce to remedy the problems with Inspectieview;
- it had been agreed with the 8 unconnected local environmental services that they would connect to Inspectieview no later than 1 January 2022;
- she would remind the environmental services of this agreement.

There is also a problem identifying legal persons using criminal law data. The Public Prosecution Service does not check the details it records on violators against a basic records database. In contrast, it checks details on natural persons against the case number entered in the criminal justice register or the citizen service number. Many of the names, addresses and Chamber of Commerce registration numbers entered in the Criminal Records Register (JDS) for a particular company are incorrect or out of date. It is difficult to retrieve full criminal details on legal persons from the JDS, which is managed by the Judicial Information Service (part of the Ministry of J&V). As is the case with Inspectieview, it is far from simple to follow company locations over time. It is thus often difficult to see whether a particular location commits multiple violations. We note that criminal enforcement at legal persons is under pressure from weaknesses in identification.

The Minister of J&V wrote in response to the report that the identification of legal persons was difficult because of the lack of biometric information and because legal persons can undergo many changes (establishment, insolvency, change of name, merger, etc.). However, he would consult the partners concerned in the judicial system in the near future and strengthen the analytical capacity of the project team that is addressing this problem.

## 4.2 Information sharing

One of the goals of the VTH Act is to improve cooperation between the administrative and the criminal law columns. It is of great importance that the criminal law column can respond to administrative signals. Systematic processing and analysis of reliable data is essential.

Information sharing between the relevant supervisors is a statutory requirement under the VTH Act. A concrete example of coordination between the administrative and criminal columns is the Public Prosecution Service's participation in the Environmental Council. Other participants are the State Secretary for I&W, the Minister of J&V, the Minister of the Interior and Kingdom Relations, other relevant ministers and representatives of municipalities, provinces, water authorities and environmental services.

The most recent evaluation of the VTH Act provides no pointers for the further, successful coordination of information sharing between the criminal and administrative law columns. It makes no reference to criminal law, the Public Prosecution Service or the police (Berenschot, 2019). The previous evaluation (Berenschot, 2017) had found that coordination was organised chiefly at the provincial level, between environmental services, the Public Prosecution Service and the police. The Public Prosecution Service requests information in order to take well-founded decisions on criminal enforcement. Conversely, in view of its function and responsibilities, it is reluctant to share information with others. This is due to the regulations governing the sharing of criminal information.

The Public Prosecution Service has signed cooperation and information-sharing agreements with several local environmental services. The fact that it makes bilateral agreements with individual environmental services clearly shows that national services are working in a fragmented system with many competent authorities. In principle, Inspectievier provides a platform for information sharing, also between the administrative and criminal columns, but it is of poor quality (see section 4.1).

The Van Aartsen Committee put it as follows, *'information sharing [is] not at the required level to be conducive to the quality of permitting, supervision and enforcement. This frustrates coordination between the criminal law and administrative law systems'* (p. 28). On the basis of our audit, we agree with this.

## 4.3 Lower-tier supervision

Using the information it collects, the ILT, as the lower-tier supervisor, determines whether or not the competent authority has neglected its duties. If a province has seriously failed to perform its duties, the ILT can assume them. In practice, however, it has not done so in the past 10 years. To exercise its lower-tier supervision, the ILT contacts a province 5 to 10 times a year in response to signals received about a process or procedure. According to the ILT, the contacts usually have a positive influence, for instance by preventing provinces from taking incorrect decisions (ILT, 2020a).

In part, the ILT exercises its lower-tier supervision in response to unusual environmental incidents (see section 3.4.2). In 2019, 51% of the Seveso companies reported 2,300 such cases. As 51% of the 400 or so Seveso companies filed such reports, on average each company reported more than 10 environmental incidents in that year. It is not known how often environmental incidents occurred at the 49% of companies that did not file a report. The ILT supervises remotely using administrative data. As the data are limited, they provide the ILT with little insight into the violations and afford few opportunities for supervision.

As the owner of Inspectieview, the ILT has ready access to potentially valuable data on inspections, violations and enforcement that it could use to fulfil its task of lower-tier supervision. Inspectieview, however, suffers from quality problems (see section 3.1). How the law is interpreted also impedes the use of Inspectieview as an instrument of lower-tier supervision. The explanatory memorandum to the decree to amend the Environmental Law Decree (Government Gazette, 2017) states, *'The system may not be used for lower-tier supervision. Should that happen, it cannot be ruled out that the parties connected to Inspectieview Milieu will enter supervision data selectively in their databases. Fewer data would then be available via Inspectieview Milieu, negatively influencing the system's effectiveness'*. We think this interpretation of the law is open to reconsideration. The statutory duty to share information means a supervisor cannot disregard information that is unwelcome to it. There are no gradations in information sharing for parties that use Inspectieview in the performance of their statutory duty. If they do not share information in full, they cannot fulfil that duty. Furthermore, parties that are not connected to Inspectieview must explain how they share information in full. This will only be relevant until 1 January 2022, however, for the State Secretary for I&W has undertaken that all environmental services will be connected to Inspectieview by then (Netherlands Court of Audit, 2021).

In this report we explain what insights can be gained from Inspectieview after careful editing and analysis of the data. The insights enable us to draw conclusions on the extent of the problem and on the supervision exercised and its effectiveness. This information is vital for the ILT's lower-tier supervision.

## 4.4 Audit opinion

On the basis of our audit findings we can express an opinion on whether the information is in order. To do so, we apply a series of standards.

Audit question Do supervisors, the minister and state secretary have sufficient insight into the extent of environmental crime detected, the supervision exercised and the effectiveness of the approach?	
Standard	Met?
Supervisors and enforcement organisations have sufficient knowledge and information to recognise the risks of environmental crimes committed by companies.	✗
'The minister responsible for the system must put the right conditions in place for the administrative law enforcement system to function correctly. The Minister of Justice and Security has a similar responsibility for the criminal law enforcement system. They are responsible not only for the more material conditions, such as funding and centralised knowledge sources, but also for the presence of sufficient checks and balances in the system. This includes collective responsibility for the VTH system and cooperation within it, horizontal democratic control and, additionally, lower-tier supervision.' (VTH Act)	✗
The efficiency and effectiveness of interventions and compliance are monitored consistently.	✗
Ministries and enforcement organisations know the extent to which companies comply with rules and standards.	✗
Information on interventions and compliance or non-compliance is such that the efficiency and effectiveness of the interventions can be measured retrospectively.	✗
The information provided by enforcement partners (environmental services, police, inspectorates, Public Prosecution Service) provides an insight into the environmental crimes that are committed. The necessary information sharing is in order.	✗

✓ Met ✗ Not met — Partially met

### Explanation of the standards

*Supervisors and enforcement organisations have sufficient knowledge and information to recognise the risks of environmental crimes committed by companies.*

The ILT must establish whether there are serious shortcomings in the implementation of the WABO and the VTH Act, such as lack of enforcement. Information on unusual environmental incidents at Seveso companies is not satisfactory because it is so incomplete. Furthermore, the ILT owns Inspectieview. Inspectieview is potentially a useful source of information but owing to quality problems it is not suitable in its current form. The interpretation of the VTH Act that Inspectieview cannot be used

for lower-tier supervision should be reconsidered. The ILT's information position as the lower-tier supervisor is inadequate. Lower-tier supervision is inadequate.

*VTH Act: 'The minister responsible for the system must put the right conditions in place for the administrative law enforcement system to function correctly. The Minister of Justice and Security has a similar responsibility for the criminal law enforcement system. They are responsible not only for the more material conditions, such as funding and centralised knowledge sources, but also for the presence of sufficient checks and balances in the system. This includes collective responsibility for the VTH system and cooperation within it, horizontal democratic control and, additionally, lower-tier supervision.'*

**Not met.** The information that supervisors and enforcement organisations require to identify the risk of environmental crime is inadequate. This is due to problems we highlighted earlier regarding the quality of data in the information systems: problems concerning the identification of companies, the lack of data and the presence of incorrect data.

*The efficiency and effectiveness of interventions and compliance are monitored consistently.*

**Not met.** On the basis of what has been published to date on environmental interventions and compliance in the Netherlands, in our opinion this is still virgin territory. Inspectieview can potentially provide integrated information but owing to the quality problems it is unable to do so in its current state. Information management must improve if effectiveness is to be audited. Our audit shows that it can be improved.

*Ministries and enforcement organisations know the extent to which companies comply with rules and standards.*

**Not met.** The ILT concluded in a recent report that the minister and state secretary responsible for policy have no insight into the functioning of the VTH system (ILT, 2019). We found from intensive data editing and analysis that ministries and enforcement organisations are able to obtain some insight but it requires an investment of time and manpower.

*Information on interventions and compliance or non-compliance is such that the efficiency and effectiveness of interventions can be measured retrospectively.*

**Not met.** The data processing we carried out shows that this is possible to a certain extent. The information we originally found in Inspectieview and the JDS was certainly not organised with a view to establishing efficiency and effectiveness.

*The information provided by enforcement partners (environmental services, police, inspectorates, Public Prosecution Service) provides an insight into the environmental crimes that are committed. The necessary information sharing is in order.*

**Not met.** There are impediments to sharing information between the administrative law and the criminal law columns, partly because of the organisation of the VTH system with 29 separate environmental services and because the Public Prosecution Service must make separate data sharing agreements with environmental services.

# 5.

## How many violations are detected?

In this chapter we provide an estimate of the environmental crimes and violations detected at the 482 Seveso and not-quite Seveso companies we audited. It is not easy to give an estimate. Firstly, the government's poor information position is an impediment (see chapter 4). The greatest impediment was linking the right data between and in the databanks (Inspectieview, BRZO environmental service registers, JDS) to the right company location (see appendix 2). By editing and analysing the data, however, an initial estimate can be made of the extent of the problem. The supervisors, minister and state secretary do not have such a national overview. Section 5.1 considers the nature and extent of environmental crime. Section 5.2 looks at the differences between companies: does one company commit more violations than another? Are there multiple violators? We close the chapter with a brief summary (section 5.3).

### 5.1 Nature and extent of known environmental crimes

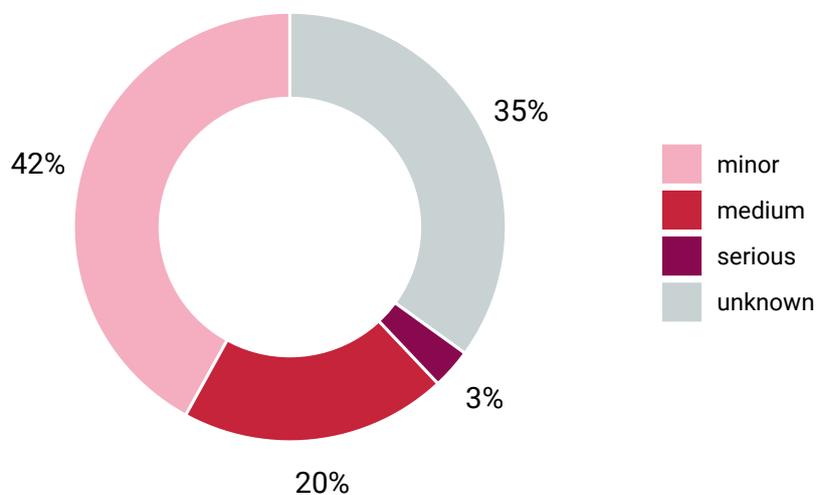
Environmental crime and violations are known in the Netherlands as 'discovered' crimes; crimes that are detected chiefly by looking for them. They are not reported by the environment. We therefore cannot say anything about the overall extent of the phenomenon; there is a dark figure of undiscovered crime. We can say something about the crimes *detected*, however. We found that local environmental services visited the 482 companies we audited 19,685 times in total between 2015 and 2019. 3,497 of the inspections found one or more violations, equal to 18% of the total.

### Seriousness of environmental violations

Figure 4 shows that the most prevalent violations were minor (44%). Remarkably, it is not known how serious the violations were in more than a third of the cases, and 'unknown' is accordingly the second most frequent category. Some 20% of the violations are in the medium category and 3% are serious. This is equal to 3 serious environmental violations every 2 months by our group of companies.

**Figure 4** *Seriousness of the environmental violations*

#### Most violations are minor or of unknown seriousness



#### Examples of environmental violations by seriousness

##### Minor violation (Inspectieview)

'Empty containers at the depot [...] a plastic jerry can (20 l) was found with 15 litres of diesel oil. The jerry can did not have a top and had fallen over. Some of the liquid had spilled out. The jerry can was not on a drip tray. It was in a container with a wooden floor. The floor was not impermeable. The container was on a paved site with a sealed concrete floor. The floor was impermeable.'

##### Medium violations (Inspectieview)

'The tanks' internal floating ceiling is activated when product with a higher benzene content than 5% is pumped into the tank. This is not permitted under regulation 7.6.7 and [the company] should have used a vapour recovery system to recover the vapour released until the ceiling is activated. Not using a vapour recovery system was a deliberate choice for tank [...].'

'An incident report has to be drawn up following a spillage of tetrafluoroethylene.'

'About 18 tonnes of methanol was spilled because the air valve on the drainage pipe was left open during discharge from a ship.'

#### **Serious violations (Inspectieview)**

'No leak detector in combination with leakages. With 62.5% leakage in 3 years, it does not meet the target.'

'The WM chapter 17.2 inspection of [the company] found that the procedures to bridge critical health, safety and environmental security were not correctly observed when furnace [...] was started up. The resultant enormous fire released a huge amount of soot. The soot caused a great deal of alarm among local residents. Crops in the area were also declared unfit for human consumption.'

'In normal circumstances no complaints are made about odours released by the company at the site. Between 27 December 2015 and 14 January 2016, the incident room received and recorded 77 complaints about odours released by [the company].'

#### **Incidents dealt with under criminal law (public information)**

The highest verdict found by our audit was imposed in a case brought against waste processor ATM in Moerdijk; the case was concluded in 2012 with an unconditional sentence of more than €7 million. It was imposed because ATM was processing waste at the end of the 1990s without a permit. The Public Prosecution Service had demanded a verdict of €17.5 million. Owing to lack of evidence in a number of areas, it was set at €7 million. This amount reflects the unlawful benefit ATM enjoyed by working without the necessary permits.

Odfjell was ordered to pay a fine of €3 million in 2013 because it had systematically broken safety regulations for many years. According to the judge it was a matter of luck that there had not been a disaster. The Public Prosecution Service had demanded a fine of €3 million and conditional closure of the company if it did not remedy the problems. The court did not impose the conditional closure because it had confidence in the supervisor.

In 2019 the court ruled that Shell had not taken sufficient measures to prevent explosions at its Moerdijk location in 2014. The company was also to blame for the release, 18 months later, of a dangerous substance into the atmosphere that was a danger to health and the environment.

### **Nature of the violations**

The nature of a third of the violations cannot be established from the data in Inspectieview or the Seveso local environmental services' registers, but that of two-thirds can. The table below lists the recorded nature of those violations.

#### **Top 10 violations related to:**

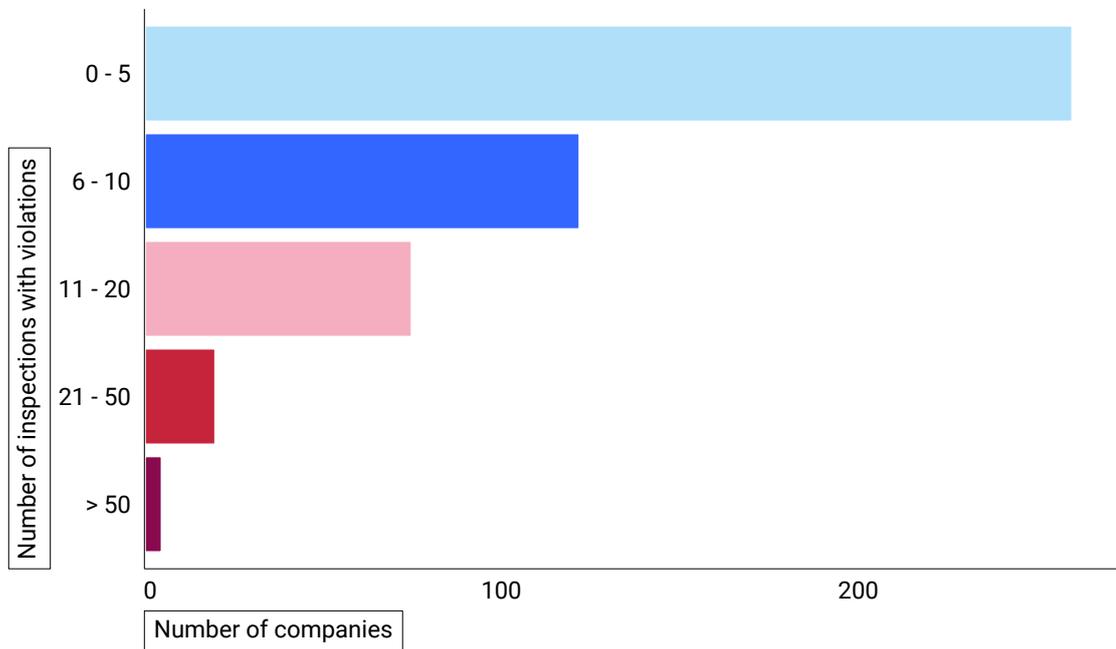
1. safety;
2. WABO;
3. Environmental Management Act;
4. Transport of Hazardous Substances Act;
5. soil;
6. financial and economic loss;
7. Firework Decree;
8. REACH;
9. physical environment;
10. air.

## **5.2 Differences between companies**

The number of company inspections that found violations differs considerably from one company to another, as shown in figure 5. At many companies, only a few inspections found violations in 2015-2019. This could be because the companies committed few violations or because few inspections were carried out (see also chapter 6). A small group of companies committed violations frequently or very frequently: in 5 years' time more than 50 incidents and 1 company committed more than 100. The number of inspections at these companies was also higher than average.

**Figure 5** Number of inspections with violations per company

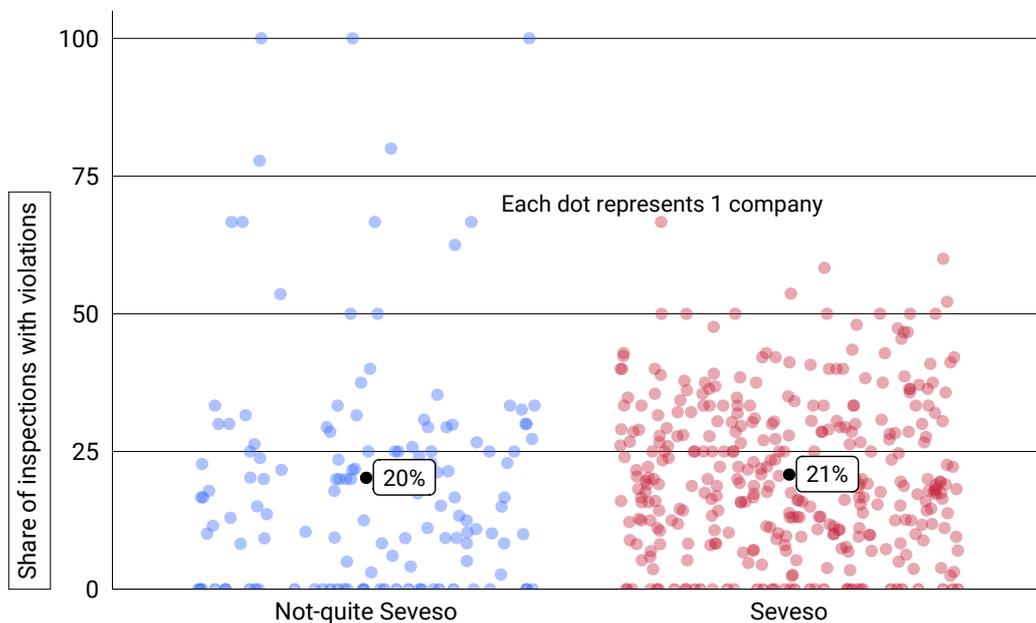
**Most companies commit few violations, some commit many**



There seems to be little difference between Seveso companies and not-quite Seveso companies regarding the percentage of violations found by environmental inspections (figure 6).

**Figure 6** Percentage of environmental inspections with violations at Seveso companies and not-quite Seveso companies

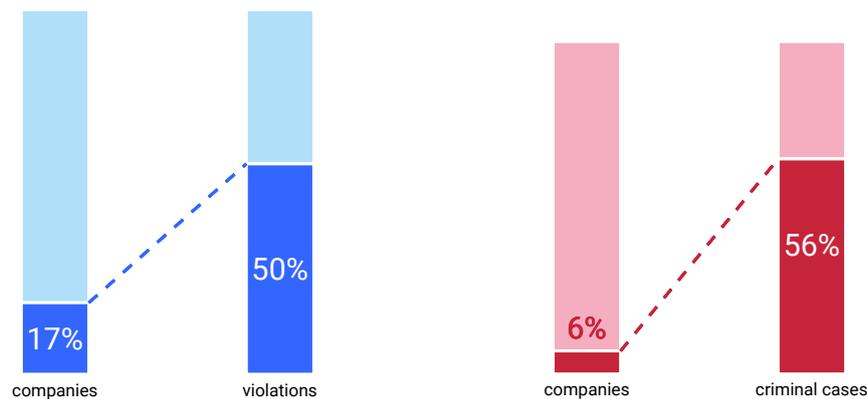
**Little difference in degree of violations between Seveso companies and not-quite Seveso companies**



The number of violations is not distributed evenly across the companies. Both environmental inspections and criminal cases reveal a relatively small group of multiple offenders and violators (figure 7).

**Figure 7** Multiple offenders and violators in environmental inspections and criminal cases

**80 companies (17%) responsible for 1,750 violations (50% of all violations)**      **30 companies (6%) responsible for 88 criminal cases (56% of all criminal cases)**



### 5.3 Summary

- 18% of the environmental inspections found 1 or more violations. Nearly 3,500 inspections were carried out at 482 companies over 5 years.
- The most prevalent violations were ‘minor’: more than 40%. The second largest category (35%) was classified as ‘unknown’. The remaining violations were serious and medium.
- Seveso companies and not-quite Seveso companies commit about the same number of violations.
- Both environmental inspections and criminal data reveal a relatively small group of multiple offenders and violators.

# 6.

# Supervision and enforcement decisions

The next question is what factors were taken into account when deciding on the supervision and enforcement measures. Were the decisions understandable in practice? As supervisors and enforcement organisations base their decisions on poor information (see chapter 4), there is a risk of supervision and enforcement being ineffective. Were supervision decisions based on known risks? Did enforcement measures comply with the national enforcement strategy?

In section 6.1 we look at the intensity of supervision per company and the differences from one company to another and among the local environmental services. Section 6.2 considers whether the supervision is commensurate with the risk of a company committing a violation. Section 6.3 shifts the focus to administrative enforcement. Criminal cases are considered in section 6.4; what forms of criminal case are there and how often are they brought? In section 6.5 we look at the relationship between administrative and criminal enforcement; is criminal law applied more often for companies that commit many violations? We close this chapter with a preliminary audit opinion based on the above standards (section 6.6).

## 6.1 Environmental inspections

Environmental inspections are the primary means to determine whether a company has committed a violation. We have described environmental violations as discovered incidents. The higher the risk of a company committing a violation the more attention a supervisor would therefore be expected to pay to it. A number of cases are described below. We then consider the extent to which supervision is risk-based.

The data on environmental inspections are taken from Inspectieview and (if an environmental service is not connected to Inspectieview) from the Seveso local environmental services' registers. It can be seen that there are many forms of environmental inspection. The 10 most frequent are listed in the box below.

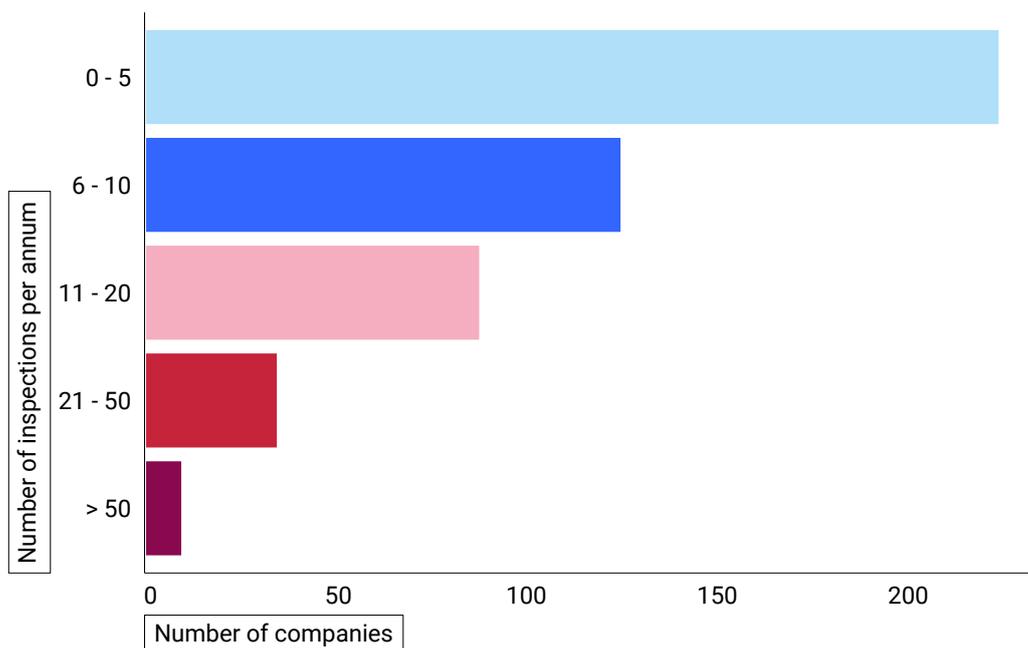
**Top 10 types of inspection**

- thematic control;
- incident supervision (repressive control);
- partial inspection (preventive control);
- assessment of reporting duty (assessment of reporting duty);
- follow-up check (repressive control);
- administrative settlement: records;
- assessment of mandatory check; mandatory report;
- administrative control (preventive control);
- comprehensive control;
- environmental control.

On average, 8.2 environmental inspections are carried out at each company every year. Some companies are clearly inspected more often than others, as shown in figure 8.

**Figure 8** *Number of environmental inspections per company*

**Number of inspections per company per annum varies enormously**

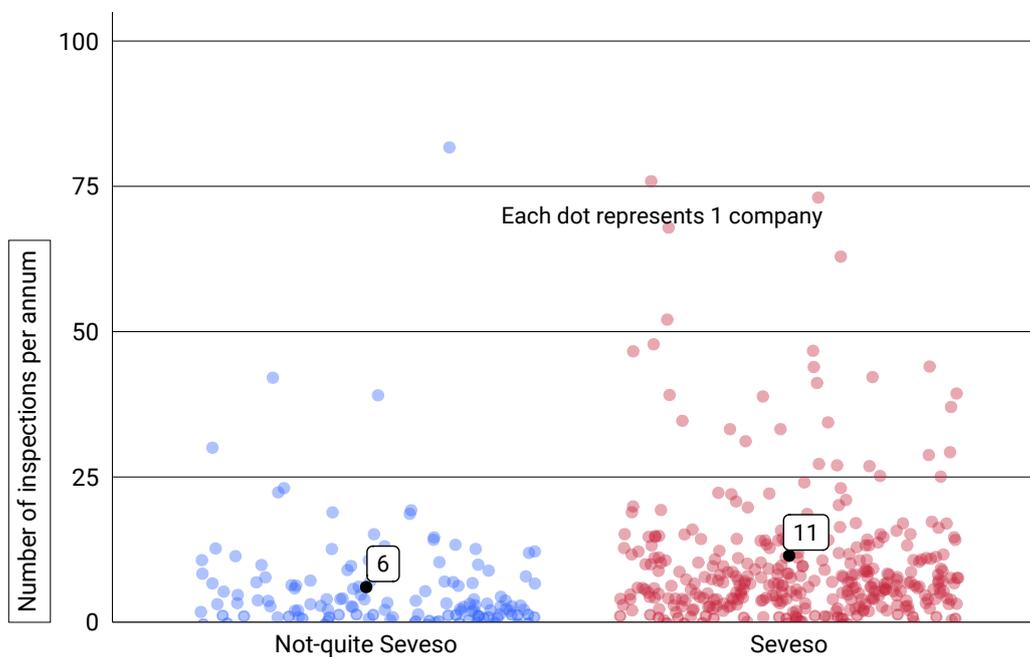


Most companies are inspected 4 times per year or less. A small group undergo dozens of inspections every year. 4 company locations are inspected more than 100 times a year on average.

Seveso companies are inspected more often on average than not-quite Seveso companies, as shown in the figure below.

**Figure 9** Number of environmental inspections per Seveso and not-quite Seveso company

**More inspections at Seveso companies than at not-quite Seveso companies**

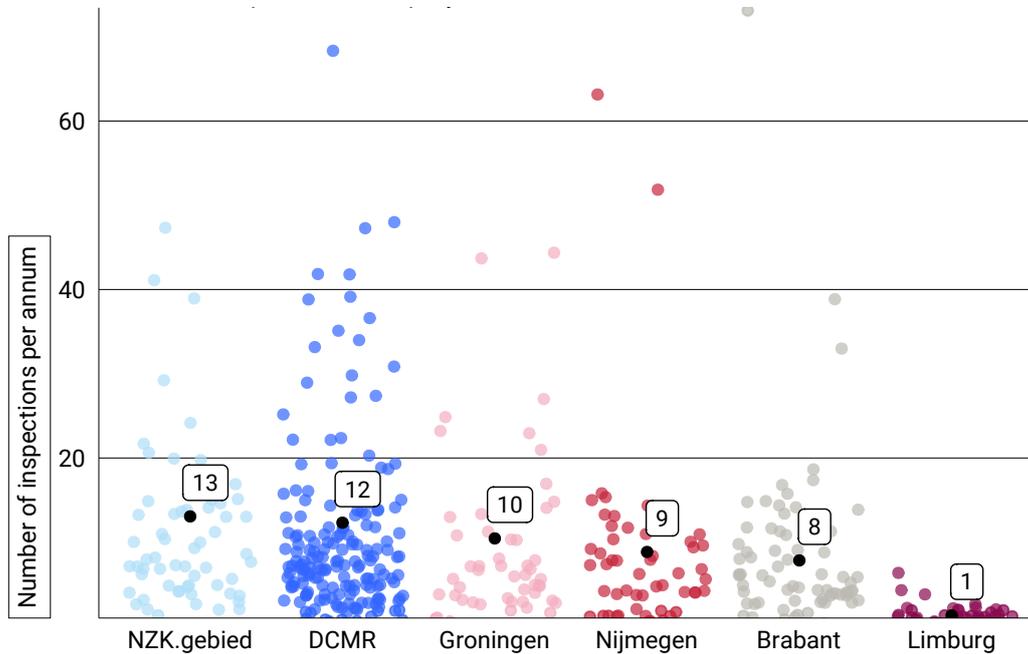


*Variation between Seveso local environmental services*

The figure below shows the median of the number of inspections per company per annum carried out by the 6 Seveso local environmental services.<sup>4</sup>

**Figure 10** Number of environmental inspections per company carried out by the 6 Seveso local environmental services

**Inspection intensity varies significantly by region**



There are 3 causes of the differences among the environmental services:

- variations in actual inspection frequency,
- variations in the keeping and quality of inspection records,
- differences in the type of companies inspected by a particular service.

We cannot determine from our audit to what extent each cause explains the differences.

**BRZO inspections in the Common Inspection Area**

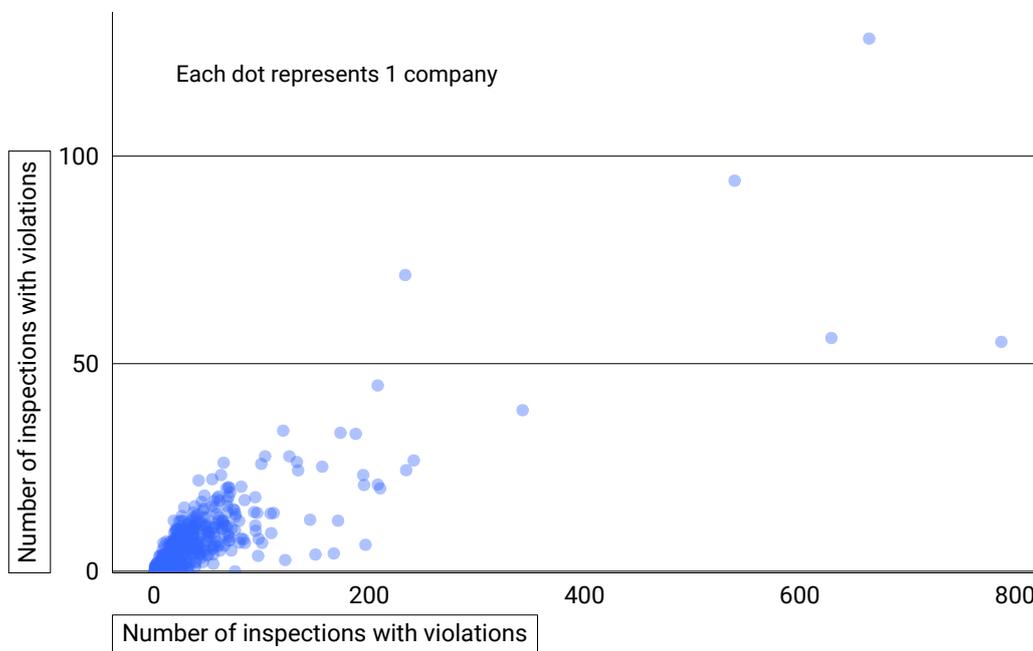
The data above relate to environmental inspections. In addition, Seveso companies are subject to BRZO inspections (see chapter 2). BRZO inspections are concerned principally with external and internal safety but can also cover environmental issues. The findings of BRZO inspections are recorded in the Common Inspection Area (GIR) information system. We conclude from the information in the GIR that Seveso companies were inspected 1.4 times a year on average in 2011-2017. The difference in inspection frequency per company is relatively small.

## 6.2 Relationship between environmental inspections and violations

Are inspections risk-based? Figure 11 provides a first impression that they might be: the more violations there are, the more inspections are carried out. However, more violations are found if more inspections are carried out, which is to be expected with discovered crimes.

**Figure 11** Relationship between number of environmental inspections and violations per company, 2015-2019

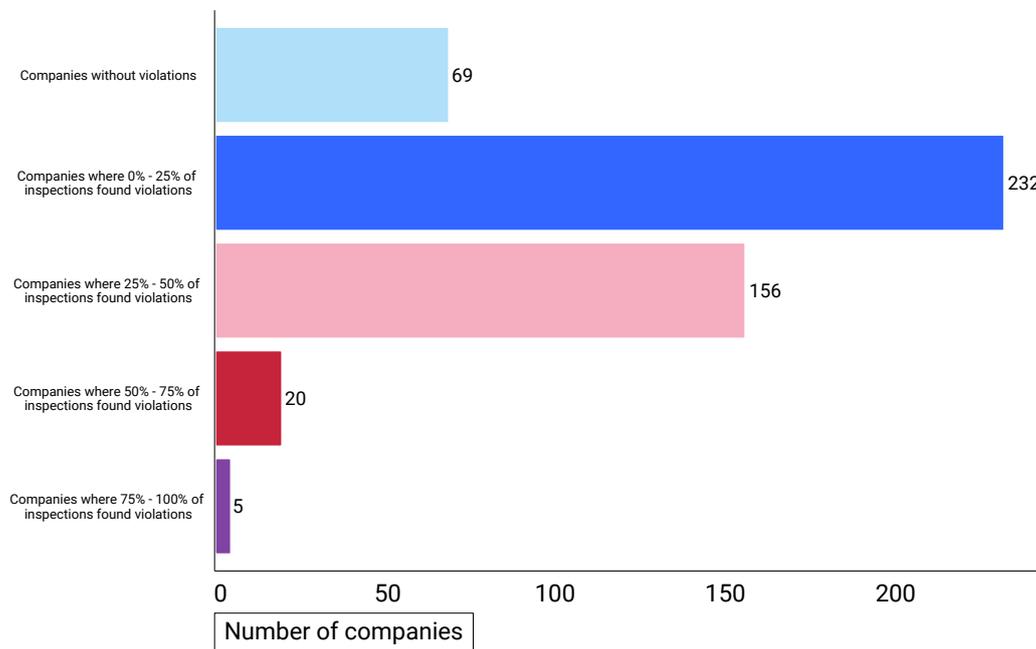
**The more you look, the more you see**



To determine whether inspections are risk-based, it is also important to know how likely it is that an inspection will find a violation. In other words, in what percentage of inspections do inspectors find a violation? This takes into account how often a company is visited. At 25 companies (5%), at least half of the inspections found a violation (see figure 12). In other words, the probability of an inspection finding a violation is about at least 3 times higher than the average of 18% (see section 5.1).

**Figure 12** *Percentage of environmental inspections with 1 or more violations*

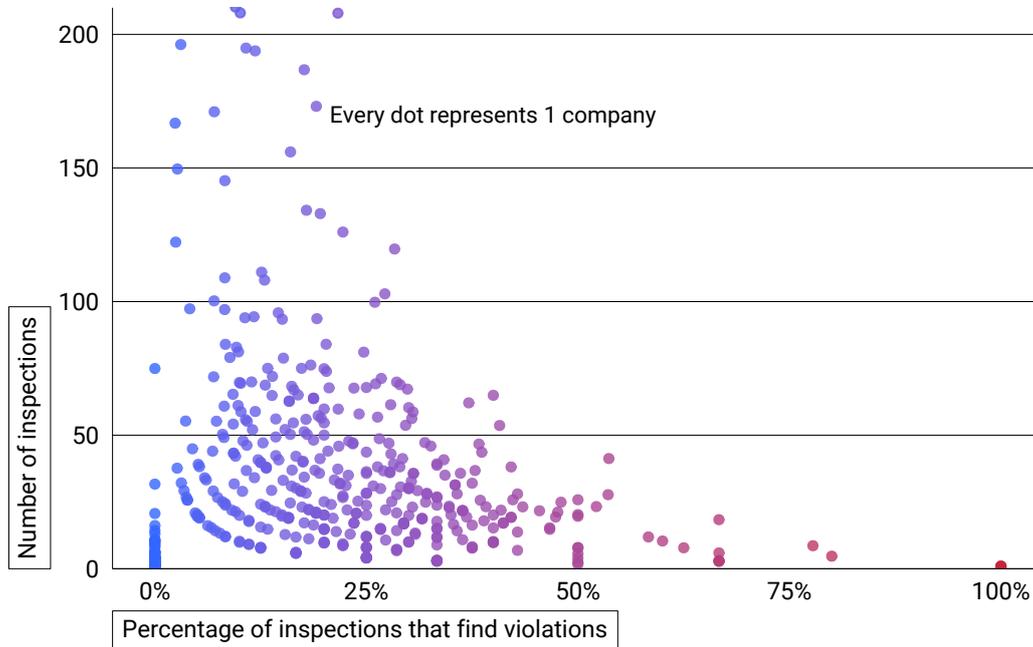
**At most of the companies, up to 25% of inspections found a violation**



What is the relationship between the probability of an inspection finding a violation at a company and the supervision exercised? With a view to risk-based supervision, the higher the probability of a violation (the violation density) the more frequently an inspection should be carried out. The horizontal axis in figure 13 shows what percentage of environmental inspections find 1 or more violations. The vertical axis shows how many inspections are carried out at a company.

**Figure 13** Relationship between probability of an environmental violation and average number inspections per annum

**No positive relationship between violation density and inspection frequency**



Our audit found that there was no positive relationship between the probability of a company committing a violation and the number of times it is inspected. Rather, there seems to be a slightly negative relationship; companies at which a violation is often found (i.e. in at least half of the cases) are seldom inspected.

The right hand side of figure 13 is particularly problematic. The probability of a violation is high but there is little supervision.

**More inspections at a company after a violation is found?**

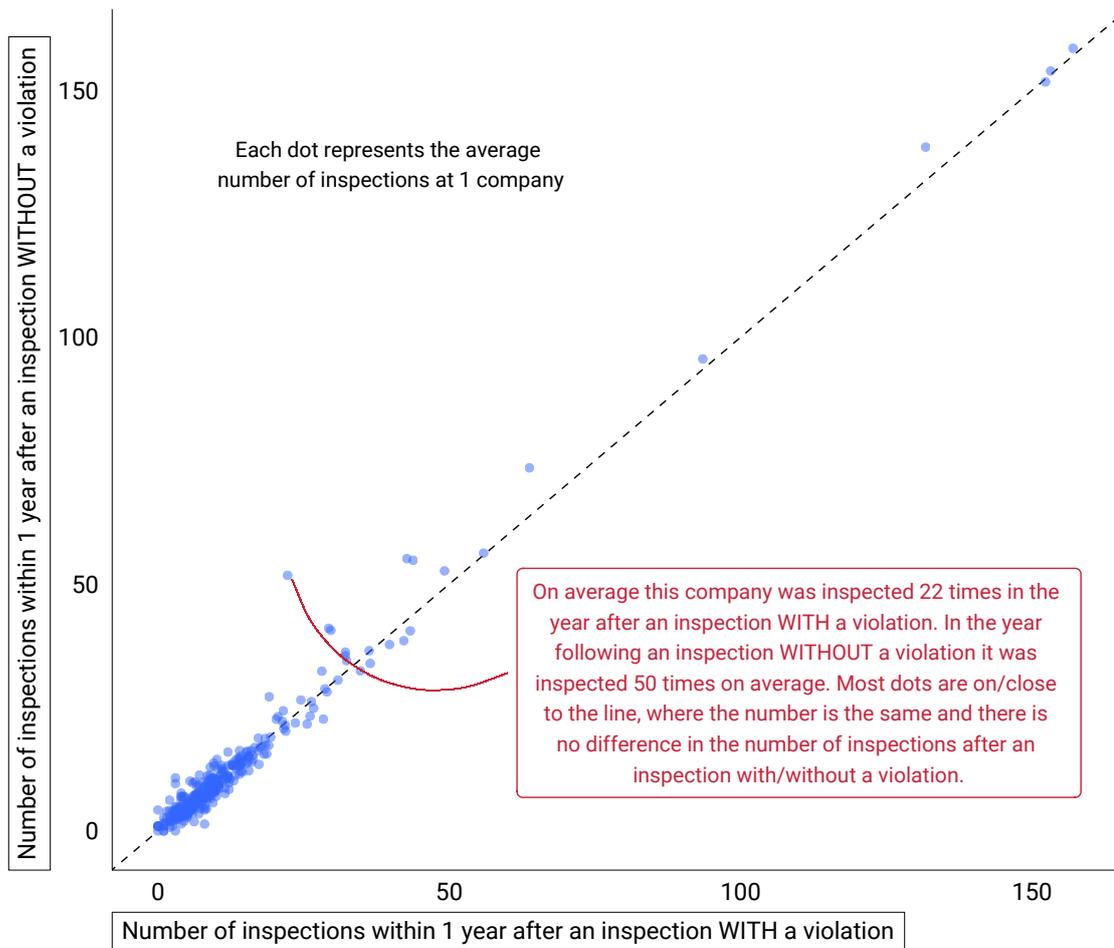
If inspections were risk-based, a company would be inspected more often after a violation. We checked whether this was the case. The figure below shows how often each company was inspected in the year after (a) an inspection had found a violation and (b) an inspection had not found a violation. We would expect more inspections to be carried out in the year after a violation is found.

Our audit found that this is often not the case, as shown in the figure. Companies on the diagonal line on average undergo as many environmental inspections after an inspection *with* a violation (horizontal axis) as after an inspection *without* a violation (vertical axis). Most companies are therefore not inspected more frequently after a violation has been found. Exceptions to this pattern are mainly in the opposite

direction: some companies are inspected *less often* after a violation has been found than after an inspection without a violation. The findings indicate that environmental inspections could be more risk-based.

**Figure 14** Relationship between number of inspections after an inspection with and without a violation, per company

### Companies not inspected more often after a violation

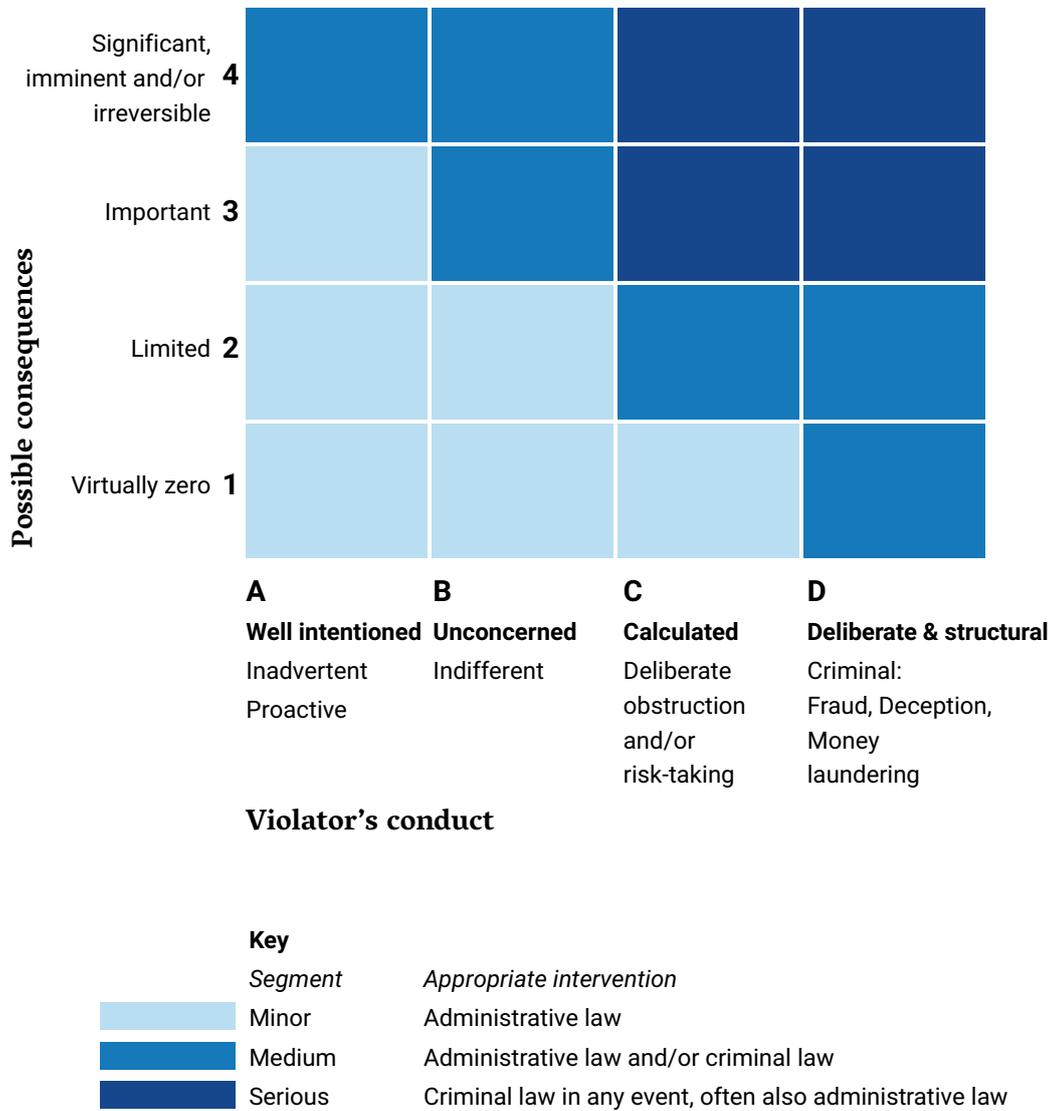


## 6.3 Patterns in enforcement

When a violation is found, the authorities respond with a follow-up check or enforcement measure. The national enforcement strategy (LHS) provides guidance on the appropriate response in the particular circumstances. The purpose of the LHS is to ensure enforcement is consistent. How a violation is dealt with depends on how serious it is (the harm it causes to people and the environment) and the attitude and conduct of the violator. In the case of a serious violation or a deliberate or even

criminal act, criminal law comes into play. Figure 15 shows the intervention matrix of the LHS. The question is whether the LHS is implemented consistently, also in view of the poor information position described in chapter 4.

**Figure 15** National enforcement strategy



Source National enforcement strategy

The figure below presents data on environmental inspections based on the violations found. The type of intervention is related to how serious a violation is. The colour shows how often a particular intervention is made: dark blue is indicative of very frequent interventions and light blue of very infrequent.

**Figure 16** Relationship between seriousness of violations and type of enforcement

		Seriousness of violation				Total
		Minor	Medium	Serious	Unknown	
Light ↑ Type of enforcement ↓ Harsh	 <b>Follow-up check</b>	696	191	31	781	<b>1,699</b>
	 <b>Administrative remedy</b>					
	Warning notice	188	2	0	42	<b>232</b>
	Information	14	6	3	17	<b>40</b>
	Administrative enforcement order	0	14	0	0	<b>14</b>
	Penalty payment	50	78	3	40	<b>171</b>
	 <b>Administrative punishment</b>					
	Administrative fine	1	0	1	0	<b>2</b>
	Closure	0	0	6	0	<b>6</b>
	Administrative settlement	0	0	1	19	<b>20</b>
	 <b>Criminal law</b>					
	Criminal justice	1	5	2	5	<b>13</b>
	Official report	5	1	27	2	<b>35</b>
	<b>Unknown</b>	529	411	20	305	<b>1,265</b>
<b>Total</b>	<b>1,484</b>	<b>708</b>	<b>94</b>	<b>1,211</b>	<b>3,497</b>	

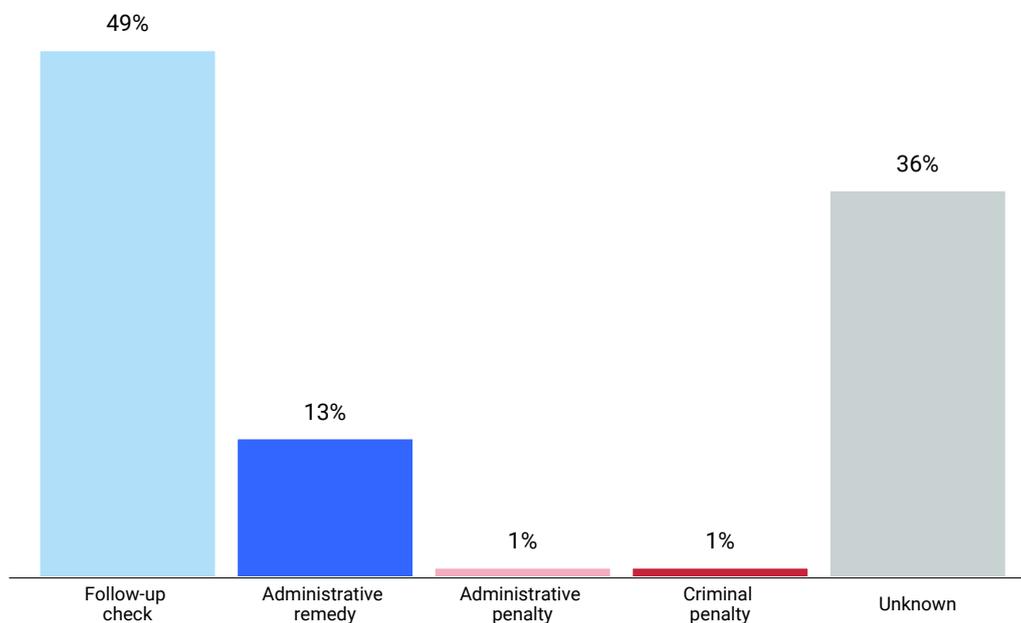
The table shows firstly that certain interventions are often made and others only rarely. A follow-up check is by far the most frequent type of intervention, accounting for nearly half of the total (1,699 times out of a total of 3,497 inspections with a violation). Two other interventions are also frequently made: warning notices and penalty payments (232 times and 171 times respectively). Many other measures are rarely used, such as administrative enforcement orders, administrative fines and the closure of a company (only a few times).<sup>5</sup>

The table also shows that a large number of interventions are unknown. Our audit found that supervisors often failed to record both the seriousness of a violation and the type of enforcement measure taken. In more than a third of the inspections with

a violation, the intervention is not known. The type of intervention is not known in more than half of medium and serious cases.<sup>6</sup> The table also shows there are exceptions to the expected pattern: the response to some serious violations is to provide the company concerned with information or to issue it with a penalty order and the response to some minor violations is to draw up an official report. Where the response is a follow-up check, the follow-up check can, of course, result in a harsher measure if the violation has not been remedied.

**Figure 17** *Type of enforcement following a violation*

**Many follow-up checks, few penalties, but also response often not known.**



To determine whether the enforcement measures are in accordance with the national enforcement strategy, we also asked whether the enforcement was harsher in the case of repeat violations. Our analysis<sup>7</sup> found that the total number of violations committed by a company (the 'umpteenth' violation since the beginning of the observation period, 2015) was not a factor in the severity of enforcement. A tenth violation was dealt with no differently than a first violation. We found the same pattern when we looked at the number of earlier violations in the previous 3, 6 or 12 months.

## 6.4 Application of criminal law

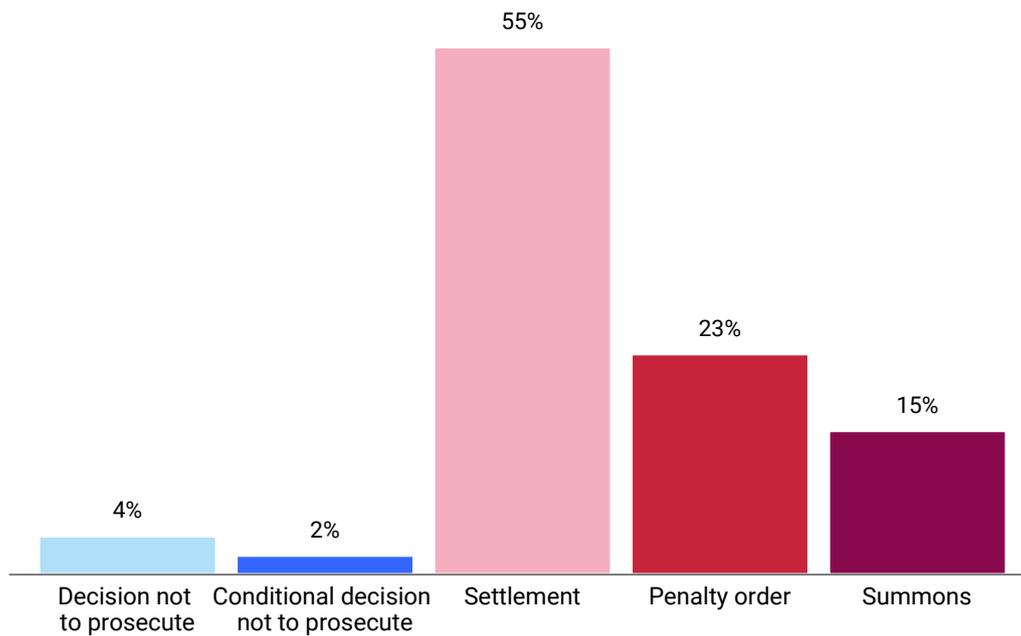
Criminal proceedings are instigated in a small proportion of cases. A case's progress to and through the criminal law system is not without problems. We observed in chapter 3 that information sharing between the administrative and criminal law columns was far from perfect. A further problem is that the police have delivered fewer environmental cases in recent years. In 2016, for instance, the police delivered 75 environmental cases to the National Environmental Chamber, but the number fell to 24 in 2019. This is due in part to staffing problems in the police environmental units (CCV, 2019; National Environmental Chamber, 2019). The progress of environmental cases through the criminal law system is another concern. In particular, fewer complex cases requiring a bespoke approach are settled than are brought (Netherlands Court of Audit, 2018). The limited capacity of public prosecutors is one of the causes of stockpiling by the National Public Prosecutor's Office. Furthermore, there can be logistical complications hearing witnesses: owing to lack of capacity among examining magistrates hearings can take a long time and lead to long waiting lists. By way of illustration, according to the Public Prosecutor's Office 16 of the 26 cases (62%) that have been stayed are appeals that are older than 10 years.

In this section we consider the *completed* criminal cases in the Public Prosecution Service's Criminal Records Register that were brought against the 482 companies we audited. If we take the same period that we took for the cases in *Inspectieview*, there are 175 cases (case numbers) in the Criminal Records Register.<sup>8</sup> For a more detailed analysis of this information, we chose a longer period (2011-2019) so that we could base the analysis on a higher number of criminal cases (304).

The figure below shows that more than half the completed criminal cases were concluded with an out-of-court settlement: an offer by the Public Prosecution Service that allows the suspect to avoid criminal prosecution subject to certain conditions. The suspect usually has to pay an amount of money. A settlement does not establish guilt.

**Figure 18** *Type of enforcement following a violation*

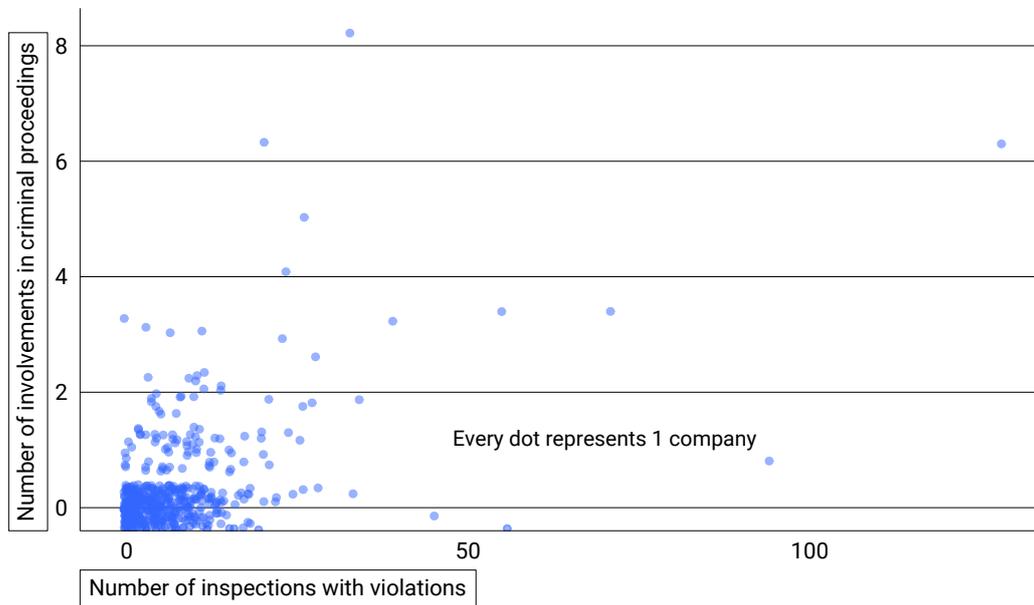
**More than half of the criminal cases conclude with a settlement**



What is the relationship between the application of administrative law or criminal law per company? We first looked at the number of environmental violations found by inspections and the number of criminal cases brought against the companies concerned in the same period (figure 19).

**Figure 19** Relationship between number of environmental violations and the number of criminal cases per company, 2015-2019

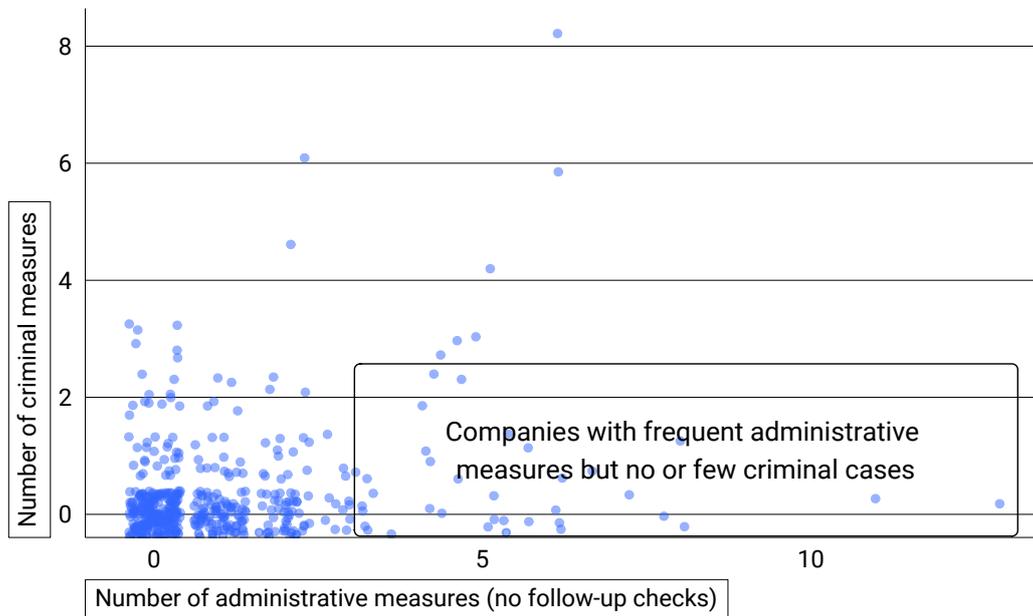
**Companies can commit many violations without criminal consequences**



If we concentrate on companies where administrative enforcement measures are known to have been taken, it becomes clear that administrative measures are often taken at some companies but not criminal measures. These companies are shown in the box in figure 20: administrative measures were taken at the companies at least 3 times but criminal measures were taken only once or not at all. As the enforcement measure is not known following a third of the inspections with a violation the number of administrative measures is probably higher than shown in the figure.

**Figure 20** Relationship between number of administrative measures and number of criminal cases per company, 2015-2019

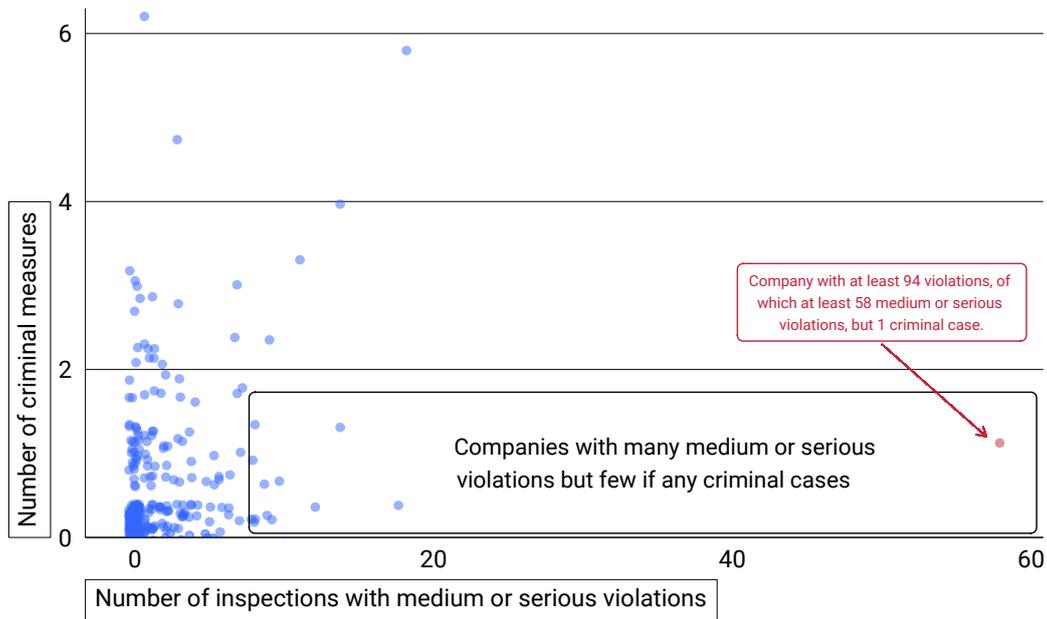
**Frequent administrative measures in combination with few criminal measures**



Given the above, it can be asked why companies that commit violations so frequently are not prosecuted under criminal law. One explanation might be that these companies make many minor administrative errors. We therefore looked at only the number of serious and medium violations (in so far as known).

**Figure 21** Relationship between medium and serious violations and number of criminal cases per company, 2015-2019

**Companies with many medium and serious violations but few if any criminal cases**



The box in figure 21 contains companies that remarkably have been subject to criminal law only once if at all despite the number of medium or serious violations they commit.

## 6.5 Audit opinion

On the basis of these findings we can express an audit opinion on supervision and enforcement.

Audit question Are supervision and enforcement decisions understandable?	
Standard	Met?
Decisions on the type of intervention are understandable.	—
Interventions are in accordance with the national enforcement strategy.	—
The intention is to apply criminal law only if other enforcement methods are inappropriate given the seriousness of the violation and/or earlier violations by the same company.	—

✓ Met    ✗ Not met    — Partially met

### **Explanatory note**

*Decisions on the type of intervention are understandable*

**Partially met.** There are significant differences in the frequency of company inspections. The differences cannot be explained in full. We also note that environmental inspections are inadequately risk-based. Some high-risk companies are rarely inspected and companies are generally not inspected more frequently after they commit a violation.

In theory the decision to intervene should be understandable. The national enforcement strategy provides guidance. It requires harsher enforcement for more serious violations and if the attitude and conduct of the violator give cause. The latter component in particular is open to interpretation.

*Interventions are in accordance with the national enforcement strategy*

**Partially met.** It is not always clear why a particular administrative intervention is chosen. Although there is a pattern of harsher measures for more serious violations, there are exceptions. In practice, previous conduct by a violator plays no discernible role in how harsh enforcement is, even though it is required under the national enforcement strategy. We also see that certain interventions, such as follow-up checks, penalty orders and warning notices, are applied frequently whereas others, such as the BIBOB and administrative fines, are rarely applied.

*The intention is to apply criminal law only if other enforcement methods are inappropriate given the seriousness of the violation and/or earlier violations by the same company*

**Partially met.** At some companies we see an unexpected combination of many violations but few criminal cases. It can be asked why criminal law is not applied in these cases. The answer may be that information on these 2 indicators is kept in different information systems that are not connected to each other.

Criminal environmental cases are often concluded with an out-of-court settlement, in practice the payment of an amount of money without the establishment of guilt. It can be asked whether settlements are relied upon too readily and criminal retribution too reluctantly.

The conclusion of a criminal case is hampered by problems in the police's delivery of environmental cases and the cases' limited progress through the criminal system (Public Prosecutor's Office, examining magistrate).

# 7.

## Is the approach effective?

An important question is whether the interventions persuade companies to commit fewer environmental violations. In chapter 4 we noted that the extent of the problem was unknown, as was the approach to it. This lack of insight in turn creates a lack of insight into the effectiveness of the approach. With the aid of the data we analysed, however, we can say something about effectiveness. 2 audit questions need answering:

- *Are interventions adequate deterrents?*
- *Do interventions improve compliance?*

We answer the effectiveness question in a series of steps. In section 7.1 we look at the results of relevant policy reviews and evaluations of the VTH Act and ask whether conclusions can be drawn on effectiveness. Section 7.2 looks at the way in which criminal cases are dealt with. We ask whether the conclusion of criminal cases leads to deterrence and retribution for loss or damage. In section 7.3 we present the results of an effectiveness analysis and ask whether interventions lead to fewer violations. We close this chapter with a preliminary audit opinion based on the above standards (section 7.4).

### 7.1 Evaluations of the VTH system and their effects

The explanatory memorandum to the VTH Act states that the minister and state secretary concerned are responsible for evaluating the effectiveness of the VTH system. Several evaluations and policy reviews have been carried out in recent years. None of them has expressed well-founded opinions on policy effectiveness (Beren-schot, 2017, 2019; Ecorys, 2018; Kwink Groep 2018; Lysias, 2015; Ministry of V&J, 2014).

There are no other Dutch effectiveness studies regarding environmental crime. We believe the quality of the data in this field is probably one of the reasons for this (Netherlands Court of Audit, 2021).

## 7.2 Deterrence

We asked whether the severity of punishment influenced compliance. This was possible only in criminal cases (there is no data on the extent of administrative penalties and fines). In criminal cases there is no relationship between the severity of punishment and the violator's conduct. In other words, harsher punishments do not improve compliance with the rules.

The figure below shows the distribution of fines and settlements imposed by the Public Prosecution Service or a criminal court for the period 2011-2019.

**Figure 22** Amount of criminal fines and settlements, 2011-2019

**If a fine is imposed, it is usually less than €10,000**

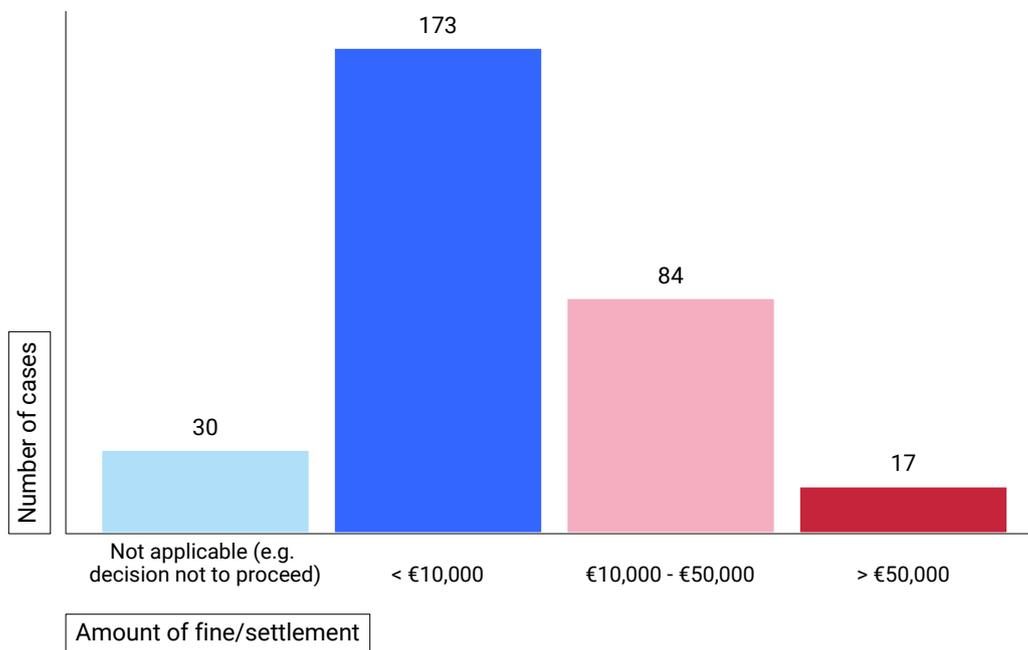
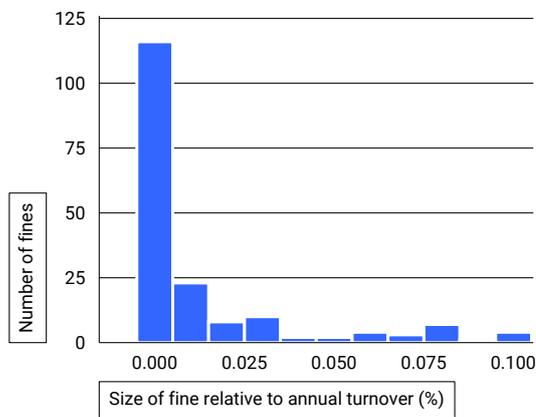


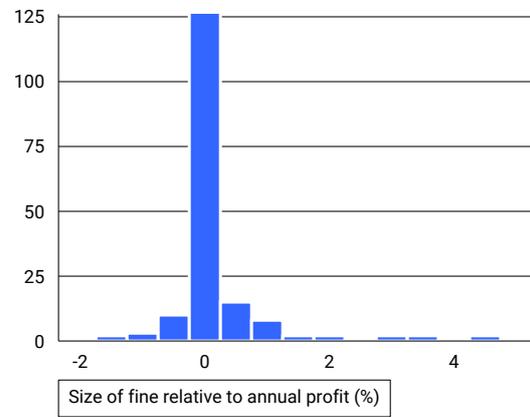
Figure 23 shows the amount of fines imposed in criminal cases relative to the annual turnover and annual profit of each parent company. It can be seen that the penalties and settlements are often just a fraction of the companies' turnover and profit.

## 23 Amount of criminal fines/settlements relative to annual turnover and annual profit by company, 2011-2019

**98% of criminal fines less than 1% of annual turnover**



**990% of criminal fines less than 1% of annual profit**



\* Based on data over a longer period (2011-2019) in order to include more cases. Data on the period 2015-2019 produce a similar picture.

The fines and settlements are often so low that they have little deterrent effect. Bear in mind though that these are for criminal cases only. Administrative fines are not included; on average, they will be even lower.<sup>9</sup> No information on administrative fines is available from the inspection data.

Besides deterrence, criminal law has another goal: retribution. We found that this goal was rarely if ever attained. We base this conclusion on the following findings:

- most cases end in an out-of-court settlement with the company making a usually small payment without accepting guilt. See also section 6.5;
- the proportion of cases that actually result in a penalty (penalty order issued by the Public Prosecution Service or a court decision) usually end in a payment that is just a fraction of the suspected company's turnover or profit.

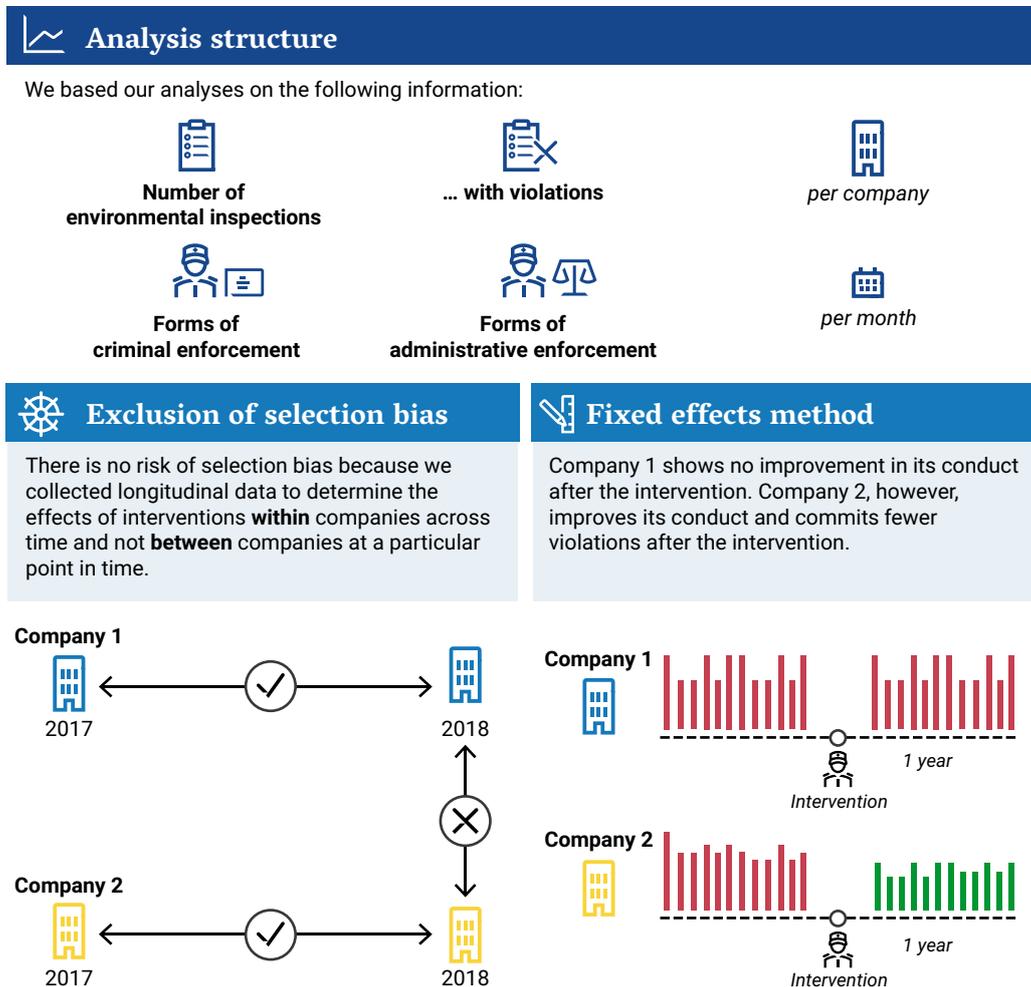
Criminal law therefore rarely censures environmental crime. It cannot be ruled out that this is due in part to the problems concerning the inflow of environmental cases and their progress through the criminal law system (see chapter 6).

## 7.3 Effectiveness analysis

In this section we ask whether the various forms of enforcement are effective at reducing environmental violations. We do so on the basis of statistical analyses of the data in Inspectieview, the Seveso local environmental services' registers and the JDS.

The figure below summarises how we carried out our analyses

**Figure 24** Performance of effectiveness analyses



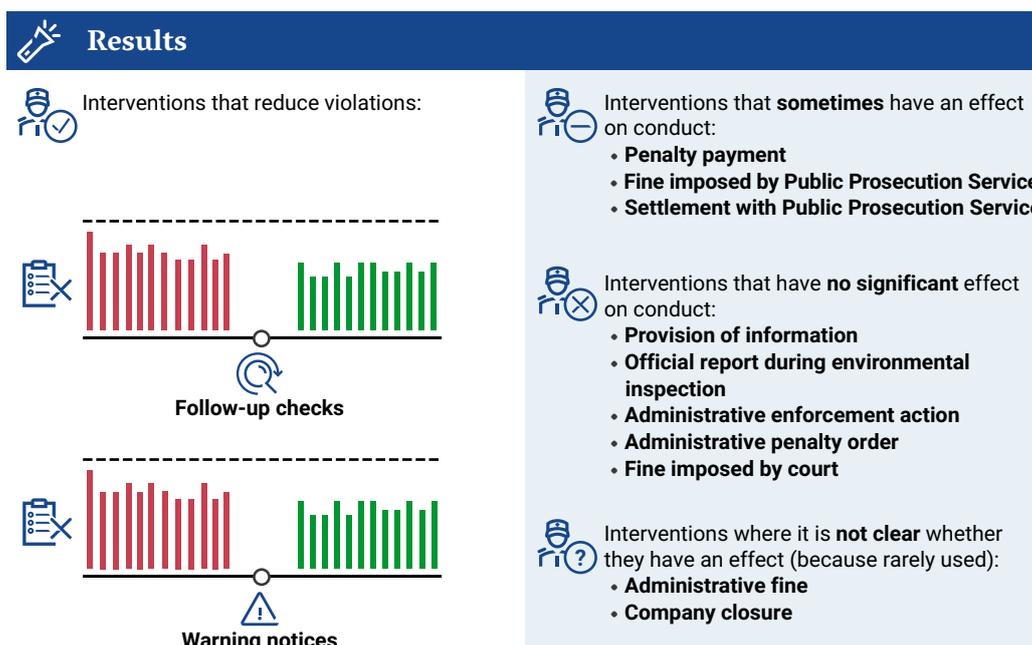
### Exclusion of selection bias

To take the best possible account of differences between the companies, we used the fixed effects method to obtain an insight into the effectiveness of inspections and enforcement. The method is considered in detail in appendix 3. This model does not compare differences *between* companies but *within* companies. We asked to what extent do companies commit fewer environmental violations in the 12 months following an intervention in comparison with other periods (before the intervention, longer than 12 months afterwards).

### 7.3.1 Results of the effectiveness models

This section considers whether different forms of intervention result in fewer violations in the period following an intervention. The results are summarised in the figure below.

**Figure 25** Results of the effectiveness analyses



We worked with several variants of effectiveness models to ensure the findings were robust. They are considered in appendix 3. Nearly all our models found follow-up checks and warning notices to be effective. Some interventions are effective only in certain situations:

- penalty payments: effective in medium and serious cases and for a shorter period (6 months after imposition);
- settlements with the Public Prosecution Service: effective in medium and serious cases;
- Court settlements: effective for a short period (6 months).

No interventions have an adverse effect and result in more violations.

### How big are the effects?

Our analyses also enabled us to calculate the size of the effects. We related the size of the effects to the number of times that an intervention was made in the period 2015-2019.

- Follow-up checks prevented further violations following nearly 750 inspections.
- Warning notices prevented further violations following more than 160 inspections.

## 7.4 Audit opinion

On the basis of our findings we came to a preliminary audit opinion on the effectiveness of the approach.

<b>Audit questions</b> <b>Are interventions adequate deterrents?</b> <b>Do interventions improve compliance?</b>	
Standard	Met?
Companies are deterred by the perceived risk of being caught and the penalty.	—
Interventions help reduce environmental offences.	—
The responsible ministries set the required compliance level.	✗
System responsibility must regularly entail targeted monitoring and evaluation of the performance of the system and its components and of the outcomes attained. The responsible parties must attach conclusions to the findings of such studies (VTH Act).	✗

 Met
  Not met
  Partially met

### Explanatory note

*Companies are deterred by the perceived risk of being caught and the penalty*

**Partially met.** Given the average frequency of 8 inspections per company per annum, the risk of being caught would appear to be high. Our audit found that there was a clear relationship between the number of environmental inspections and the number of environmental violations. It is therefore probable that more violations would be detected if more, and more risk-based inspections were carried out. This applies in particular to companies that are seldom inspected but commit relatively many violations (see chapter 6). That the perceived risk of being caught improves compliance is confirmed by the finding that follow-up checks result in fewer violations. There is no relationship between the penalty imposed in criminal cases and improved company compliance. Fines are often so low that in most cases they have no deterrent effect. Retribution as a function of criminal law rarely if ever comes into its own. This is due to the low fines in combination with the fact that companies often do not have to admit guilt (in settlements).

*Interventions help reduce environmental offences*

**Partially met.** Some interventions, such as follow-up checks and warning notices, are effective. Others, such as criminal fines imposed by judges, are not. Some interventions are partially effective. Fines issued by the Public Prosecution Service, for instance, are effective only in medium and serious cases.

*The responsible ministries set the required compliance level*

**Not met.** The recent *A Good Neighbour is Worth More!* programme (I&W/J&V, 2020) recognises that improvements are needed.

*VTH Act: 'System responsibility must regularly entail targeted monitoring and evaluation of the performance of the system and its components and of the outcomes attained. The responsible parties must attach conclusions to the findings of such studies'*

**Not met.** The published studies provide no insight into effectiveness.

# 8.

# Conclusions and recommendations

## 8.1 Conclusions

We conclude from our audit that the supervision and enforcement system in place to combat environmental crime and violations is inadequate. Owing to the lack of information, the supervisors, enforcement organisations, minister and state secretary are fumbling in the dark. We come to this conclusion as follows.

### **There is little understanding of the extent and nature of the crimes or of the supervision and enforcement and their effectiveness**

The extent of environmental crime and violations is not known. There is no comprehensive overview of the supervision and enforcement measures taken, to say nothing of the effectiveness of the approach. This is not only the case at the Seveso and not-quite Seveso companies we audited but also at legal persons in general. This lack of information harbours the risk of inconsistent and ineffective supervision and also of unequal treatment of the companies that commit a violation. Companies that do comply with the law and incur costs to do so are accordingly not competing on a level playing field (see also Van Aartsen Committee, 2021). This inadequate information position is due in part to the way in which legal persons are registered in national information systems. Names, addresses and other company details are not linked to a unique identifier such as a 12-figure Chamber of Commerce number for each company location. It is thus uncertain what inspection and enforcement data belong to which company. This is a recurrent problem in Inspectieview, the local environmental services' registers and the JDS.

Even after we edited and analysed the data, many relevant details were not available for some key indicators. In a third of the cases there was no information on how serious the violations were or what enforcement measures were taken. In half of the medium and serious cases, there was no information on enforcement.

The ILT's information position means it cannot adequately fulfil its function of lower-tier supervisor. This is particularly important because this function consists of information-driven and remote supervision of the provinces. The ILT therefore cannot provide the State Secretary for I&W with the information she needs on the performance of the VTH system, any shortcomings in supervision and enforcement and whether companies are being treated unequally. The state secretary therefore cannot adequately fulfil her responsibility for the legal system. She is expected to collect appropriate information on the operation of the VTH system in order to assess the system's operation and inform parliament accordingly.

#### **Poor compliance with environmental laws**

Our audit found that nearly 3,500 environmental inspections carried out over a period of 5 years (2015-2019) at the 482 companies we audited detected 1 or more violations. On average, 18% of the inspections detected a violation. Both the data on environmental inspections (Inspectieview, registration details of the Seveso local environmental services) and the data in the Criminal Records Register (JDS) identify a relatively small number of repeat violators. Environmental inspections reveal that 17% of the companies are responsible for 50% of the violations detected. In the JDS, 6% of the companies are involved in 56% of the criminal cases.

#### **Enforcement and supervision decisions are not always understandable**

The companies we audited undergo many environmental inspections, 8 per annum on average. There are significant differences, however, in the level of supervision per company. Companies with a high risk of violation are seldom inspected in absolute terms. The supervisor seems to pay little attention to them. Supervision particularly of these companies is rarely risk-based. It is also clear that enforcement is not in accordance with the national enforcement strategy. It is true that enforcement is harsher for more serious violations, but whether the company commits its first or tenth violation has little bearing on the choice of enforcement measure. Furthermore, the interplay between administrative law and criminal law is uncertain: some companies that commit many violations are rarely involved in criminal proceedings, even if they commit medium to serious violations. Criminal cases are usually concluded with an out-of-court settlement or a fine issued by the Public Prosecution Service of less than €10,000, often less than 1% of the company's profit or turnover. In such cases (the

majority), settlements and fines have little deterrent effect. There is little if any retribution for loss or damage caused in criminal cases owing to the low fines imposed and the fact that settlements are agreed without establishing guilt.

### **Interventions often do not improve compliance**

Our audit was the first to consider at the effectiveness of the approach to environmental crime and violations. After intensive editing and analysis of the data in Inspectieview, the local environmental services' registers and the JDS, it revealed what interventions in 2016-2019 had a demonstrable effect on reducing the number of inspections that detected a violation in the following year. We determined this with the aid of fixed effects analysis. This means that only changes *within* companies were studied. The analyses were therefore not susceptible to selection bias, which occurs when comparisons are made between companies.

Interventions that had a demonstrable effect in the following year were follow-up checks and warning notices. If the results of the fixed effects analyses are extrapolated to how often those interventions were made between 2015-2019, the model estimates that the follow-up checks carried out after nearly 750 inspections prevented 1 or more violations per inspection and warning notices prevented violations following about 160 inspections.

Several other types of intervention have only a limited effect. Administrative penalty payments and fines issued by the Public Prosecution Service are effective only in medium and serious environmental cases. If we look at effectiveness over a period of 6 months, administrative penalty payments and settlements with the Public Prosecution Service again reduce the number of inspections that find a violation. Communication-based methods to influence behaviour, such as persuasion and publicity, are not registered systematically. In the current situation, their effectiveness unfortunately cannot be assessed nationally.

**Audit question**  
**Do supervisors, the minister and state secretary have sufficient insight into the extent of environmental crime detected, the supervision exercised and the effectiveness of the approach?**

Standard	Met?
Supervisors and enforcement organisations have sufficient knowledge and information to recognise the risks of environmental crimes committed by companies.	✗
'The minister responsible for the system must put the right conditions in place for the administrative law enforcement system to function correctly. The Minister of Justice and Security has a similar responsibility for the criminal law enforcement system. They are responsible not only for the more material conditions, such as funding and centralised knowledge sources, but also for the presence of sufficient checks and balances in the system. This includes collective responsibility for the VTH system and cooperation within it, horizontal democratic control and, additionally, lower-tier supervision.' (VTH Act)	✗
The efficiency and effectiveness of interventions and compliance are monitored consistently.	✗
Ministries and enforcement organisations know the extent to which companies comply with rules and standards.	✗
Information on interventions and compliance or non-compliance is such that the efficiency and effectiveness of the interventions can be measured retrospectively.	✗
The information provided by enforcement partners (environmental services, police, inspectorates, Public Prosecution Service) provides an insight into the environmental crimes that are committed. The necessary information sharing is in order.	✗

✓ Met ✗ Not met — Partially met

**Audit question**  
**Are supervision and enforcement decisions understandable?**

Standard	Met?
Decisions on the type of intervention are understandable.	—
Interventions are in accordance with the national enforcement strategy.	—
The intention is to apply criminal law only if other enforcement methods are inappropriate given the seriousness of the violation and/or earlier violations by the same company.	—

✓ Met ✗ Not met — Partially met

<b>Audit questions</b> <b>Are interventions adequate deterrents?</b> <b>Do interventions improve compliance?</b>	
Standard	Met?
Companies are deterred by the perceived risk of being caught and the penalty.	—
Interventions help reduce environmental offences.	—
The responsible ministries set the required compliance level.	✗
System responsibility must regularly entail targeted monitoring and evaluation of the performance of the system and its components and of the outcomes attained. The responsible parties must attach conclusions to the findings of such studies (VTH Act).	✗

 Met
  Not met
  Partially met

We conclude that the approach to environmental crime and violations should be improved and made more effective. The poor information position of the supervisors, minister and state secretary creates serious problems: many environmental violations, too few risk-based inspections, inconsistent enforcement and limited effectiveness of the interventions. Owing to their lack of information, the supervisors, enforcement organisations, minister and state secretary are fumbling in the dark and effective steering is impossible. The criminal law system has a further problem owing to the inflow and progress of cases. Possibly for this reason, criminal cases rarely conclude with a retributive measure. Environmental crime is therefore rarely censured.

The approach to environmental crime and violations can play an important part in achieving the climate goals. To achieve them, better supervision and enforcement are necessary and, with a view to effectiveness, better supervision of the implementation.

## 8.2 Recommendations

At national level, the quality of information must be substantially improved. If the minister and state secretary have access to better information, the government can hold the provinces accountable for shortcomings in the performance of their VTH tasks. This is one of their supervisory responsibilities. This report shows that this is possible using the current information systems. Our audit centred on Seveso and not-quite Seveso companies. Better information must also be available on other sectors with high environmental risks, especially those that are rarely supervised.

The minister and state secretary, however, do not have the direct management tools necessary to bring about change. The State Secretary for I&W's task is to enable a system to function whose direct management tasks and powers are exercised locally. The Minister of J&V's domain is populated by independent and autonomous organisations such as the police and the Public Prosecution Service. The state secretary has direct responsibility for the lower-tier supervisor, the ILT, however, and can order it to take action. She can ask the ILT to improve the information available on the VTH system. It would then be possible to improve the quality of Inspectieview and make better use of it. The Minister of J&V must consult the police and the Public Prosecution Service to find solutions that improve the inflow and progress of criminal cases through the system, using the available staff establishment at the police and the Public Prosecutor's Office.

The approach to environmental crime and violations must be effective if it is to minimise the harm to nature and the environment. Our audit found that only a limited number of interventions were effective. There may be other effective measures, but they could not be identified from the data available to us. To give an example, the measures taken against repeat violators are directed at changing their attitude and behaviour. The associated interventions aim to change the beliefs of employees and managers. Better and standardised records of such initiatives would help in the search for 'what works'. This would bring more effective policy a step closer. Other interventions considered in our audit, such as the temporary closure of a company, are rarely applied.

Enforcement is not directed only at preventing repetition, in some cases it is also concerned with retribution for the loss or damage caused. This aim is reserved to criminal law and is inadequately applied in cases of environmental crime.

We recommend that the Minister of J&V, the Public Prosecution Service and the judiciary work together to make improvements that express society's disapproval of environmental crime more forcefully.

We recommend that the State Secretary for I&W:

- take measures to ensure that all supervisors record information in a uniform manner so that all parties concerned collect, keep and manage information in the same way (digital unitary state);
- improve the quality of information on the extent of environmental crime and violations, repeat violations, supervision and enforcement. The information position must make use of Inspectieview and criminal data and should be permanently updated and shared with all parties concerned;

- on the basis of this information position, have the ILT monitor enforcement and its supervision. She can use the information to determine whether there are serious shortcomings in supervision and enforcement, disproportionate repeat violations by particular companies and unequal treatment of companies, and intervene where necessary. Monitoring will begin at provincial level based on the information shared and can subsequently be steered at national level;
- study the effectiveness of supervision and enforcement in practice;
- in consultation with the Minister of J&V, develop a strategy for repeat violators among the small but readily identifiable group of companies that are responsible for most of the environmental crime and violations.

We recommend that the Minister of J&V:

- resolve bottlenecks in the criminal law system regarding the approach to environmental crime (police, Public Prosecution Service, criminal courts);
- improve the quality of information on the criminal approach to environmental crime;
- link the information position thus created to the administrative approach to companies. This will reveal whether the criminal and the administrative columns are sufficiently complementary. This information is essential to the ILT;
- subsequently make improvements in the criminal approach to environmental crime, so that criminal enforcement is effective and sufficiently retributive.

General recommendation:

- We recommend that inspection findings be published and shared with the public so that it is known which companies comply with the rules and which do not, and related discussions are based less on speculation.

Final recommendation:

- We recommend that the minister and the state secretary set concrete goals in their budgets and then periodically, 2 or 3 times a year, inform parliament of the progress made towards them and their effectiveness and thus of their social impact. We suggest that ministerial annual reports would be an appropriate medium for this.

# 9.

# Response of the minister and state secretary and the Court of Audit's afterword

The State Secretary for I&W and the Minister of J&V responded to our draft report on 17 June 2021. Their response is summarised below. The full response (in Dutch) has been published on [www.rekenkamer.nl](http://www.rekenkamer.nl). We close this chapter with our afterword.

## 9.1 Response of the State Secretary for I&W

The state secretary appreciates the audit, conclusions and recommendations. She finds the results disquieting and shares the Court's concerns regarding the problems we found. She thinks the main conclusion that the system functions inadequately is clear and takes it very seriously. The report makes it clear that action is needed now to resolve the problems once and for all.

The audit results will be applied in I&W/J&V's *A Good Neighbour is Worth More!* programme to raise awareness of the extent of the problems and retain a sense of urgency to tackle them. The state secretary agrees that the Van Aartsen Committee came to similar conclusions in its report. She will therefore implement the Court's recommendations in conjunction with the Van Aartsen Committee's recommendations. Further to the recommendations on data quality and the information position, which the Court drew attention to in its first report, *An Invisible Problem*, in early 2021, the parties concerned have set up a taskforce to improve the use of Inspectieview. It will carry out the following actions:

- source data owners will be encouraged to ensure the data they share through Inspectieview are correct;

- measures will be taken to make source data owners share more and better information through Inspectieview, including information from the Public Prosecution Service. Whether the unconnected environmental services are connected by 1 January 2022 will also be monitored;
- environmental services will be helped to make optimal use of Inspectieview in their primary process, for instance through training courses and the sharing of analytical capacity;
- in addition, the state secretary will consult her partners and the ILT to arrive at an approach for the further standardisation and correct registration of supervisory information. Some steps will take time, according to the state secretary.

She will strengthen lower-tier supervision as part of her implementation of the Van Aartsen Committee's recommendations. She will see whether and how government supervision can be strengthened and whether the ILT has a part to play. The state secretary regards studying the effectiveness of supervision and enforcement, as recommended, to be part of an effectively functioning and monitored VTH system. This is consistent with the current biennial study of the quality of the VTH system. The study is not specifically concerned with the effectiveness of supervision and enforcement measures. Perhaps it could be extended. The state secretary also sees a link with the final recommendation to set concrete goals to assess effectiveness. This would require further study to identify meaningful and measurable indicators that can provide an insight into the impact of supervision and enforcement on society. The state secretary will carry out this study together with the Minister of J&V and also refer to it in the further implementation of the Van Aartsen Committee's recommendations.

The state secretary sees the recommendation to work with the Minister of J&V on an approach to repeat violators as confirmation of a project she has launched with the Seveso related partners. The extent to which company characteristics can predict the violation of safety rules and the relationship between the number of violations found and the number of announced and unannounced inspections will also be studied.

Regarding the decision to publish inspection results, the state secretary refers to the competent authorities and supervisors and the Open Government Act (WOO). Several initiatives have been taken to prepare for the introduction and implementation of the WOO. The state secretary will raise the recommendation to publish the results of environmental inspections in the Environmental Council, October 2021.

## 9.2 Response of the Minister of J&V

The Minister of J&V recognises the audit findings and thinks they confirm the findings of earlier, non-quantitative studies and the Van Aartsen Committee's report. He also agrees with the Court's conclusion that the approach to environmental crime and violations can play an important role in achieving the climate goals. In view of the problems found, he accepts the need for decisive action.

Like the State Secretary for I&W, the minister refers to the *A Good Neighbour is Worth More!* programme, which covers the same issues as our recommendations. The ministry, Public Prosecution Service, police and the ILT's investigation and intelligence service (ILT-IOD) are taking measures with input from the local environmental services to make the criminal law system more effective and efficient. In addition, the Strategic Environmental Chamber has launched a study to optimise the organisation of the system. The competent authority is responsible for steering policy and setting investigation priorities. The minister agrees that the information position needs strengthening and will consult with the Public Prosecution Service. The minister will incorporate the Court's recommendations into the *A Good Neighbour is Worth More!* programme. Some recommendations, such as those regarding equipment and legislation, will have to wait until the new government is installed.

The minister appreciates the Court's final recommendation of setting concrete goals in the budget and subsequently informing parliament through the ministries' annual reports of the progress made towards them and their effectiveness and impact on society but thinks the State Secretary for I&W must be consulted before specific and measurable goals can be set.

## 9.3 Court of Audit's afterword

Both the minister and the state secretary state that our findings are a 'concern'. They then refer to other studies that came to conclusions similar to those in 2 reports the Court published this year and those made by the Van Aartsen Committee. We are aware of those reports. However, it is not clear from their response how they intend to resolve the problems, apart from through consultation and an ongoing action programme. We wonder why the Court has to come to the same or similar conclusions again even though it was known that the information was a 'concern'. Our audit found that a solution is now no closer and that the information in this present report was not known earlier – and could not have been known earlier.

The next question is whether too much reliance is placed on undertakings, consultation and action programmes that might not produce the desired results. Why will they achieve the desired results now when they have not in the past?

In our opinion, the minister and state secretary have a key role to play in resolving the problems. We believe the government and parliament should debate whether the minister and state secretary will exercise their powers regarding inspections, regional agencies and parties in the criminal justice system. And if so, how should they exercise them? The debate should be based on our audit and all the other reports that have apparently been published. What will be the new, effective approach to combat environmental crime?

# Appendix

## Appendix 1 Bibliography

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## Appendix 2 Methodology, analysis of environmental crime data

The analyses in this report could be carried out only after making many improvements to the quality of the data. The problems we encountered were so serious that we have produced a separate report on them (*An Invisible Problem, Poor quality of data on environmental crime and offences*, see [www.rekenkamer.nl](http://www.rekenkamer.nl)). We used several data sources for this audit. The main ones were:

- Inspectieview;
- registration data of 6 BRZO environmental services;
- judicial information in the Criminal Records Register;
- data from the Chamber of Commerce, via the Company.info data portal.

The greatest challenge we faced in this project was to link the right data in and between these sources to the right company. We also found that a lot of data was missing.

### Linking inspection data

Companies are recorded in several ways in the data sources. They do not have a unique identifier and are not linked to an underlying database. We became aware of this when we tried to link 2 data sources to each other and also when we tried to link data within a single data system, Inspectieview. Each company location was recorded in several ways in Inspectieview and subsequently in the local environmental services' registers and the other data sources. We established links in several ways – by means of a combination of automatic and manual links – based on company names, addresses and Chamber of Commerce registration numbers.

We could find no inspection data on 62 of the company locations in our selection (neither in Inspectieview nor in the relevant Seveso environmental services' registers). Moreover, some company locations that we had thought to be 2 separate locations during this phase later proved to be 1 location. We ultimately identified 496 company locations. We then applied a series of filters that also influenced the number of companies and/or inspections, for example:

- the date of an inspection had to be between 1 January 2015 and 31 December 2019;
- planned and ongoing inspections were excluded, only completed inspections were considered;
- inspections by the Netherlands Food and Consumer Protection Authority and the Social Affairs and Employment Inspectorate were excluded.

This also had an impact on our numbers: we came to 482 company locations for our analysis.

### **Link to other data sources**

Besides Inspectieview, we used a number of other data sources. We could not establish links in any of these sources by means of a simple key. We had to use the hybrid approach mentioned above, based on company names, addresses and information from the Chamber of Commerce (through a combination of automatic and manual links). Data was used from the following sources:

### **JDS: Criminal Records Register**

We received data from the Ministry of J&V on criminal cases pertaining to the companies on our list. We were thus able to form a picture of the number of criminal cases and their outcomes.

### **Basic company information from Company.info**

We received further information about the companies we audited from the Company.info portal. This basic information include addresses, sectors, company size in FTEs, company structures, etc. We also obtained company financial information from this source.

## Appendix 3 Effectiveness analyses

We used effectiveness analyses to determine whether inspections and the various enforcement measures reduced the number of environmental violations a company committed. We based the answers on the results of statistical analyses of the data in Inspectieview, the Seveso local environmental services' registers and the JDS.

### Exclusion of selection bias

We used the fixed effects method to take as full account as possible of the differences between companies. This model shows a measures' impact as the difference between the number of violations in the 12 months *after* a measure has been taken and in other months (i.e. before the measure was taken and more than 12 months afterwards). To avoid selection bias we therefore did not make comparisons between the companies: there are many differences between companies other than whether or not a penalty has been imposed. Not taking such differences into account would influence the validity of the estimated impact of the intervention.

### Monthly observations per company

We calculated the number of inspections, violations and enforcement measures at each company *per month*. We looked at the impact of inspections and enforcement measures in the years 2016 to 2018. As the data set continued until the end of 2019, we could look at least one year ahead of every monthly observation. We needed to calculate the number of inspections with violations per month.

### Results of the effectiveness analysis

Table 1 summarises the findings of our fixed effects analysis. For inspections, we modelled the immediate impact of the interventions: the more inspections that were carried out the more violations were found. For other interventions, the model looked at an intervention's impact a year after it was made.

### The results

The table below shows the results of the fixed effects analysis. We can see that more violations that are detected if more inspections are carried out at a company. We can also see that 2 interventions have the desired impact of reducing the number of inspections with violations. They are: follow-up checks and warning notices.

**Table 1** Fixed effects model: effect of interventions on number of inspections with violations at a company, per month, 2016-2019

Predictor	Coefficient	Standard error	T value
Intercept	-1.503**	0.3577	-4.201
Number of inspections	0.2269**	0.0070	32.366
Follow-up check	-0.1799**	0.0689	-2.612
Information	-0.2420	0.2209	-1.096
Warning notice	-0.3078**	0.1058	-2.909
Penalty payments	-0.1417	0.0887	-1.597
Administrative penalty	0.4483	0.7042	0.637
Administrative fine	-0.1622	16.48	-0.010
Administrative settlement	-0.1530	12.99	-0.008
Company closure	-2.080	1.131	-1.838
None/unknown	-0.0660	0.0651	-1.013
Criminal fine by judge	0.3563	0.2375	1.303
Public Prosecutor fines	-0.3184	0.1782	-1.787
Public Prosecutor settlement	-0.1143	0.1199	-0.953

\* significant at 5% level, \*\* significant at 1% level (two-tailed test)

### Supplementary analyses

Supplementary analyses found that besides follow-up checks and warning notices several other interventions had the desired effect in certain circumstances. They were (administrative) penalty payments (only for medium and serious violations), fines issued by the Public Prosecution Service (only for medium and serious violations) and settlements with the Public Prosecution Service (shorter effectiveness of 6 months instead of 12).

## Appendix 4 Endnotes

1. The Major Accidents (Risks) Decree provides for stricter safety inspections, known as BRZO inspections, at Seveso companies. Unlike not-quite Seveso companies, Seveso companies undergo separate BRZO inspections. Various government services – usually environmental services, the Social Affairs and Employment Inspectorate and water quality managers – work together to ensure that the companies observe the safety rules and that supervision of the rules is consistent. The inspections are reported upon in, for instance, the periodic BRZO monitors (BRZO+, 2020) and The Safety State of Major Risk Companies (I&W/SZW/J&V, 2020). Environmental crime is not a separate part of such BRZO inspections and therefore cannot be properly assessed from the inspection information. It can be assessed using the environmental inspections we studied in this audit.
2. <https://brzoplus.nl/inspectie-resultaten/bedrijvenlijst/>
3. Under REACH, companies in the EU must register all chemicals they produce or import in substantial volumes. REACH also requires them to produce information on the substances and pass it on to their customers.
4. We refer to the 6 geographical land areas of the Seveso local environmental services (Rijnmond, Brabant, Nijmegen, Limburg, Groningen and the Noordzee-kanaalgebied). If we filter the inspections carried out by the ILT out of this information, we see roughly the same pattern as the one shown here.
5. It cannot be concluded from Inspectieview and the inspection data in the local environmental services' registers whether the BIBOB Act, a preventative administrative measure, is applied. If a serious threat is imminent, for instance if a permit is misused, the competent authority can reject the application or withdraw the permit. Environmental permits are also subject to the BIBOB. We investigated how often the BIBOB was applied. We asked the National BIBOB Agency (LBB) to filter all its recommendations out of our selection of 482 companies. The LBB made 8 recommendations in 2015-2019. The Ministries of I&W and J&V state in *A Good Neighbour is Worth More!* (I&W/J&V, 2020) that they intend to use BIBOB more often.
6. 431 of the 802 inspections with violations, equal to (411+20) and (708+94) respectively in the table.
7. See Methodology (Appendix 2)
8. During the clearance procedure, the Public Prosecution Service said it had arrived at a higher number of environmental cases. Because legal persons are not identified in the Public Prosecution Service's systems by a unique identifier (section 4.1) no straightforward comparison can be made between its data and ours.
9. See Guidelines for Administrative Sanctions (in Dutch) at <https://www.infomil.nl>

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