where the insider wishes to rely upon one of the
defences in s. 53. The more tentative and unreliable
the information, the more likely the defence is
to succeed.

When dealing with compliance with the dis-
closure requirements under the Listing Rules, the
rationale for requiring disclosure instructs to apply
a different test to determine which information is
sufficiently material and as such ripe for disclosure.
In this case the price sensitivity of the information
as an indicator for materiality is much too broad.

Although price-sensitive information is almost
invariably relevant, its reliability may fluctuate. To
assess the reliability of an item of price-sensitive
tentative information, the probability-magnitude
test has to be applied. By assessing the probability
of the tentative event actually occurring and the
significance of such occurrence to investors, a
balance is achieved between the potential return
from accurate forward-looking information and
the potential risk that the return will not materialise.
That is to say, the greater the potential return,
the less probability or certainty is required before
an investor’s decision is likely to be affected. As
such the probability-magnitude test can be seen as
a realistic, investor-oriented standard for testing
materiality of tentative information.

REFERENCES
(1) Listing Rules, Chapter 9.
(2)Listing Rules, Chapter 9. See also ‘Guidance on the
 Dissemination of Price Sensitive Information’, London
(3) Indeed, the Listing Rules contains a list of past events that
 would trigger disclosure.
(4) Take for example the development of a new product as an
 item of tentative information. Until the new product is
 finalised, any information regarding the development is
 tentative.
(5) One element of the definition of inside information in the
 new CJA 1993 is that it has to be price sensitive. The
 information, if made public, would have a significant
 effect on the price of the securities. Although price
 sensitivity cannot be defined with exactitude, the guidance
 provided by the Stock Exchange in its recent report (ref. 2
 above) is as good as any.
(6) CJA 1994 ss 53(1)(a) and 53(2)(a).
(7) For instance, the development of a new product is a fact
 and the likelihood of its occurrence is a question; the
 preparation of a merger/takeover is a fact and the
 probability of actual merger/takeover is a question.
(8) With definitive (as opposed to tentative) past information
 the issue of reliability does not arise. Definitive
 information is always reliable and materiality is
determined by assessing the relevance of the information
not its reliability.

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ENVIRONMENTAL CRIME

Some Thoughts on the Role of the Criminal Law in
Deterring Environmental Pollution

Michael G. Faure

In the theory on the usefulness of criminal sanc-
tions several reasons are advanced why environ-
mental pollution should be criminalised. One of
the arguments is that the severe sanctions offered
by the criminal law are also used to protect classic
interests such as property, health and honour.
These were the values that were protected by the
criminal law in most of the penal codes that were
enacted in the last century. The argument can
indeed be made that given the deteriorating state
of the environment in many industrialised coun-
tries, a clean environment is nowadays at least as
important as the other just-mentioned values that
were previously protected by the criminal law.
Hence, if the criminal law is used to protect these
classic individual values it should also be used to
protect environmental interests. Indeed, most of
these individual values (such as health and prop-
erty) cannot even be enjoyed if the basic require-
ments concerning a clean environment have not
been met.

Arguments for using the criminal law to deter environmental pollution can also be found in the economic theory of crime and punishment. This theory is grounded on the deterrence viewpoint: by threatening a potential polluter with serious punishments, such as imprisonment or high fines, he would be deterred from his intended pollution. A similar deterrent effect could not be reached by using other legal instruments such as tort law. Liability rules do indeed also have a deterrent effect. The problem is, however, that the only risk that a potential polluter runs under a liability rule is that he will have to pay compensation equal to the amount of damage he caused. With environmental pollution, the probability of detection is often much lower than 100 per cent. As a consequence, deterrence only works if the sanction to which the potential polluter is exposed is much higher than the amount of damage he might be causing. This can in general not be reached with tort law, but only by using the criminal law. The fact that the probability of detection is less than one, is therefore a powerful argument in favour of using the criminal law to deter environmental pollution.

In addition the argument could be made that even increasing the amount of compensation due by the tortfeasor, eg by introducing punitive damages (as it exists in American tort law) would not remove the need to use the criminal sanction. Indeed, the insolvency problem that exists if too high monetary sanctions are imposed would make the injurer judgment proof. Thus, non-monetary sanctions will often be needed to reach deterrence. This can obviously be better done through the criminal law, given the due process requirements that will have to be met if non-monetary sanctions are imposed that seriously interfere with basic human rights such as the prison sanctions. Thus also the rule of law prohibits the introduction of very stringent sanctions that might be necessary to deter environmental pollution through eg administrative or civil law. Only the criminal procedure can provide the necessary due process requirements that will have to be met if sanctions such as an imprisonment have to be imposed.

LOW SANCTIONS

Obviously one should not overestimate the effectiveness of the criminal sanction. It has often been stressed in empirical studies with respect to the impact of criminal sanctions that the deterrent effect might be low because most criminals do not act as rational utility maximisers and can therefore not always be deterred. This criticism does, however, not apply to the application of the criminal sanction on environmental pollution. Indeed, environmental pollution is in most cases a result of corporate behaviour. White-collar criminals can certainly be considered as rational in their choice whether or not to commit a crime. For a potential polluter an expected sanction will often just be considered as a cost of doing business. In many cases the potential polluter will balance the expected costs of the sanctions against the gain he may obtain by committing the crime. One should indeed not forget that by committing environmental pollution a lot of money can be earned, because, for example, investments in cleaning equipment can be postponed. The investment in, say, water cleaning equipment that would be necessary to comply with the conditions of a licence can often cost millions of dollars. If the criminal law were the only legal instrument available to force a potential polluter to make this investment, he would only do so (and thus avoid the crime) if the fine that would eventually be imposed multiplied by the probability of detection and conviction would be higher than the money he can save by not investing in the water cleaning equipment. This example illustrates that it is extremely difficult to use the classical criminal sanctions to deter environmental pollution. In many western European countries it is possible to impose relatively high fines. But nevertheless the maximum punishments are almost never imposed by judges. Taking into account the relatively low sanctions that are effectively imposed and the low probability of detection, one can understand that the criminal law alone will not induce a potential polluter to follow the legal requirements and thus avoid the pollution.

ENFORCEMENT

One weakness already indicated concerning the application of the criminal sanction, is that even relatively severe sanctions in legislation are only effective if enforcement can also be guaranteed. In modern democracies respecting the rule of law, no one likes the idea of policemen controlling every-
one in society at every moment of the day. Hence, even the most perfect system of control can never guarantee a compliance of 100 per cent.

These remarks that could, of course, also be made concerning the role of the criminal law in enforcing economic or fiscal regulation, do, however, not justify the conclusion that the criminal law would not have any influence at all as far as deterring pollution is concerned. In some cases, especially in legal systems where government officials have a large power of discretion, not every offence will be prosecuted. Often the administrative authorities seek to achieve compliance by convincing the company concerned that measures should be taken to follow, e.g., the conditions of a licence or that otherwise a criminal case will be brought. In some countries this seems to be relatively effective, although there is always a danger that in these negotiations the administrative authorities become too closely involved with the industry, whereafter enforcement will be lacking altogether. However, if used in an effective way, the threat of bringing a criminal action can indeed induce the potential polluter to invest in, say, cleaning equipment. This tendency to use the criminal law in a problem solving way can also be noticed in the policy of the public prosecutors in many western European countries. They often decide not to bring a criminal action if, after an offence has been detected, serious investments were made to comply with the legislation. Of course, this compliance strategy could also be criticised since it would \textit{ex ante} not give enough incentives to potential polluters to follow the requirements of the law in the first place. If all they risk after detection is that they will have to make the investments they were forced to do anyway, deterrence will, of course, fail. In this respect one can indeed note a remarkable difference in approach between public prosecutors in some western European countries like Belgium and the Netherlands and in the USA. In Europe, prosecutors primarily seem to focus on the result of the criminal action, being that the investments should be made and the environmental pollution deterred instead of focusing primarily on deterrence. On the other hand, public prosecutors in the USA, especially those from the specialised Environmental Protection Agency seem to direct their actions more primarily towards deterrence through high criminal sanctions. The power of discretion of American judges is also limited through federal sentencing guidelines that set minimum sanctions for specific offences and that have to be followed by the judge.

Of course, one could wonder whether, in the European context, potential polluters would be deterred at all through criminal sanctions if both the magnitude of the sanctions and the probability of detection are indeed that low. One answer is that in addition to the actually imposed fines, which indeed in most cases really are too low to have a serious deterrent effect, an increasing use is also made of non-monetary sanctions. Although in western European legal systems the fine is probably still the most common sanction for environmental crimes, in some countries judges also impose prison sanctions, especially in the case of repeating offenders. In addition to prison sanctions, several modern environmental statutes also give the judge the possibility of imposing direct measures upon the convicted polluter, such as a duty to restore the harm committed, e.g., by cleaning up a polluted soil. In some cases they can even go as far as the shut down of a company. Some legislations also give the judge the possibility to order that his judgment should be published through the mass media. Although the application of these special sanctions still varies between the different European legal systems, one can certainly note an increasing use of those specific measures. For instance if a polluter was prosecuted because he illegally deposited waste, he would often be convicted to clean up the waste he discharged. In some legal systems it is even possible to enforce these specific duties with a severe penalty payment that will be due if the duties are not fulfilled within the time limit laid down in the judgment. One can understand that these specific duties can have a highly deterrent effect. The costs of a soil clean-up can be quite high and the stigmatising effect connected with the publication of a judgment in a national newspaper can be disastrous for a company's reputation. In many cases one can note that the board members of a company who are prosecuted for environmental crime consider the publicity that is given to a major criminal case as the most serious consequence of the whole procedure. For multinational companies in particular with a clean environmental image, prosecuting a criminal case that attracts a lot of attention from the mass media can cause a major reputational loss.
and thus have a serious deterrent effect as well. Therefore, one can say that although the sanctions that are used in practice are probably as such not always that deterrent, the criminal prosecution and conviction will certainly have a preventive effective, certainly for well-known companies that have a reputation to defend within their community.

THE LAST RESORT
Several scholars still consider the criminal law as an *ultimum remedium*, a last resort that should not be used too quickly. This *ultimum remedium* theory is especially of interest in the light of the existence of other legal instruments that can deter environmental pollution, such as administrative or civil sanctions. One could argue that only if the other legal instruments do not work, should the criminal law be used. It could indeed be argued that, although the theoretical argument in favour of the criminal sanction is convincing, certain minor violations of licence conditions by a company at good faith could be dealt with by an administrative fine or by civil law enforcement. However, even when only the administrative sanction is used it should be borne in mind that administrative authorities will have more power in their negotiations with a company concerning the measures that have to be taken to comply with the conditions of a licence, if they know that they are backed by a public prosecutor, who can bring a criminal case if the company is not willing to follow the proposals made by the administrative authorities.

USING THE CRIMINAL LAW
It must be remembered that until now the discussion has been mainly about pollution caused by serious, established companies that do not respect, for example, licence conditions. Especially given their position within society there is sometimes a reluctance with judges to impose high sanctions upon managers of firms that are of crucial socio-economic significance for a whole community. This makes it all the more important that both the administrative authorities and the public prosecutor are completely independent in their decisions to prosecute a polluter, even if this may be an important employer in the community concerned.

It is indeed a lot easier for a prosecutor to prosecute the 'real criminals'. It should not, however, be forgotten that in some cases environmental pollution was intentionally caused simply with the aim of making a lot of money. It would be unacceptable to enforce those cases only with administrative or civil sanctions. If the environmental interests are intentionally endangered in a serious way, the criminal law should provide its powerful protection. Unfortunately, in many western European countries there have been examples of serious environmental criminality. Some people have specialised in illegal waste dumping. Unfortunately, a lot of money can be made by solving the waste problem for the government, which makes it relatively attractive for malafide entrepreneurs to engage in these kinds of activities. Western Europe has also seen the tragic consequences of difference in legislation. Indeed, the Netherlands and Germany probably started first with enacting environmental legislation. As a result major (illegal) waste streams originated from the Netherlands and Germany first to the Flemish region, then (after the Flemish region enacted legislation), to the Walloon region and then to France. Every country exported its pollution problem to its neighbours. Many of these cases of illegal transport of waste have led to criminal law prosecutions. These cases illustrate another limitation of the criminal law: it is merely an enforcement mechanism. It can only be effective if there is clear and stringent environmental legislation in the first place. Of course, after all these cases of illegal transport of waste, the European Commission and other international bodies realised that waste legislation should be harmonised. Illegal waste traffic is only attractive if a difference between the legislations of various regions exists and thus the costs of legal disposal of waste differ. But as is often the case with legislation, in such a case the EC Directives and the Basel Convention ran after the facts, after the Walloon region, for example, had been confronted with severe pollution caused by illegal transports of waste from the Netherlands, that had thus 'solved' its waste problems. If clear and effective environmental legislation is enacted then the criminal law can certainly be a powerful tool to induce compliance with the legislation. The thoughts expressed in this introductory paper have only been meant to indicate that, given its inherent limitation, the criminal law can certainly provide an important contribution to the enforcement of environmental legislation. Obviously, far more
research than these preliminary thoughts is needed to indicate how the criminal law can fulfill this role and how its effectiveness can be improved. The new Journal provides a forum for such research.

**FURTHER READING**


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**CORPORATE CRIME**

**Corporate Criminal Responsibility — Ascription of Criminal Liability to Companies**

Michael Jefferson

In English law a company may be responsible for wrongful acts or omissions in two ways. First, a corporation may be vicariously liable for the behaviour of its employees. The company, as a legal construct, is liable if employers who are natural persons would have been so liable. The acts (or omissions) and state of mind of these high-level employees are imputed to the company. The company is not vicariously liable (ie for what others did) but personally or directly (ie for what it did). The acts of the senior officers were done as the company, which being artificial cannot perform actions or mental calculations. The second mode of liability is sometimes known as the identification or *alter ego* doctrine. One distinction between the two modes of criminal responsibility is immediately apparent. Under the first the company is liable for the conduct of its employees, however low in the corporate hierarchy. With regard to the second there is a distinction drawn between those who are the directing mind and will of the company and other individuals (cf. *Tesco Supermarkets Ltd v Natrares*1 and *Tesco Stores Ltd v Brent LBC*2). The distinction is often stated anthropomorphically as one between ‘hands’ and ‘brain’ and there is a growing jurisprudence concerned with which jobs in which companies fall within these categories.

Within the last year the House of Lords has twice considered the application of vicarious lia-