

The revolution in environmental criminal law in Europe

Citation for published version (APA):

Faure, M. (2017). The revolution in environmental criminal law in Europe. *Virginia Environmental Law Journal*, 35, 321-356.

Document status and date:

Published: 01/01/2017

Document Version:

Publisher's PDF, also known as Version of record

Document license:

Taverne

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

THE REVOLUTION IN ENVIRONMENTAL CRIMINAL LAW IN EUROPE

*Michael Faure**

I. INTRODUCTION	321
II. THE TRADITIONAL ENFORCEMENT APPROACH.....	324
<i>A. The Place of Environmental Criminal Law</i>	324
<i>B. Criminal Law's Dependence on Administrative Law</i> ..	327
<i>C. Criminal Law as Primary Instrument</i>	330
III. TWO DOCTRINAL MOVES.....	331
<i>A. Umweltschutz durch Strafrecht?</i>	331
1. <i>Abstract Endangerment</i>	334
2. <i>Concrete Endangerment</i>	335
3. <i>Serious Environmental Harm</i>	335
4. <i>An Optimal Combination of Different Provisions</i> ..	336
<i>B. Do We Have the Right Regime?</i>	337
IV. EMPIRICS	339
V. POLICY CHANGES.....	342
<i>A. Council of Europe Convention</i>	342
<i>B. EU Environmental Crime Directive</i>	344
<i>C. Member State Level</i>	349
1. <i>The Place of Environmental Criminal Law</i>	349
2. <i>Administrative Dependence</i>	352
3. <i>Toolbox Approach</i>	353
VI. CONCLUSION.....	355

I. INTRODUCTION

In many European Union (“EU”) countries, the way in which environmental crime is described in legislation has undergone revolutionary shifts during the last thirty years. Environmental law first emerged in most EU countries in the 1970s. These early efforts give rise to three basic observations regarding environmental crime. First, the role that criminal law played in most of this legislation was relatively modest. Environmental laws of a primarily administrative character, i.e. those that imposed an obligation upon operators to apply for a permit and to run the

* Michael Faure is Professor of international and comparative environmental law at Maastricht University and Professor of private law and economics at Erasmus School of Law, Rotterdam (both in the Netherlands).

operation in accordance with permit conditions, were appended with criminal provisions merely holding that he who acts in disobedience of that particular administrative obligation is subject to criminal sanctions. This phenomenon has been characterized as the administrative dependence of environmental criminal law. Environmental crime was thus not defined in an independent manner that took into account the nature of the danger to the environment caused by a particular behavior.

Second, the fact that environmental crimes were simply created by legislators as a kind of appendix to administrative laws gave them a low priority in enforcement policy. Most enforcement authorities—particularly prosecutors—view the most important crimes as those incorporated in the penal code. As a result, the prosecution of crimes embedded in special administrative laws received lower priority.

Third, the criminal law was basically the only instrument available to enforce these administrative environmental laws in EU Member States.¹ Other penalties aiming at deterrence, such as administrative fines, were not available in most legal systems.² Given the fact that prosecutors did not give crimes embedded in special administrative laws high priority, environmental crimes were not prosecuted in many countries and many violations were therefore dismissed.

Of course, I do realize that this characterization of environmental criminal law in EU Member States may to some extent constitute a rather crude generalization. There may well have been individual Member States where environmental crime was incorporated into the penal code and where more prosecutions of environmental crime took place. However, on the whole it is fair to characterize early environmental criminal law as largely dependent on an administrative basis because this generally describes the state of many European legal systems.

In this Article, I will argue that the way in which the concept of environmental crime has developed in Europe, or the way in which environmental crime has been defined in legislation, has dramatically changed in the past thirty years. The most important change is that the criminal provisions are no longer just an “add on” to administrative environmental laws—legislators have undertaken attempts to formulate the protection of the environment through the criminal law in a more

¹ Currently the EU consists of 28 Member States: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom. See *EU member countries in brief*, EUROPEAN UNION, https://europa.eu/european-union/about-eu/countries/member-countries_en (last visited on Aug. 2, 2017). In the June 2016 Brexit-referendum the UK voted in favor of leaving the EU, a process that is most likely going to take shape later in 2017.

² Germany with its *Ordnungswidrigkeitengesetz* constitutes an important exception.

independent manner. The dependence upon administrative law has become less absolute. A second important evolution, although somewhat later in time, is that in many Member States a so-called “toolbox” approach has been introduced. This refers to the fact that criminal law is now considered as only one of several enforcement instruments available. Given that the most repressive environmental sanctions are available within criminal law, they are considered an “*ultimum remedium*” or “*ultima ratio*.” That idea led in many legal systems to either an increasing use or the introduction of administrative fines as an alternative to criminal prosecution. Prosecution in those systems is reserved for those instances where administrative fines could not provide sufficient deterrence.

A third (r)evolution which can be observed in some (although certainly not all) EU Member States is that the place of environmental criminal law has changed. The most important point is that the decreasing administrative dependence of environmental criminal law coincides with a “better place” for environmental crime within the environmental law framework. Prominence has given rise to codification in either special environmental codes or even within penal codes.

In this Article, I will try to describe, sketch, and analyze these evolutions at the positive level. I argue that these changes have to an important extent been influenced by various influential doctrinal changes. An important one comes from German legal doctrine that emerged in the 1980s addressing the legal dogmatic foundations of environmental criminal law; another, of more recent date, comes from the United Kingdom where scholars (and increasingly policy makers) have been arguing that administrative fining systems should be added to the enforcement toolbox along with criminal prosecution. I argue that these doctrinal changes have (at least implicitly) had an important influence on the policy change that we can observe in the way environmental crime is currently described in legislation, more particularly in its relationship to other enforcement systems.

At the normative level, these doctrinal moves and the corresponding policy changes are to a large extent desirable in the sense that they provide a more adequate and cost effective protection to the environment. This observation is not meant to suggest that the quality of environmental criminal legislation in all EU Member States is now such that there is no further room for improvement. Rather, simply that these changes may be viewed as normatively desirable.

It is beyond the scope of this Article to provide detailed proof of policy changes in all EU Member States. I focus instead on examples of doctrinal changes in a few prominent Member States to show how they have affected policy. However, this Article will examine policy changes

found at the EU level—more particularly, in the way in which environmental crime is defined in the so-called Environmental Crime Directive—to highlight that the revolution in environmental criminal law in Europe reaches beyond changes observed in individual Member States.

This Article is arranged in six parts. Part II outlines the traditional enforcement approach as it emerged in the 1980s. Part III sketches some doctrinal changes away from the traditional enforcement approach baseline and Part IV discusses data concerning the enforcement of environmental law. I then turn to policy changes in Part V and conclude in Part VI.

II. THE TRADITIONAL ENFORCEMENT APPROACH

As already discussed above, the traditional approach when environmental criminal law emerged in Europe (in most Member States in the 1970s–80s) was characterized by the following features: environmental criminal law could be found in administrative laws, there was a strong administrative dependence of environmental criminal law, and criminal law seemed to be the primary tool because there were not many alternatives available.

A. *The Place of Environmental Criminal Law*

At the advent of environmental statutes in the European Union, criminal law aiming at the protection of the environment usually came as an appendix to legislation having largely an administrative character. One example is the Belgian (Federal) Surface Water Protection Act of 1971.³ Article 2 of this Act prohibited emitting substances or discharging polluted liquids or gasses into surface waters, but excepted discharging wastewater with a license granted through the Act. Article 5 subsequently held that all discharge of wastewater was dependent on a license. The remainder of the Act stipulated in detail which administrative authority could provide the discharge permit and which conditions could be imposed on such a permit.

The criminal law provision is found in Article 41 of the Belgian Act. This Article punished, *inter alia*, anyone who violates the provisions of the Act or the executive orders made thereunder. More particularly it punished anyone who would, in violation of Article 5, discharge

³ Wet op de bescherming van de oppervlaktewateren tegen verontreiniging [Surface Water Protection Act] of 26 March 1971, MONITEUR BELGE [M.B.] [Official Gazette of Belgium], May 1, 1971 [hereinafter Surface Water Protection Act].

wastewater into the surface waters without a permit or in violation of the permit conditions.⁴

The structure of this criminal provision already shows a strong relationship between administrative law and environmental criminal law, but that is a point on which we will focus below. For now, it suffices to notice that, in contrast to other criminal provisions, the description of environmental crime cannot be found either in a specific environmental code or in the penal code itself. Belgium, however, was not the only country where environmental crime could only be found in environmental statutes of an administrative nature. For example, in France the major provisions concerning environmental crime emerged in the 1970s. They could be found in the Act of July 15, 1975 concerning the discharge of waste and recycling of materials⁵ and in an Act on Classified Installations of July 19, 1976.⁶ Article 18 of this Act, *inter alia*, punished anyone who would operate a hazardous installation without the required license. A similar approach could also be found in the United Kingdom where criminal provisions with respect to the environment were laid down in a variety of environmental statutes such as the Environmental Protection Act 1990, the Waste Resources Act 1991, the Water Industry Act 1991, the Clean Air Act 1993, and the Environment Act 1995.⁷

This structure, whereby the criminal provisions could only be found at the end of an administrative law, had a few obvious disadvantages. One practical disadvantage arose from the fact that environmental crime was not described (by the legislator) in a harmonized and coordinated way. Rather, provisions could be found in a variety of different administrative laws, aiming at the regulation of waste, climate classified installations, protection of the surface water, ground water, air, etc. This scattered nature of environmental criminal law made it difficult for enforcers to

⁴ Article 41 also provided other prohibitions that were criminalized, but that is not material for this discussion. See generally Susan F. Mandiberg & Michael G. Faure, *A Graduated Punishment Approach to Environmental Crimes: Beyond Vindication of Administrative Authority in the United States and Europe*, 34 COLUM. J. ENVTL. L. 347, 353 (2009).

⁵ Loi No. 75-633 du 15 juillet 1975 Relatif à l'élimination de déchets et la récupération des matériaux [Law No. 75-633 of July 15, 1975 Relating to the Disposal of Waste and the Recovery of Materials], JOURNAL OFFICIEL DE LA RÉPUBLIQUE DE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], July 16, 1975, p. 7279, in MICHAEL FAURE & GÜNTER HEINE, ENVIRONMENTAL CRIMINAL LAW IN THE EUROPEAN UNION: DOCUMENTATION OF THE MAIN PROVISIONS WITH INTRODUCTIONS 128–30 (2000) [hereinafter FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW].

⁶ Loi No. 76-663 du 19 juillet 1976 Relatif aux installations classées pour la protection de l'environnement [Law No. 76-663 of July 19, 1976 Relating to Installations Classified for the Protection of the Environment], JOURNAL OFFICIEL DE LA RÉPUBLIQUE DE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], July 20, 1976, p. 4320, in FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 133–36.

⁷ See FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 347–60.

determine the extent to which particular behavior would be prohibited by the criminal law.⁸ A second disadvantage was that law enforcers (both prosecutors and judges) may have considered environmental crime to be less important because it was not incorporated into actual penal codes.⁹ This signaled that the values protected by environmental criminal provisions were not being regarded as important as the values and interests protected in the penal code and hence deserved a lower priority. The fact that environmental crime could not be found in a penal code or in specific environmental legislation (at least in many legal systems) was criticized in the literature.¹⁰ Practitioners held that lack of penal codification was undesirable and less effective.¹¹

However, even in the 1980s, some countries did incorporate environmental crime into their penal code. Germany provides a striking example. As a result of the entry into force of the 18th Strafrechtsänderungsgesetz on the first of July 1980, provisions concerning environmental crime were incorporated in sections of the German Strafgesetzbuch.¹² German legal observers commented that penal codification that excluded less serious crime, would enhance the deterrent effect of the environmental criminal laws, and would facilitate prosecution.¹³

The Netherlands provides another example. The Netherlands already had specific provisions protecting surface waters in its penal code since an Act of November 13, 1969.¹⁴ In 1989 those provisions were changed

⁸ For example, in Belgium it was not clear whether a discharge of substances other than wastewater (for which a permit was always required) into the surface waters would also constitute a crime under the Surface Water Protection Act of 1971 (on those debates see, MICHAEL FAURE, PREADVIES MILIEUSTRAFRECHT 72–80 (1990). German legal doctrine in particular considered the incorporation of environmental crime into the penal code as essential for an adequate protection of ecological interests. See, e.g., KLAUS TIEDEMANN, DIE NEUORDNUNG DES UMWELTSTRAFRECHTS: GUTACHTLICHE STELLUNGNAHME ZU DEM ENTWURF EINES SECHZEHNSTEN STRAFRECHTSÄNDERUNGSGESETZES (GESETZ ZUR BEKÄMPFUNG DER UMWELTKRIMINALITÄT) 18 (1980).

⁹ For example, in Belgium, commentators opined that “both environmental polluters as well as magistrates will only take environmental crime seriously if this crime is incorporated into the penal code, on condition that also the penalties are substantially increased.” FAURE, PREADVIES MILIEUSTRAFRECHT, *supra* note 8, at 56 (the author’s translation from Dutch).

¹⁰ See, e.g., Paul Morrens, *Enkele actuele knelpunten in het leefmilieustrafrecht*, 51 RECHTSKUNDIG WEEKBLAD 1281 (1987–1988) (arguing that incorporation of environmental crime into the penal code is necessary for magistrates to take environmental crime seriously.).

¹¹ This was a result of lower priority and fewer prosecutions. See Morrens, *supra* note 10, at 1281.

¹² Klaus Tiedemann & Urs Kindhäuser, *Umweltstrafrecht – Bewährung oder Reform?*, NEUE ZEITSCHRIFT FÜR STRAFRECHT 339 (1988).

¹³ TIEDEMANN, *supra* note 8, at 18.

¹⁴ See generally Hein Heemskerk & Stefan Ubachs, *Totstandkoming Artikel 173a en 173b Sr in 1969*, in HERZIENING VAN HET COMMUNE MILIEUSTRAFRECHT 9–11 (Michael G. Faure, Theo A. de Roos & Marjolein J.C. Visser eds., 2001).

into Articles 173a and 173b of the penal code.¹⁵ These provisions punished unlawful emissions into the soil, air, or surface waters where the perpetrator had reasons to suspect that this could lead to death or public health concerns.¹⁶ However, for a variety of reasons those provisions were also criticized both in Germany¹⁷ and in the Netherlands.¹⁸ In particular, as discussed below, these provisions were criticized for their continuing dependence upon administrative obligations.¹⁹

B. Criminal Law's Dependence on Administrative Law

A second feature of how European criminal law protected the environment in the 1970s and 1980s in many jurisdictions was partially related to the fact that the criminal law was considered a complement to a primarily administrative legal framework.²⁰ The fact that the criminal provisions were contained in environmental laws of a mainly administrative character took on more than symbolic importance, it had practical implications for the kind of environmental protection the criminal law could provide.

Environmental criminal law in many countries was characterized as “administratively dependent.”²¹ Indeed, nations usually criminalize polluting without a permit or violating permit conditions (or other

¹⁵ Wetboek van Strafrecht of 3 Mar. 1881 (establishing a criminal code that has since been amended many times). For an (unofficial) translation in English, see ACT OF 3 MARCH 1881, EUROPEAN JUDICIAL TRAINING NETWORK, CRIMINAL CODE OF THE NETHERLANDS 95 (2012).

¹⁶ See generally Stefan Ubachs, *De beweegredenen van de Wetgever bij de totstandkoming van de Artikelen 173a en 173b Sr*, in HERZIENING VAN HET COMMUNE MILIEUSTRAFRECHT 12–14 (Michael G. Faure, Theo A. de Roos & Marjolein J.C. Visser eds., 2001). Article 173a of the criminal code of the Netherlands held that “any person who intentionally and unlawfully releases a substances onto or into the soil, into the air or into the surface shall be liable to:

1° a term of imprisonment not exceeding 12 years or a fine of the 5th category, if such act is likely to endanger public health or the life of another;

2° a term of imprisonment not exceeding 15 years or a fine of the 5th category, if such act is likely to endanger the life of another person and the offence results in the death of a person.”

EUROPEAN JUDICIAL TRAINING NETWORK, CRIMINAL CODE OF THE NETHERLANDS 95 (2012).

¹⁷ See GÜNTER HEINE & VOLKER MEINBERG, EMPFEHLEN SICH ÄNDERUNGEN IM STRAFRECHTLICHEN UMWELTSCHUTZ, INSBESONDERE, IN VERBINDUNG MIT DEM VERWALTUNGSRECHT? GUTACHTEN FÜR DEN 57. DEUTSCHEN JURISTENTAG, VERHANDLUNGEN DES 57. DEUTSCHEN JURISTENTAGES (1988).

¹⁸ Michael Faure, *Het Nederlandse Milieustrafrecht: dringend aan herziening toe!*, RM THEMIS 3–12 (1997).

¹⁹ Günter Heine, *Verwaltungsakzessorietät des Umweltstrafrechts*, 39 NEUE JURISTISCHE WOCHENSCHRIFT 2425–34 (1990).

²⁰ Although not completely, because the problem of the administrative dependence of the criminal law also emerged in the provisions contained in the penal code.

²¹ This administrative dependence of the criminal law has especially been studied in German legal doctrine. It was there known under the notion *Verwaltungsakzessorietät*. See WOLFGANG WINKELBAUER, ZUR VERWALTUNGSAKZESSORIETÄT DES UMWELTSTRAFRECHTS (1985).

obligations).²² Administrative law therefore largely provides norms that individuals and corporations have to obey. Often the criminal law is limited to a disposition at the end of a particular administrative environmental law, holding that he who violates the provisions of this statute will be punished with a particular sanction.²³

One consequence of this structure is that ecological values are not directly protected through criminal law. For example, even grave pollution of soil or water is not necessarily punishable.²⁴ A particular act must at the same time constitute a violation of an administrative obligation to give rise to criminal liability. Administrative dependence therefore limits the scope to criminalize pollution directly. Moreover, this administrative dependence also has as a consequence that it will be the administrative authorities that receive wide powers to determine the punishable nature of certain polluting acts. Indeed, administrative authorities define the conditions of a permit and with that they effectively also determine the conditions for criminal liability.²⁵ Some have held that as a result of this administrative dependence the criminal law loses some of its autonomy since the intervention of the criminal law is only possible in case of a violation of administrative obligations.²⁶

In that sense, one can see that the structure of environmental criminal law is quite different from the structure of the traditional crimes which protect individual values like life, health, or property. Violations or endangerments of these traditional individual interests are directly criminalized without the intervention of administrative authorities. Some

²² See the example of Article 41 of the Belgian Surface Water Protection Act of 1971. *See* Surface Water Protection Act, *supra* note 3, at Art. 41 (punishing anyone who would discharge wastewater into the surface waters without a permit or in violation of the permit conditions, discussed in the previous section).

²³ This was typically the case in Article 41 of the Belgian Surface Water Act of 1971, which has already been discussed above.

²⁴ In a well-known case, the Antwerp Court of Appeal considered pollution caused by the German pharmaceutical company Bayer. In that particular case, there was no valid license, but the court held that Bayer was not to blame since there was no license due to an administrative error. The administrative dependence of environmental criminal law did not allow the court to verify whether or not Bayer's emissions was an illegal pollution. For a discussion of this Bayer case, see Michael Faure, *Towards a New Model of Criminalization of Environmental Pollution: The Case of Indonesia*, in ENVIRONMENTAL LAW IN DEVELOPMENT: LESSONS FROM THE INDONESIAN EXAMPLE 192–93 (Michael Faure & Nicole Niessen eds., 2006).

²⁵ For example, in the previous section of the Belgian Surface Water Protection Act of 1971 it was the administrative authorities that had the competence to determine the conditions of the permit. Violation of the permit conditions was criminalized in Article 41, which effectively meant that the administrative authority determined the conditions for criminal liability. *See generally* FAURE, PREADVIES MILIEUSTRAFRECHT, *supra* note 8, at 72–80.

²⁶ This was traditionally the case in many legal systems. For a good comparative overview in that respect see, *inter alia*, Mohan Prabhu, *General Report: English Version*, 64 INT'L REV. OF PENAL L. 699–728 (1994).

scholars have reasoned that a consequence of the administrative dependence of environmental criminal law is that the legal interest protected by law in this case is not the environment as such.²⁷ The environment is indeed only protected to the extent that administrative law actually provides. Each case of environmental pollution will not automatically be criminalized; this will only be the case if a certain act equally constitutes a violation of an administrative obligation.²⁸

There has been some debate on whether or not this model is directed at protecting environmental values.²⁹ To some extent, one could argue that the only value that is protected in the case of administrative dependence, is the interest of the administrative authority in the proper enforcement of the environmental law.³⁰ However, it is now more widely accepted that these administrative statutes, especially as far as they lay down emission limit values, are also directed at the protection of the environment.³¹ Therefore a criminal provision, punishing a violation of these administrative rules also aims at the protection of the environment, albeit in an indirect way. For example, a criminal provision punishing anyone who operates a chemical plant without a license is also directed at protecting ecological values.³² Indeed, operating such a plant without a license might endanger the protected interest—a clean environment. However, since the criminal law applies irrespective of any specific damage or threat of harm to the environment these provisions punish an abstract endangerment of the environment.³³ Although the goal of the criminal law provision can indirectly be environmental protection, that is not immediately clear from the way these provisions are formulated and operate. Indeed, the criminal law applies as soon as the administrative obligation (for instance, in the form of an emission limit value in a license) has been breached, whether or not this causes harm to the environment.

In sum: if administrative obligations are fulfilled, no protection will be granted through the criminal law. On the other hand, if administrative obligations have not been determined at all, protection cannot be granted through the criminal law either. With this model of environmental

²⁷ See, e.g., THEO J.B. BUITING, STRAFRECHT EN MILIEU 32–34 (1993).

²⁸ See, e.g., ALAIN DE NAUW, LES MÉTAMORPHOSES ADMINISTRATIVES DU DROIT PÉNAL DE L'ENTREPRISE 84 (1994).

²⁹ Faure, *Towards a Model of Criminalization of Environmental Pollution: The Case of Indonesia*, *supra* note 24, at 191–92.

³⁰ Compare LEO E.M. HENDRIKS & J. WÖRETSHOFER, MILIEUSTRAFRECHT 29, 31–32 (1995) with BUITING, *supra* note 27 and CORNELIE WALING, HET MATERIËLE MILIEUSTRAFRECHT (1990).

³¹ See Heine, *Verwaltungsakzessorietät des Umweltstrafrechts*, *supra* note 19, at 2425–34.

³² HENDRIKS & WÖRETSHOFER, *supra* note 30, at 16–19.

³³ BUITING, *supra* note 27, at 1103–06; WALING, *supra* note 30, at 24, 58.

criminal law's absolute dependence on administrative law, one is left with the impression that it is administrative interests rather than ecological values that are protected.

C. Criminal Law as Primary Instrument

In this traditional structure of environmental criminal law, not only was environmental criminal law dependent upon administrative law—to an important extent the reverse was also true. Only criminal law could force operators to comply with the administrative obligations. That is clear from the quoted examples from Belgium, France, and the United Kingdom. In those countries alternative mechanisms that could equally aim at deterrence, such as administrative fines, were not available. In this traditional setup, there was therefore no room for what could now be referred to as a toolbox approach,³⁴ which has largely followed the so-called enforcement pyramid developed by Ayres and Braithwaite,³⁵ whereby the criminal law would only be used at the top of the pyramid when all other mechanisms (like persuasion, administrative fines etc.) have failed.

However, alternatives were available in Germany. Germany had used for a long time the *Ordnungswidrigkeitenrecht*, a system of administrative penal law, which is a non-criminal sanctioning system that allows for the imposition of administrative fines (so called *Geldbußen*).³⁶ Other legal systems that were inspired by the German example, like Austria, had similar systems of administrative penal law, allowing for the imposition of fines.³⁷ One should note, however, that in German legal doctrine there was a clear distinction between administrative violations that were subject to administrative penal law (administrative fines) and the *Kernstrafrecht* (core criminal law), which punished different violations considered to be of a different value.³⁸ The decision whether a particular behavior would be sanctioned under administrative penal law (*Ordnungswidrigkeitenrecht*) or under the criminal law was to be decided primarily by the legislator.³⁹ German legal doctrine developed detailed and elaborate criteria to determine whether a particular behavior should

³⁴ This approach will be further explained below in Section III.B.

³⁵ IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992).

³⁶ See FAURE & HEINE, *ENVIRONMENTAL CRIMINAL LAW*, *supra* note 5, at 143–47.

³⁷ See *id.* at 9–13.

³⁸ On this distinction, see Dieter Schaffmeister, *Politieële en justitiële delikten*, in 1 *HANDELINGEN DER NEDERLANDSCHE JURISTEN-VEREENIGING*, 127–291 (1984).

³⁹ *Id.*

be qualified by the legislator as an administrative offence or a crime.⁴⁰ This differs from an enforcement toolbox approach in which authorities decide (based upon a variety of criteria such as the nature of the violation, environmental harm caused, type of perpetrator, etc.) whether to follow an administrative or criminal route in a given case.

III. TWO DOCTRINAL MOVES

Two general features were typical, irrespective of the particular legislative form of European environmental crime, in the 1970s and 1980s. First, there was the strong interrelationship between administrative and criminal law, and second the strong tendency towards criminalization of any violation of administrative environmental law. Two reactions emerged in legal doctrine against the negative implications of these features. First, the German response acting against the absolute dependence of environmental criminal law upon the administrative. And second, a practical response in favor of creating an enforcement toolbox with a more limited role for environmental criminal law.

A. Umweltschutz durch Strafrecht?

The well-known Max Planck Institute for Foreign and International Criminal Law in Freiburg im Breisgau played an important role in the analysis of environmental criminal law in Europe. The institute launched a broad project under the title “Umweltschutz durch Strafrecht?” (“environmental protection through criminal law?”) to analyze the way in which the criminal law protected the environment in a wide variety of countries with special attention paid to the relationship between environmental criminal law, administrative, and civil law.⁴¹ The project stood under the coordination of Günter Heine, who himself published widely on environmental criminal law in Germany⁴² and internationally.⁴³ The general tenet in the project was to examine the limits of the criminal

⁴⁰ See, e.g., HEINZ MATTES, *UNTERSUCHUNGEN ZUR LEHRE VON DEN ORDNUNGSWIDRIGKEITEN* (1982).

⁴¹ Michael G. Faure, *Günter Heine und das Umweltstrafrecht in Europa*, in *STRAFRECHT ALS ULTIMA RATIO: GIEBENER GEDÄCHTNISSCHRIFT FÜR GÜNTER HEINE* 111–25 (Walter Gropp, Bernd Hecker, Arthur Kreuzer, Christoph Ringelmann, Lars Witteck & Gabriele Wolfslast eds., 2016).

⁴² See, e.g., Günter Heine, *Aspekte des Umweltstrafrechts im internationalen Vergleich*, in *GOLTDAMMER'S ARCHIV FÜR STRAFRECHT* 67–88 (1986); Günter Heine, *Zur Rolle des Strafrechtlichen Umweltschutzes*, 101 *ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFTEN* 722–55 (1989).

⁴³ Günter Heine, *Die Verwaltungsakzessorietät im deutschen Umweltstrafrecht unter Berücksichtigung des österreichischen Rechts. Aktuelle Probleme und Reformüberlegungen*, 11 *ÖSTERREICHISCHE JURISTEN ZEITUNG* 370–78 (1991).

law in awarding its protection to the environment as well as to question the effectiveness of criminal law and determine how protection could be improved, especially in relation to administrative law.⁴⁴ Heine and his team developed a model of environmental criminal law with a reduced dependence upon administrative law, at least with a more nuanced approach to the relationship.

Legal thinking about environmental criminal law as developed by Günter Heine and others had a strong, worldwide influence. Many young scholars from a variety of European countries wrote dissertations on environmental criminal law under the supervision of Günter Heine and then director of the Max Planck Institute, Albin Eser.⁴⁵ Doctoral dissertations on environmental criminal law in Belgium,⁴⁶ the Netherlands,⁴⁷ and the United Kingdom,⁴⁸ added to the body of legal scholarship. Dissertations were also defended on international environmental criminal law⁴⁹ and even on environmental criminal law in East Africa,⁵⁰ Korea, and Japan.⁵¹ Moreover, Heine co-edited various volumes on environmental criminal law in the Scandinavian countries⁵² and in Central and Southern Europe.⁵³ The influence of this movement in legal scholarship was apparent at a preparatory colloquium of the Association Internationale de Droit Pénal (“AIDP”), organized in Ottawa in November 1992 and of which the proceedings were published in the *International Review of Penal Law* (1994).⁵⁴ Many interesting draft

⁴⁴ Faure, *supra* note 41, at 111–25.

⁴⁵ Albin Eser was director of the Max Planck Institute for Foreign and International Criminal Law in Freiburg from 1991 until 2003. *See Prof. Dr. Albin Eser*, MAX PLANCK INSTITUTE FOR FOREIGN AND INTERNATIONAL CRIMINAL LAW, <https://www.mpicc.de/en/home/eser.html> (last visited Mar. 27, 2016).

⁴⁶ *See, e.g.*, MICHAEL FAURE, *UMWELTRECHT IN BELGIEN: STRAFRECHT IM SPANNUNGSFELD VON ZIVIL- UND VERWALTUNGSRECHT* (1989).

⁴⁷ *See, e.g.*, WALING, *supra* note 30; CORNELIE WALING, *DAS NIEDERLANDISCHE UMWELTSTRAFRECHT: EINE UNTERSUCHUNG ZU DEN DOGMATISCHEN GRUNDLAGEN UND ZUR PRAKTISCHEN ANWENDUNG* (1991).

⁴⁸ *See, e.g.*, OWEN LOMAS, *ENVIRONMENTAL PROTECTION BY CRIMINAL LAW IN ENGLAND AND WALES* (1988).

⁴⁹ *See, e.g.*, JOHANNES KLAGES, *MEERESUMWELTSCHUTZ UND STRAFRECHT: ZUR AUSDEHNUNG DEUTSCHER STRAFGEWALT AUF DEN FESTLAND SOCKEL* (1989); JÖRG MARTIN, *STRAFBARKEIT GRENZÜBERSCHREITENDER UMWELTBEEINTRÄCHTIGUNGEN* (1989).

⁵⁰ *See, e.g.*, RALF SCHUHMAN, *UMWELTSCHUTZ DURCH STRAFRECHT IN SCHWARZAFRIKA: EINE VERGLEICHENDE UNTERSUCHUNG ANHAND EINER FALLSTUDIE FÜR KENIA* (1991).

⁵¹ *See, e.g.*, BYUNG-SUN CHO, *UMWELTSTRAFRECHT IN KOREA UND JAPAN: EINE RECHTSVERGLEICHENDE UNTERSUCHUNG DER NORMATIVEN UND DOGMATISCHEN GRUNDLAGEN UND DER PRAXIS* (1993).

⁵² *See UMWELTSTRAFRECHT IN DEN NORDISCHEN LÄNDERN* (Karin Cornils & Günter Heine eds., 1994).

⁵³ *See UMWELTSTRAFRECHT IN MITTEL- UND SÜDEUROPAISCHEN LÄNDERN* (Günter Heine ed., 1997).

⁵⁴ *See Draft Resolution*, 65 INT’L REV. OF PENAL L. 633, 1214 (1994).

resolutions were also proposed that would effect a de-coupling of criminal law from administrative law.⁵⁵

One could summarize the ideas of Günter Heine and his disciples as proceeding from the point that the close relationship between administrative and criminal law should be abandoned. Otherwise, the criminal law cannot award its full protection to the environment.

However, this does not necessarily mean that one should immediately abandon any link between environmental criminal law and administrative law. Indeed, this link may even have certain advantages. First of all, administrative dependence has the advantage that it respects the *lex certa* principle that follows from the principle of legality in criminal law. *Lex certa* holds that the legislator should prescribe the criminalized behavior as precisely as possible.⁵⁶ In case the legislator punishes violation of administrative norms (for example, conditions in a permit) the criminalized behavior will usually be relatively clear *ex ante*.⁵⁷ However, one should also realize that referring to a permit may not always be the ideal way of criminalizing pollution since permit conditions can be vague and ambiguous.

Secondly, one can hold that a link with administrative law is indispensable to some extent, since the alternative of simply criminalizing “pollution” would be too broad and vague. In that case (if such a broad definition was to be used) it would no longer be clear *ex ante* which behavior is criminalized and which is not. The example is given that it would not be useful to criminalize for instance “the one who would have contributed to climate change.” The impossibility of proving a causal link between certain behavior and the criminalized result would render such a provision inapplicable in practice.⁵⁸

Moreover, the formulation of obligations in administrative law may also contribute to making the concept of unlawfulness more precise in environmental criminal law. One can hope that it is the administrative authority which is best situated to determine whether a specific form of pollution is lawful or not. Indeed, administrative authorities may be far better qualified (given their expertise and thus their information advantage) than the judge in a criminal court to determine which type of pollution should be considered unlawful and which not. And this

⁵⁵ *Id.*

⁵⁶ See Michael G. Faure, Morag Goodwin & Franziska Weber, *The Regulator's Dilemma: Caught between the Need for Flexibility & the Demands of Foreseeability. Reassessing the Lex Certa Principle*, 24 ALB. L. J. SCI. & TECH. 283–364 (2014) (discussing the importance of this *lex certa* principle in criminal law).

⁵⁷ See DE NAUW, *supra* note 28, at 85.

⁵⁸ See J.H. Robert, *Le problème de la responsabilité et des sanctions pénales en matière d'environnement*, 65 INT'L REV. OF PENAL L. 954–55 (1994).

information advantage of administrative authorities is thus a strong argument in favor of some link between administrative and environmental criminal law.

Consequently, some link between environmental criminal law and administrative law should likely be retained. The primary decision on the admissibility of certain polluting acts should remain with administrative authorities within the limits set by law and respecting general principles of administrative law.

As a result, different types of criminal provisions are necessary to protect the environment, all with a different goal and all with a different relationship to administrative law.⁵⁹ An effective environmental criminal regime, according to Heine and the MPI scholarship, needs a combination that penalizes abstract endangerment of the environment and concrete endangerment of the environment, as well as an independent crime for when pollution has serious consequences.⁶⁰

1. Abstract Endangerment

The notion of abstract endangerment refers to the fact that within this model the criminal provision usually does not punish environmental pollution directly. In this model the criminal law is an addition to a prior system of administrative decisions concerning the amount and quality of emissions into the environment.

Within this system, the role of criminal law usually limits itself to the enforcement of prior administrative decisions that are taken. A distinction may be made between a dependency upon general administrative rules and principles (*Verwaltungsrechts-akzessorietät*) and the dependency upon individual decisions of administrative agencies (*Verwaltungsakts-akzessorietät*).⁶¹ In sum: breach of administrative obligations needs to be penalized. Some legal remedy needs to be used to guarantee compliance with important administrative obligations to avoid environmental pollution. However, since the link between the provision and the environmental harm is rather remote in this model, the penalty should not necessarily be very high and in some cases administrative penal law may suffice. It is, however, clear that in addition to penalizing abstract

⁵⁹ For an overview, see Günter Heine, *Allemagne: Crimes against the Environment*, 65 INT'L REV. OF PENAL J. 731–59 (1994).

⁶⁰ See FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 1–4.

⁶¹ Günter Heine, *Verwaltungsakzessorietät des Umweltstrafrechts*, *supra* note 19; Heine, *supra* note 25, at 728–32; Heine, *supra* note 26, at 370–78; Hero Schall, *Umweltschutz durch Strafrecht: Anspruch und Wirklichkeit*, 20 NEUE JURISTISCHE WOCHENSCHRIFT, 1263, 1265–66 (1990). Prabhu refers in this respect to the 'administrative accessoriness of penal law. Prabhu, *supra* note 26, at 708.

endangerment, an effective environmental criminal law should do something more than punishing the mere failure to meet administrative obligations.

2. Concrete Endangerment

Concrete endangerment provisions treat an endangerment of environmental values posed by a concrete threat to the environment as a prerequisite to criminal liability.⁶² Under this provision, an abstract danger that some illegal operation might pose to the environment is insufficient for criminal liability. Usually, an emission criteria is set to value a given level of threat. Usually the provisions falling under this model do not require that actual harm needs to be proven, the threat of harm is sufficient.

In addition, concrete endangerment provisions usually only lead to criminal liability if a second condition is met—an illegal emission. In a model of absolute administrative dependence, all that needs to be shown is that the act violated administrative rules. In the concrete endangerment model, the emission or pollution that can cause a threat of harm needs to also be proven. However, as long as the administrative rules are observed, no criminal liability is likely to follow since the act itself will not be unlawful. This departs from the serious environmental harm model, discussed below, in which criminal liability can occur even if administrative requirements were formally met. This type of provision, in which the unlawful concrete endangerment of the environment (through emissions) is penalized, has the advantage that one does not merely focus on the failure to abide by administrative obligations. This equally means that if enforcement of administrative obligations is lacking, criminal law can nevertheless intervene since an unlawful endangerment of the environment (through emissions) might have taken place.

3. Serious Environmental Harm

A third type of criminal provision directly punishes some cases of serious pollution. In fact, this model also punishes emissions, but the consequences are more serious—namely, long-lasting pollution, serious consequences for the health of persons, and/or a significant risk of injuries to the population. The main difference between this model and the others discussed above is that the linkage between criminal law and prior administrative decisions is completely removed. Under this type of

⁶² Buiting, *supra* note 27, at 28–29; HENDRIKS & WÖRETSCHOFER, *supra* note 30; Waling, *supra* note 30.

provision, serious environmental pollution can be punished even if the defendant has complied with the conditions of his license. The underlying notion is that the administrative regulation never allowed this specific risk or harm. These are therefore cases where the veil of the famous dependency of the administrative law is pierced.

There are some examples of such an autonomous crime.⁶³ It is also more important to notice that there is an international tendency to limit a defendant's ability to rely on a license where they have caused serious harm to the environment.⁶⁴

There are instances of prohibitions unrelated to environmental law that punish the one who causes bodily harm to another. Most Penal Codes have provisions punishing the one who negligently or intentionally causes injuries to another, regardless of whether or not these injuries were caused through emissions into the environment. Again, in most legal systems these provisions still apply even if the defendant followed the conditions of a license.⁶⁵

This independent crime for serious pollution, of which several examples also exist,⁶⁶ focuses again on emissions, but in this case on those that may also endanger human health. The major difference with the model previously discussed is that unlawfulness is no longer required.

4. *An Optimal Combination of Different Provisions*

At the policy level, the strength and weaknesses of various models show that an effective environmental criminal law really needs a combination of these various types of provisions. The penalization of abstract endangerment is necessary to give administrative obligations force. But these provisions are unsatisfying policy mechanisms because they apply even if no ecological harm or danger exists. Moreover, they cannot provide adequate protection if there is no violation of existing administrative rules.⁶⁷ In that respect, the provisions merely penalizing the failure to meet administrative obligations (which remain necessary) need to be complemented with provisions aiming at the concrete endangerment of the environment. Penalizing unlawful emissions can do this. However, in some cases, the conditions of an administrative license

⁶³ Faure, *supra* note 24, at 198–200.

⁶⁴ See *Resolution 10 of the XVth International Congress of Penal Law*, INT'L REV. OF PENAL L. 50 (1995).

⁶⁵ Heine, *Aspekte des Umweltstrafrechts im internationalen Vergleich*, *supra* note 42, at 83.

⁶⁶ Faure, *supra* note 24, 198–200.

⁶⁷ Michael Faure & Marjolein Visser, *How to Punish Environmental Pollution? Some Reflections on Various Models of Criminalization of Environmental Harm*, 4 EURO. J. CRIME, CRIM. L. & CRIM. JUST. 358 (1995).

may still provide a sort of affirmative defense. And the protection granted to the environment by a judge is already autonomous in that it is not limited to penalizing administrative failures. Finally, the system needs to be complemented with an independent crime applicable to serious pollution if a concrete danger to human life or health exists. Only at this level is the inter-dependence of environmental criminal law and administrative law entirely abandoned.

Below in Part V, I will examine to what extent this regime, arguing for a more independent protection of the environment through criminal law, can be found in recent European and Member State legislation.

B. Do We Have the Right Regime?

Several commentators have questioned the interdependent relationship between environmental administrative and criminal law. The title of this Section paraphrases the title of a 2002 article by Anthony Ogus and Carolyn Abbot that questioned whether the United Kingdom—which relied almost exclusively on the criminal law to enforce environmental law—had “the right regime.”⁶⁸ Before Ogus and Abbot’s article, questions had already been asked concerning the proper scope of environmental criminal law in other legal systems as well. In the Netherlands, Louk Hulsman initially pleaded for the allocation of a subsidiary character to the criminal law that would apply the criminal law only when alternatives (e.g., private enforcement and administrative fines) would not suffice.⁶⁹ Later, Hulsman took a more radical approach by pleading in favor of a total abolition of the criminal law.⁷⁰ Although his more radical approach was not largely followed, his plea to first consider other, less intrusive instruments than the criminal law and to use criminal law only as a last resort, was largely supported by De Roos⁷¹ and Faure⁷² in their comments on Dutch legal doctrine. Dieter Schaffmeister

⁶⁸ Anthony Ogus & Carolyn Abbot, *Sanctions for Pollution: Do We Have the Right Regime?*, 13 J. ENVTL. L. 283–98 (2002).

⁶⁹ LOUK H.C. HULSMAN, *HANDHAVING VAN RECHT* (1965); Louk H.C. Hulsman, *Kriteria voor strafbaarstelling, in STRAFRECHT TE-RECHT? OVER DEKRIMINALISERING EN DEPENALISERING* 80–92 (E.A. de la Porte ed., 1972).

⁷⁰ LOUK H.C. HULSMAN, *AFSCHEID VAN HET STRAFRECHT; EEN PLEIDOOI VOOR ZELFREGULERING* (1986).

⁷¹ THEO A. DE ROOS, *STRAFBAARSTELLING VAN ECONOMISCHE DELICTEN* (1987).

⁷² Michael G. Faure, *Bedenkingen over de rol van het Strafrecht bij de bestrijding van milieuverontreiniging, in OM DEZE REDENEN. LIBER AMICORUM ARMAND VANDEPLAS* 229–63 (1994); Michael G. Faure, *Waarom milieustrafrecht?*, *RECHT EN KRITIEK* 446–79 (1995).

was another who advocated import of the German distinction between administrative penal law from criminal law into the Netherlands.⁷³

Ayres and Braithwaite's work on the enforcement pyramid was particularly influential and triggered further thinking into the need for applying the criminal law to violations of environmental law.⁷⁴ Their work applied law and economics analysis to argue that criminal law was too costly to be generally applied to regulatory violations in cases where administrative penalties alone could suffice. Ogus utilized this analysis to argue in favor of a restrictive application of the criminal law for reasons of cost effectiveness⁷⁵ and later, along with Carolyn Abbot, applied these insights to the domain of environmental law.⁷⁶ Ogus and Abbot argued that the high threshold of proof and severity of criminal sanctions increases inherent costs of enforcement within the criminal law system.⁷⁷ As a result, prosecutors will have the tendency to use their discretion to bring only the most egregious cases to court.⁷⁸ Put another way, the possibility of dismissal reduces use criminal law for a large proportion of environmental cases. If no alternative penalty is available in a particular case, environmental laws are thus likely to suffer from under-deterrence. Ogus and Abbot's influence in the United Kingdom can be seen in the work of Professor Richard Macrory, who carried out a wide-ranging review of regulatory enforcement regimes for the UK Cabinet Office.⁷⁹ He came to the conclusion that enforcement systems should involve less reliance on criminal law and a greater use of administrative penalties.⁸⁰

Similar views in Belgium—more particularly in the Flemish Region—were expressed in the 1990s during revision of environmental law in a Draft Decree on Environmental Policy.⁸¹ The Flemish Minister of the Environment ordered the Ghent Professor of Environmental Law, Hubert Bocken, to work jointly with a team of other scholars to craft a new Draft

⁷³ Schaffmeister, *supra* note 38, at 127–291. Note, however, that, as mentioned, this merely concerns a defense of making the distinction between administrative penal law and criminal law at the level of the legislator.

⁷⁴ IAN AYRES & JOHN BRAITHWAITE, *RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE* (1992).

⁷⁵ Anthony Ogus, *Enforcing Regulation: Do we Need the Criminal Law?*, in *NEW PERSPECTIVES ON ECONOMIC CRIME* 42–46 (Hand Sjögren & Göran Skogh eds., 2004).

⁷⁶ Ogus & Abbot, *supra* note 68.

⁷⁷ *Id.* at 293.

⁷⁸ *Id.*

⁷⁹ RICHARD B. MACRORY, *FINAL REPORT FOR CABINET OFFICE, LONDON, REGULATORY JUSTICE: MAKING SANCTIONS EFFECTIVE* (2006).

⁸⁰ *Id.*

⁸¹ INTERUNIV. COMM'N FOR THE REVISION OF ENVTL L. IN THE FLEMISH REGION, *CODIFICATION OF ENVIRONMENTAL LAW, DRAFT DECREE ON ENVIRONMENTAL POLICY* (Hubert Bocken & Donatienne Ryckbost, eds., 1996).

Decree of Environmental Policy.⁸² Interestingly, the resulting Draft Decree contained a large chapter on administrative penalties, including administrative fines.⁸³ The Draft Decree also had a system of aligning criminal and administrative enforcement through mandatory notification to the public prosecutor by the administrative body of its intention to impose an administrative fine. The prosecutor could then decide to initiate criminal proceedings or to agree with the imposition of the administrative fine.⁸⁴ The commentary to the chapter on administrative sanctions made clear that the drafters felt a larger use of administrative sanctions—more particularly administrative penalties—had to be made because they could be imposed more rapidly and provide a sufficient deterrent effect.⁸⁵ The Draft Decree illustrates the traction gained for limited last-resort application of criminal law in the Flemish Region during this time.

Did we have the right regime? Notice that different streams of literature (criminological, law and economics, and administrative law) largely went in the same direction in the 1990s and early 2000s: in favor of a more limited role for criminal law and a larger role for alternatives, such as administrative fining systems. This is the “toolbox” approach, whereby a variety of different tools (civil penalties, administrative fines and criminal law) are at the disposal of enforcers. Enforcers may then choose which tool would be an appropriate remedy for a particular type of environmental offense. The toolbox approach is also empirically desirable. As the next Part will illustrate, data increasingly made clear that criminal sanctions were rarely imposed in practice.

IV. EMPIRICS

Relatively little is known about the enforcement of environmental law in practice. That was the case in the 1980s and is still largely the case today. In countries like the Netherlands, Belgium, the United Kingdom, and Germany data on enforcement activities as well as the output and outcome of investments in enforcement are rare. Moreover, the way in which data in the Member States are collected (if at all) is not harmonized. What available data does show is that where enforcement

⁸² VOORONTWERP DECREET MILIEUBELEID (DRAFT DECREE ON ENVIRONMENTAL POLICY) PREPARED BY THE INTERUNIV. COMM’N FOR THE REVISION OF ENVTL L. IN THE FLEMISH REGION (1995) [hereinafter DRAFT DECREE].

⁸³ Article 7.2 (Enforcement) dealt with administrative sanctions. *Id.* at 80–81.

⁸⁴ See Article 7.2.3 of DRAFT DECREE ON ENVIRONMENTAL POLICY, *supra* note 83.

⁸⁵ See Marc Boes & Kurt Deketelaere, *Administratieve sancties*, in VOORONTWERP DECREET MILIEUBELEID 716–40 (Interuniversitaire Commissie tot Herziening van het Milieurecht in Vlaamse Gewest eds., 1995).

authorities formally established that a violation took place, cases were often not prosecuted and simply ended with a dismissal.⁸⁶

A few facts and figures can illustrate this. For the Flemish Region in Belgium the Environmental Inspectorate collected data on the number of cases that were dismissed out of the total number of notices of violations.⁸⁷ For the period 1998–2004 the Environmental Inspectorate noticed that of all of its notices of violation on average 64 percent of the cases were dismissed whereas approximately 7 percent were prosecuted.⁸⁸ This low number of prosecutions casts doubts on the efficacy of the criminal enforcement system.⁸⁹

Similar data points come from the United Kingdom. Bell and McGillivray report that for the period 2000–2007, around 25,000 pollution incidents were reported but less than 5 percent were prosecuted.⁹⁰ Similar data were also reported by the group of German criminologists that participated in the Max Planck project on the protection of the environment through the use of criminal law. In their report to the German Law Association, Heine and Meinberg refer to data on the enforcement of environmental law for the period 1975–1986.⁹¹ According to them in 1985 more than 40 percent of all criminal environmental cases were not prosecuted.⁹² In a later study, Lutterer and Hoch examined decisions of the public prosecutor concerning the prosecution of environmental crime and noticed that 60 percent of the cases were dismissed in 1997, whereas prosecution only followed in 7.9 percent.⁹³

This small sample of studies indicate that environmental cases were not often prosecuted by the public prosecutor before the criminal court,

⁸⁶ For a summary of the empirics in that respect, see Michael G. Faure & Katarina Svatikova, *Criminal or Administrative Law to Protect the Environment?*, 24 J. ENVTL. L. 253–86 (2012).

⁸⁷ AFDELING MILIEUINSPECTIE [DEP'T OF THE ENVTL INSPECTORATE, THE FLEMISH REGION], MILIEUHANDHAVINGSRAPPORTEN [ENVIRONMENTAL ENFORCEMENT REPORTS] (1993–2008). For a detailed analysis of these reports, see Katarina Svatikova, *Economic Criteria for Criminalization. Optimal enforcement in case of environmental violations*, 110–19 (Apr. 15, 2011) (dissertation, Erasmus University Rotterdam) (on file with author).

⁸⁸ A few others resulted in transactions imposed by the prosecutor. See Faure & Svatikova, *supra* note 86, at 260–66.

⁸⁹ For a further discussion of these data on the Flemish Region see, Michael G. Faure & Katarina Svatikova, *Enforcement of Environmental Law in the Flemish Region*, 19(2) EUR. ENERGY & ENVTL. L. REV. 60–79 (2010).

⁹⁰ STUART BELL & DONALD MCGILLIVRAY, ENVIRONMENTAL LAW 291 (6th ed. 2005).

⁹¹ HEINE & MEINBERG, *supra* note 17.

⁹² *Id.* The numbers follow from a more detailed study executed by the criminologist Volker Meinberg, *Empirische Erkenntnisse zum Vollzug des Umweltstrafrechts*, ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFTEN 112–57 (1988).

⁹³ WOLFRAM LUTTERER & HANS J. HOCH, RECHTLICHE STEUERUNG IM UMWELTBEREICH 147–49 (1997).

which led to high dismissal rates. That confirms the assumption made in law and economics literature that prosecutors will, given the high costs of criminal law, focus efforts on a few egregious cases and allow others to be dismissed.⁹⁴ Two interesting conclusions may be drawn from the empirical studies. First, the probability of being detected and prosecuted was very low due to high rates of dismissal. The data provided by the Environmental Inspectorate on the Flemish Region suggests there was a 20 percent chance that on average a company will be inspected on a yearly basis.⁹⁵ The conditional probability of being prosecuted based on the number of prosecutions out of the number of notices of violations dealt with by the public prosecutor was even lower—7 percent.⁹⁶ On average, data indicates that the probability an inspection would take place, the violation would be detected, and the firm prosecuted, was less than 1 percent, meaning that less than one in every hundred firms in violation would be detected and prosecuted.⁹⁷ This raises serious questions on the deterrent effect of the criminal law.⁹⁸

Second, the German data provided by Lutterer and Hoch not only provided information on the prosecution of criminal cases, but also on the way in which administrative authorities dealt with cases in administrative penal law. Recall that for the criminal law, 60 percent of the cases were dismissed, whereas in only 7.9 percent of the cases did a prosecution take place.⁹⁹ Contrast this figure with rates in the administrative penal law system, where a fine was imposed in 53 percent of the cases by the administrative authorities.¹⁰⁰ In the administrative penal law system, some noticeable reaction took place in 57 percent of the cases, whereas in the criminal system this occurred only in 48.9 percent.¹⁰¹ Lutterer and Hoch therefore concluded that the probability of a sanction being imposed was higher under the administrative penal law than under the criminal procedure.¹⁰² These empirical conclusions validated the assumptions of commentators questioning environmental regimes and provided strong support for a radical change in environmental criminal

⁹⁴ See Michael Faure, Anthony Ogus & Niels Philipsen, *Curbing Consumer Financial Losses: The Economics of Regulatory Enforcement*, 31 L. & POL'Y 170–71 (2009).

⁹⁵ See Faure & Svatikova, *supra* note 89.

⁹⁶ See *id.* at 260–66.

⁹⁷ *Id.* at 265.

⁹⁸ Combined with the fact that when a case was prosecuted and a conviction achieved the fines imposed were quite low as well. See *id.* The authors hold: “Thus on average, around 7% of [Notices of Violation] are prosecuted, which might not provide sufficient incentive *ex ante* to comply with the environmental regulations in the first place.” *Id.*

⁹⁹ See *supra* note 97 and accompanying text.

¹⁰⁰ Faure & Svatikova, *supra* note 86, at 278.

¹⁰¹ *Id.* at 278.

¹⁰² LUTTERER & HOCH, *supra* note 93.

law, towards a limited role for criminal prosecution and the development of alternative remedies.

V. POLICY CHANGES

The traditional approach towards environmental criminal law has been subjected to serious criticism from commentators supported by data establishing the relatively limited capacity of criminal law systems to deal with environmental crimes.¹⁰³ A variety of policy changes in environmental criminal law in Europe are strongly in line with the suggestions made by critics. Some of these changes had already taken shape in the 1990s and have continued in this century. This is not to claim that these policy changes are a direct result of criticisms against the former regime. In some cases, indications for such a relationship can be provided, especially where academics who were at the root of the doctrinal moves described in Part III, *supra*, were directly or indirectly involved in policy changes. But this was not the case in all EU Member States and their environmental regimes differ. As a result, one can provide a few examples of some trends in specific Member States that constitute changes of the traditional enforcement approach, but the changes may be stronger in one Member State than in another and still in others, there may have been no change at all.

In order also to analyze evolutions at the supranational level, I will first sketch the importance of the Council of Europe Convention of 1998, a relatively early policy document. Next, I will look at the importance of the EU Directive on Environmental Crime of 2008 and question to what extent it is a departure from the traditional enforcement approach and in line with the doctrinal suggestions. Finally, I will look at evolutions in a few Member States in order to provide examples of where those Member States have departed from the traditional enforcement approach in line with the doctrinal suggestions.

A. Council of Europe Convention

If there is a single document where one can see the influence of commentators, especially those associated with the Max Planck Institute project, it is the 1998 Council of Europe Convention on the Protection of the Environment through Criminal Law.¹⁰⁴ In this Convention, the various signatory states agreed to adopt specific provisions to protect the environment in their criminal law. It therefore contains minimum

¹⁰³ See *supra* Parts II–IV.

¹⁰⁴ The text has, *inter alia*, been published in FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 407–16.

provisions on environmental criminal law. Interestingly, many of the ideas presented above can be found in this convention, more particularly the three types of provisions mentioned above.

The core of the Convention is—not surprisingly—a concrete endangerment crime, which can be found in Article 2. This Article includes a long list of behaviors that the signatory states will criminalize on the basis of their respective national laws. Article 2(1b) refers to:

The unlawful discharge, emission or introduction of a quantity of substances or ionizing radiation into air, soil or water, which causes or is likely to cause their lasting deterioration or death or serious injury to any person or substantial damage to protected monuments, other protected objects, property, animals or plants.¹⁰⁵

Here, one recognizes clearly the criminalization of concrete endangerment. It is the unlawful emission that is penalized. This provision goes much further than provisions that would merely aim at penalizing the failure to abide by administrative obligations.

The Convention goes further and stakes out an independent crime aimed at serious pollution in Article 2.1(a): “The discharge, emission or introduction of a quantity of substances or ionizing radiation into air, soil or water, which: (i) causes death or serious injury to any person, or (ii) creates a significant risk of causing death or serious injury to any person[.]”¹⁰⁶ Note that in this particular case, when an emission has the serious consequences of causing death, serious injury, or creating a significant risk of death or serious injury, the Convention abandons the “unlawful discharge” requirement. This is truly independent in the sense that this provision applies irrespective of the violation of administrative obligations. The idea is that emissions that cause death or serious injury, or create a significant risk of such damage, can never be justified under administrative law.

Finally, the Council of Europe Convention also has the traditional abstract endangerment provisions, but they occupy a less important place in the Convention. More particularly Article 4 refers to the unlawful operation of a plant.¹⁰⁷ Note, however, that in this particular case it holds: “Each party shall adopt such appropriate measures as may be necessary

¹⁰⁵ CONVENTION ON THE PROT. OF THE ENV'T THROUGH CRIMINAL LAW IN STRASBOURG, Art. 2(1)(b) OF THE COUNCIL OF EUROPE, (Apr. 11, 1998), *in* FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 398–99.

¹⁰⁶ *See id.* at 398.

¹⁰⁷ *See id.* at 400.

to establish as criminal offences or administrative offences, liable to sanctions or other measures under its domestic law.”¹⁰⁸

The drafters of the Convention clearly recognized that in the case of abstract endangerment, ecologic values are not endangered in the same way as with a concrete endangerment. For those, Member States can rely on administrative offences.

Although the Council of Europe Convention has not yet entered into force, it demonstrates a new attitude towards environmental criminal law. If environmental criminal law is indeed supposed to play an important role in supporting sustainable development, it should not limit itself to sanctioning administrative obligations. Rather, criminal law should grant more direct protection to ecological values. This is clear where the Convention refers to unlawful emissions and recognizes pollution with serious consequences as an independent crime.¹⁰⁹ The Convention preserves the criminal law, as had been proposed in German legal doctrine.¹¹⁰ In addition, the Convention explicitly refers to administrative offences for crimes of abstract endangerment.¹¹¹ This facilitates a toolbox approach, whereby the criminal law may be reserved as an enforcement method of last resort.

Incidentally, Günter Heine participated in the meetings in Strasbourg leading to the Council of Europe Convention.¹¹² In addition, the Ministerialrat representing the German Government, Manfred Möhrenschrager, had published widely in the field and to an important extent in the same direction as the *Umweltschutz durch Strafrecht* publications.¹¹³ So it is not surprising that the Convention largely followed the ideas that were formulated at Max Plank and elsewhere.

B. EU Environmental Crime Directive

The harmonization of criminal law at EU level has a long and debated history, the details of which are beyond the scope of this Article.¹¹⁴

¹⁰⁸ *Id.* at 399.

¹⁰⁹ *Id.* at 398–99.

¹¹⁰ *See supra* Section II.C.

¹¹¹ *See* FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, 399–400.

¹¹² *Id.*, at 397–406.

¹¹³ *See, e.g.*, MANFRED MÖHRENSCHLAGER, DAS NEUE WIRTSCHAFTSSTRAFRECHT: KOMMENTAR (1986); Heinrich Laufhütte & Manfred Möhrenschrager, *Umweltstrafrecht in neuer Gestalt*, 92 ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTS-WISSENSCHAFTEN 912–72 (1980); Manfred Möhrenschrager, *Revision des Umweltstrafrechts*, NEUE ZEITSCHRIFT FÜR STRAFRECHT 513–18 (1994).

¹¹⁴ *See, e.g.*, Françoise Comte, *Criminal Environmental Law and Community Competence*, 12 EUR. ENERGY & ENVTL. L. R. 147–56 (2003); Françoise Comte, *Environmental Crime and the Police in Europe: A Panorama and Possible Paths for Future Action*, 15 EUR. ENVTL. L. R. 190–

Suffice it to state that in 2000, Denmark took a first step within the framework of the then-called Third Pillar, with an initiative targeting serious environmental crime.¹¹⁵ Subsequently the Council of the European Union accepted a framework decision on January 27, 2003 on the protection of the environment through criminal law.¹¹⁶ This Council framework decision was based on the Council of Europe Convention on the Protection of the Environment through Criminal Law. Resolving an institutional conflict, the Court of Justice of the EU of the Court held that:

[although] as a general rule neither criminal law nor the roles of criminal procedure fall within the community competence . . . the last-mentioned finding does not prevent the community legislature, when the application of effective, proportionate and dissuasive criminal penalties by the competent national authorities is an essential measure for combatting serious environmental offences, from taking measures which relate to the criminal law of the Member States which it considers necessary in order to ensure that the roles which it lays down on environmental protection are fully effective.¹¹⁷

On the basis of this competence, two environmental directives were adopted: Directive 2008/99, adopted with respect to environmental crime, and Directive 2009/123, with respect to ship-source pollution.¹¹⁸

In evaluating Directive 2008/99 in the context of doctrinal changes in environmental crime, two questions are presented: first, to what extent can the graduated punishment approach advocated by legal scholars be found in the Directive; and second, to what extent does the Directive allow for a toolbox approach? Starting with the latter question, it is striking that the positive comments concerning administrative law that were present in the Council of Europe Convention are totally absent in the EU Directive on Criminal Law protecting the environment. Administrative law is mentioned rather negatively. For example, Recital 3 of the Directive holds explicitly that criminal penalties “demonstrate a social disapproval of a qualitatively different nature compared to administrative penalties or a compensation mechanism under civil

231 (2006); Martin Hedemann-Robinson, *The Emergence of European Union Environmental Criminal Law: A Quest for Solid Foundations*, ENVIRONMENTAL LIABILITY 71–91 (2008).

¹¹⁵ 2000 O.J. (C 39) 11.

¹¹⁶ 2003 O.J. (L 29) 55.

¹¹⁷ 2005 E.C.R. C-176/03.

¹¹⁸ Directive 2008/99/EC, of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law, 2008 O.J. (L 328) 28; Directive 2009/123 of the European Parliament and of the Council of 19 November 2009 on ship-source pollution and on the introduction of penalties for infringements, 2009 O.J. (L 280) 52.

law.”¹¹⁹ Moreover, Article 5 of the Directive holds that specific violations need to be regarded as criminal offences in the national legislation implementing the Directive.¹²⁰ The Directive does not explicitly incorporate suggestions from scholars advocating a toolbox approach.¹²¹

Turning to the first question: The graduated punishment approach following from German legal doctrine holds that an optimal environmental criminal law consists of a combination of three types of different criminal provisions. Article 3 of Directive 2008/99 distinguishes nine offences.¹²² However, the offences described in the Directive are difficult fit into the three theoretical models of criminalization:¹²³

(a) the discharge, emission or introduction of a quantity of materials or ionising radiation into air, soil or water, which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants.¹²⁴

This provision is difficult to classify as within a single theoretical model. The first part of the provision refers to discharging or emitting or introducing a quantity of materials into air, soil, or water. These clearly constitute concrete endangerment crimes. However, the second part provides a specific condition that fits more with the serious environmental harm model:

(b) the collection, transport, recovery or disposal of waste, including the supervision of such operations and the after-care of disposal sites, and including action taken as a dealer or a broker (waste management), which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil, or the quality of water, or to animals or plants,¹²⁵

Here, the same problem with classification arises: the collection, transport, recovery, or disposal of waste is an abstract endangerment crime. However, as in provision (a), there is a requirement that this act would either cause or be likely to cause damage to human health or to the

¹¹⁹ Council Directive 2008/99/EC, of the European Parliament and of the Council of 19 November 2008 on the protection of the environment through criminal law, 2008 O.J. (L 328) 28.

¹²⁰ *See id.* at 30.

¹²¹ This does not exclude the possibility for Member States to retain administrative penalties, and also administrative fines. However, in order to implement the Directive correctly at least the infringements mentioned in the Directive should be threatened by the legislature with criminal penalties.

¹²² Council Directive 2008/99/EC, art. 3, *supra* note 119, at 29–30.

¹²³ *See* discussion *supra* Section III.A.

¹²⁴ Council Directive 2008/99/EC, art. 3(a), *supra* note 119, at 29.

¹²⁵ *Id.* at 30.

environment. The causation elements appear to criminalize concrete endangerment.

(c) the shipment of waste, where this activity falls within the scope of Article 2(35) of Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste¹²⁶ and is undertaken in a non-negligible quantity, whether executed in a single shipment or in several shipments which appear to be linked[.]¹²⁷

Here, to the extent that there is “merely” unlawful shipment of waste, it is the unlawfulness of the shipment that is penalized, making it an abstract endangerment crime. However, since it also includes a requirement that the shipment should be undertaken “in a non-negligible quantity” one could equally argue that this unlawful shipment also caused threat of harm to the environment, which would fall under the concrete endangerment model. That would, however, require that there would also be abandonment by disposing of waste in an unlawful manor. The endangerment created by the shipment could be merely abstract, whereas an endangerment created by disposal or abandonment would be concrete:

(d) the operation of a plant in which a dangerous activity is carried out or in which dangerous substances or preparations are stored or used and which, outside the plant, causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants[.]¹²⁸

Again, this is an example of a rather complicated formulation: the unlawful operation of a plant as such is a classic example of an abstract endangerment crime. However, in this case the condition is added that this operation would cause or would be likely to cause death or serious injury to humans or to the environment. Here the same comments apply as to provisions (a) and (b):

(e) the production, processing, handling, use, holding, storage, transport, import, export or disposal of nuclear materials or other hazardous radioactive substances which causes or is likely to cause death or serious injury to any person or substantial damage to the quality of air, the quality of soil or the quality of water, or to animals or plants[.]¹²⁹

¹²⁶ Regulation 1013/2006, of the European Parliament and of the Council of 14 June 2006 on shipments of waste, 2006 O.J. (L 190).

¹²⁷ Council Directive 2008/99/EC, art. 3(c), *supra* note 119, at 30.

¹²⁸ *Id.*

¹²⁹ *Id.*

This provision has the same construction as (d) and constitutes a concrete endangerment crime.

The next provision in Article 3 reads as follows: “(f) the killing, destruction, possession or taking of specimens of protected wild fauna or flora species, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species[.]”¹³⁰ Here the classification seems relatively simple since “killing, destruction, possession or taking” all seem to require a specific consequence, which goes beyond the merely abstract and would make them fit all into the concrete endangerment category.

The next provision in Article 3 reads as follows: “(g) trading in specimens of protected wild fauna or flora species or parts or derivatives thereof, except for cases where the conduct concerns a negligible quantity of such specimens and has a negligible impact on the conservation status of the species[.]”¹³¹ This seems more like an abstract endangerment crime, comparable to offence (c) discussed above (unlawful shipment of waste). After all, unlawful trading in protected wild fauna or flora may lead to an endangerment of particular values, but the endangerment is rather abstract. The focus of the offence is rather on the unlawful character of the trading, which would make it an abstract endangerment crime and of a less serious nature than the offences protecting similar values in (f).

The next provision in Article 3 of the Directive reads: “(h) any conduct which causes the significant deterioration of a habitat within a protected site[.]”¹³² This provision seems to be relatively easy to classify since a concrete harm is required (significant deterioration of a habitat within a protected site), which makes it a concrete endangerment crime.

The next provision in Article 3 refers to: “(i) the production, importation, exportation, placing on the market or use of ozone-depleting substances[.]”¹³³ Here again the provision is rather difficult to classify since at least five different types of behavior are mentioned which can all potentially endanger the ozone layer, but in some cases the danger may be merely abstract (for example in case of production) whereas in other cases the danger may be more concrete (placing on the market) or could even lead to concrete harm (use of ozone-depleting substances). Depending on which type of behavior is at stake potentially any of the models could apply.

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.*

From the forgoing, the formulation of the crimes in the Directive clearly follows, at least to some extent, the suggestions made by scholars because they do not simply criminalize administrative disobedience. Note, however, that the way in which unlawfulness is defined in Article 2(a) of the Directive, requiring an act that violates:

(i) the legislation adopted pursuant to the EC treaty and listed in annex A; or (ii) with regard to activities covered by the Euratom treaty, the legislation adopted pursuant to the Euratom Treaty and listed in annex B; or a law, an administrative regulation of a Member State or a decision taken by a competent authority of a Member State that gives effect to the Community legislation referred to in (i) or (ii)¹³⁴

One might argue that this definition of unlawfulness establishes that none of the offences in the Directive follow the independent or autonomous crime model, whereby the administrative link would be completely eliminated and the “permit shield” does not apply.¹³⁵ But the formulations above clearly go further than mere administrative disobedience.

C. Member State Level

Changes have occurred at the individual Member State level in recent years in line with the doctrinal moves advocated by scholars. While it is not possible to discuss all changes in all states in detail—and differences between Member States caution against generalities—a few influential examples demonstrate that the place of environmental criminal law has changed. There have been changes in the administrative dependence and we are increasingly seeing a “toolbox approach” to environmental enforcement.

1. The Place of Environmental Criminal Law

Recall that critics were skeptical of the structure of environmental criminal law, as it developed in the 1970s and ‘80s, insofar that criminal law was merely a supplement to legislation of an administrative character.¹³⁶ Commentators reasoned that this did not sufficiently signal the seriousness of environmental crime and jeopardized effective

¹³⁴ *Id.* at 29.

¹³⁵ The term “permit shield” refers to the administrative dependence of environmental criminal law. *See supra* Section II.B. A consequence of the permit shield is that behavior will normally not lead to criminal liability as long as it follows the conditions of an administrative permit. In that sense the permit shields a polluter from criminal liability. For details, see Mandiberg & Faure, *supra* note 4, at 447.

¹³⁶ *See supra* Part II.

enforcement since enforcers would have to mind a large and piecemeal variety of different environmental laws.

Several Member States have moved towards either incorporation of environmental crime into the penal code and/or a codification of environmental law generally, whereby environmental crime also received a specific place in an environmental code. Starting with the first, Germany and the Netherlands were first movers to some extent; Germany incorporated various criminal provisions in its penal code in 1980¹³⁷ and the Netherlands in 1989.¹³⁸ But others followed, such as Finland in 1995.¹³⁹ Southern European countries have also incorporated environmental crimes into their penal codes. Portugal has important provisions in Articles 278–281 of its Criminal Code.¹⁴⁰ This new Portuguese Criminal Code, which came into force on October 1, 1995, includes the crime of causing damage to nature (Art. 278), a pollution crime (Art. 279), pollution causing a public danger (Art. 280), and danger to fauna and flora (Art. 281).¹⁴¹ Spain adopted a new Spanish Criminal Code in 1995 containing a broad spectrum of ecological offences in Articles 325–331.¹⁴² The criminal provisions deal, *inter alia*, with illegal emissions, but also crimes related to damaging cultural heritage, flora and fauna and others.¹⁴³

There are also many examples of incorporation of criminal provisions into a code or special environmental law. In the 1990s, many countries developed already-integrated environmental codes. Scandinavian countries provide many specifics. Criminal provisions are found in the Environmental Protection Act of 1991 in Denmark¹⁴⁴ and in Sweden as

¹³⁷ See Heine, *supra* note 59, at 733.

¹³⁸ See Cornelie Waling, et al., *Crimes Against the Environment*, 65 INT'L REV. PENAL L. 1065 (1994).

¹³⁹ The Finnish Penal Code now contains a whole range of criminal provisions. See Arie Ekroos, *Finland*, in CRIMINAL PENALTIES IN EU MEMBER STATES' ENVIRONMENTAL LAW 165 (Michael Faure & Günter Heine eds., 2002).

¹⁴⁰ See Criminal Code of Portugal (2006), available at http://www.pgdlisboa.pt/leis/lei_mostra_articulado.php?mid=930&tabela=leis&ficha=1&pagina=1.

¹⁴¹ See Anabela Rodrigues, et al., *Portugal*, in CRIMINAL PENALTIES IN EU MEMBER STATES' ENVIRONMENTAL LAW, 218 (Michael Faure & Günter Heine eds., 2002); Jorge de Figueiredo Dias, *Das portugiesische Strafgesetzbuch von 1982 in der Bewährung*, 105 ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT 77–107 (1993); Peter Hünerfeld, *Portugal*, in UMWELTSTRAFRECHT IM MITTEL- UND SÜDEUROPÄISCHEN LÄNDERN 359–72 (Günter Heine ed., 1997); Anabela Rodrigues, *Les crimes contre l'environnement. Quelques points du Droit Portugais*, INT'L REV. PENAL L. 1125–1148 (1994).

¹⁴² CÓDIGO PENAL (Criminal Code) art. 325–31, 1995.

¹⁴³ FAURE & HEINE, *supra* note 5, at 293; Miguel Polaino Navarrete, *Spanien*, in UMWELTSTRAFRECHT IM MITTEL- UND SÜDEUROPÄISCHEN LÄNDERN 497–546 (Günter Heine ed., 1997).

¹⁴⁴ For a more recent version, see the Consolidated Environmental Protection Act No. 698 of September 22, 1998, published and translated by the MINISTRY OF ENV'T & ENERGY, DENMARK,

well.¹⁴⁵ In Sweden the major provisions concerning environmental crime could be found in the Miljöbalk 1998, an environmental code specifying penalties.¹⁴⁶ Recently the criminal law provisions in this environmental code have been updated.¹⁴⁷ Ireland and the United Kingdom already had relatively early general statutes protecting the environment, which also included criminal offences. Ireland enacted those provisions in the Environmental Protection Agency Act 1992,¹⁴⁸ the United Kingdom enacted offences in the Environmental Protection Act 1990.¹⁴⁹ However, both in Ireland and the United Kingdom these Environment Acts did not provide a complete harmonization or integration. Criminal provisions could still be found in other legislation dealing with specific sectors of the environment (like air, soil or water). Other interesting examples of integration of environmental criminal law can be found in the Flemish and Walloon Region in Belgium.¹⁵⁰ In the Flemish Region a Decree of April 5, 1995 already contained general provisions on environmental policy.¹⁵¹ In 2007 a Title XVI “Supervision, Enforcement and Safety Measures” was added to this Decree, and it entered into force on the first of May 2009.¹⁵² This is referred to as the “Environmental Enforcement Decree.” This Decree contains criminal sanctions that apply to environmental legislation dealing with separate environmental issues. The Decree contains a long list of legislative provisions that all fall under the scope of its application. That integration implies that the criminal provisions are harmonized into one document and no longer scattered over different decrees and statutes.

DANISH ENVTL PROT. AGENCY (1999). See FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 86–88; Jan Jepsen, *Dänemark*, in UMWELTSTRAFRECHT IN DEN NORDISCHEN LÄNDERN 1–235 (Karin Cornils & Günter Heine eds., 1994).

¹⁴⁵ See MILJÖBALK [MB] [Environmental Code].

¹⁴⁶ FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 311–19.

¹⁴⁷ See NIELS J. PHILIPSEN & MICHAEL G. FAURE, FIGHTING ENVIRONMENTAL CRIME IN SWEDEN: A COUNTRY REPORT, EUR. UNION ACTION TO FIGHT ENVTL. CRIME (2015).

¹⁴⁸ This is now the Protection of the Environment Act 2003, amending the Act of 1992, Protection of the Environment Act 2003 (No. 27/2003) (Ir.). See also FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 192–95.

¹⁴⁹ Environmental Protection Act 1990 (Eng.). See also VALSAMIS MITSILEGAS, MALGOCIA FITZMAURICE & ELENA FASOLI, FIGHTING ENVIRONMENTAL CRIME IN THE UK: A COUNTRY REPORT (2015).

¹⁵⁰ Environmental policy is a competence of the regions in Belgium as a result of which the legislative instruments (refer to as decrees) have been drafted at the level of the regions.

¹⁵¹ Décret contenant des dispositions générales concernant la politique de l’environnement [Decree containing general provisions on environmental policy] of Apr. 5, 1995, MONITEUR BELGE [M.B.] [OFFICIAL GAZETTE OF BELGIUM], June 3, 1995.

¹⁵² Décret complétant le décret du 5 avril 1995 contenant des dispositions générales concernant la politique de l’environnement par un titre XVI “Contrôle, maintien et mesures de sécurité” [Decree supplementing the Decree of 5 April 1995 containing general provisions concerning environmental policy by Title XVI “Control, maintenance and security measures”] of Dec. 21, 2007, MONITEUR BELGE [M.B.] [OFFICIAL GAZETTE OF BELGIUM], Feb. 29, 2008.

A similar harmonization took place in the Walloon Region with a Decree of June 5, 2008, which equally brought together all criminal provisions and sanctions into a single decree.¹⁵³

2. Administrative Dependence

There are also many examples in the modern environmental legislation of Member States where the criminal provisions do not merely punish administrative disobedience, they criminalize concrete endangerment and/or consequential harm to the environment as well. Again, one has to be careful with generalizations—Germany has had independent environmental protections since the 1990s—but later reforms are striking. For example, the new Articles 278 and following in the Portuguese Criminal Code target concrete endangerment of the environment and serious pollution. Note that there is still some administrative dependence in that one condition for criminal liability is unlawfulness.¹⁵⁴ Similarly, some level of independence can be found in the new provisions in the Spanish Criminal Code. These provisions do not simply punish administrative disobedience, but also illegal emissions; and Article 325 criminalizes the engagement in environmentally dangerous activities in infringement of administrative laws.¹⁵⁵ Where such activities cause a serious endangerment of human health, the Spanish provisions provide for greater sanctions. These provisions in the new Spanish Criminal Code thus punish the endangerment of ecological values and look more like concrete endangerment crimes. However, the requirement of unlawfulness maintains some degree of administrative dependence.¹⁵⁶

Similar evolutions can be found in other more recent changes in environmental criminal law. In Sweden, for example, where Article 29(1) criminalizes the pollution of land, water, or air in a manner which involves or is liable to involve risks for human health or detriment to flora and fauna that are not inconsiderable, or other significant detriment to the environment.¹⁵⁷ Following a legislative change of 2004 “changing the surface and groundwater in a manner that harms or may harm human

¹⁵³ Décret relatif à la recherche, la constatation, la poursuite et la répression des infractions et les mesures de réparation en matière d’environnement (1) [Decree on the Search, Recognition, Prosecution, and Punishment of Crimes and Environmental Remedies (1)] of June 5, 2008, MONITEUR BELGE [M.B.] [OFFICIAL GAZETTE OF BELGIUM], Ed. 2, June 20, 2008. For an analysis of this Walloon Decree see the contributions in HENRI-D. BOSLY, ET AL., LA LUTTE CONTRE LES INFRACTIONS ENVIRONNEMENTALES: JOURNÉE D’ÉTUDES DU 30 AVRIL 2009 (2010).

¹⁵⁴ FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 283.

¹⁵⁵ CÓDIGO PENAL (Criminal Code) art. 325, 1995.

¹⁵⁶ See FAURE & HEINE, ENVIRONMENTAL CRIMINAL LAW, *supra* note 5, at 293–94.

¹⁵⁷ MILJÖBALK [MB] [Environmental Code] 29:1.

health, animals or plants” is now criminalized.¹⁵⁸ In France the formulation of environmental crime has also changed, in the sense that the country grants more independent protection to ecological values. Guihal, a court of appeals judge and well-known commentator on environmental criminal law in France, has remarked that in France the criminal law is now protecting the environment in a more autonomous way.¹⁵⁹

From these examples, we may conclude that there remains some relationship between environmental crime and administrative law in most legal systems. However, compared to the absolute administrative dependence in the old environmental laws of the 1980s, important changes have taken place. First, criminal behavior is now no longer only described as a violation of administrative obligations (e.g., the duty to have a permit), but rather in ecological terms (e.g., causing serious pollution). Moreover, although some relationship with administrative law is retained, the formulation has changed. More recently, criminal liability no longer requires a violation of administrative obligations, but instead rests on “unlawfulness.” The latter notion is undoubtedly broader than a mere violation of administrative interest. In that sense the lessons coming from the legal doctrine discussed above¹⁶⁰ advocating a change from an absolute to a relative administrative dependence have been followed.

3. Toolbox Approach

As mentioned above, some legal regimes of the 1980s, such as those in Austria and Germany, had models of administrative penal law whereby the legislator had *ex ante* decided that particular violations would no longer be handled by the criminal law, but exclusively through administrative penal law. In other Member States, such as Portugal, the enforcement of environmental administrative statutes took place through administrative punishment of those regulatory offences.¹⁶¹

The United Kingdom, following the recommendations of Macrory in 2008–2009, introduced administrative fines. In England and Wales the introduction of the Regulatory Enforcement and Sanctions Act of 2008 gave some regulatory bodies, including the Environment Agency, the

¹⁵⁸ See Philipsen & Faure, *supra* note 147, at 15.

¹⁵⁹ DOMINIQUE GUIHAL, *DROIT RÉPRESSIF DE L'ENVIRONNEMENT* 541 (2d ed. 2000). Article 421-2 of the Penal Code now has a specific crime of “ecologic terrorism.” See MICHEL PRIEUR, *LE DROIT DE L'ENVIRONNEMENT*, 857–58 (4th ed. 2001). The problem is, however, that the scope of application of this crime is relatively limited: an emission has to take place of particular substances that can cause concrete harm to the health of humans or animals or to the natural environment.

¹⁶⁰ See *supra* Section III.C.1.

¹⁶¹ FAURE & HEINE, *ENVIRONMENTAL CRIMINAL LAW*, *supra* note 5, at 283.

power to impose a greater repertoire of civil (administrative) sanctions.¹⁶² They were introduced by various administrative orders and regulations such as the Environment Civil Sanctions Order of 2010.¹⁶³ And as a consequence in England and Wales, the Environment Agency can impose either a fixed monetary penalty or a variable monetary penalty. The idea of applying those fines is to fill the gap in enforcement where prosecution does not seem to be in the public interest.¹⁶⁴

Similar changes took place in the Flemish and Walloon Region as a result of the introduction of the Environmental Enforcement Decree 2008 in the Flemish Region and a similar Decree of 2008 in the Walloon Region.¹⁶⁵ In the Flemish Region, some environmental crimes have been declassified as administrative offences, which are no longer subject to the criminal law. In those cases, the administrative sanction is the only sanction available.¹⁶⁶ For crimes which are still forwarded to the public prosecutor, there is a possibility for the Regional Agency to impose an (alternative) administrative fine—but only in cases where the prosecutor decides not to prosecute.¹⁶⁷ We can recall that for the Flemish Region under the old system (of only criminal enforcement) 65 percent of the notices of violations were dismissed, which effectively meant that no remedy was imposed at all. Data on the enforcement policy after the introduction of the administrative fining system in 2008 show that dismissals—i.e., the cases where no enforcement reaction whatsoever takes place—had been considerably reduced. Those cases that the prosecutor dismisses are now sent to the administrative authority for imposing an administrative fine, as a result of which the number of cases where no reaction takes place at all has substantially decreased.¹⁶⁸

There are important differences between the Member States to note. For example, in the Netherlands a variety of different administrative

¹⁶² Regulatory Enforcement and Sanctions Act 2008, c. 13 (Eng.).

¹⁶³ The Environmental Civil Sanctions (England) Order 2010, c. 1157 (Eng.); The Environmental Civil Sanctions (Wales) Order 2010, c. 1821 (W. 178).

¹⁶⁴ Faure & Svatikova, *supra* note 86, at 267.

¹⁶⁵ Décret relatif à la recherche, la constatation, la poursuite et la répression des infractions et les mesures de réparation en matière d'environnement (1) [Decree on the Search, Recognition, Prosecution, and Punishment of Crimes and Environmental Remedies (1)] of June 5, 2008, MONITEUR BELGE [M.B.] [OFFICIAL GAZETTE OF BELGIUM], Ed. 2, June 20, 2008.

¹⁶⁶ Michael G. Faure & An Stas, *The Flemish High Council of Environmental Enforcement: the Role of an Environmental Enforcement Network in a New Coordinated Environmental Enforcement Landscape within the Flemish Region, 2009-2014*, in ENVIRONMENTAL ENFORCEMENT NETWORKS 490 (Michael G. Faure, Pieter De Smedt & An Stas eds., 2015).

¹⁶⁷ Faure & Svatikova, *supra* note 86 at 261.

¹⁶⁸ In that respect, see THE FLEMISH HIGH COUNCIL FOR ENVIRONMENTAL ENFORCEMENT, ENVIRONMENTAL ENFORCEMENT REPORT 2013 (2013). See also Michael G. Faure, *Handhaving van het Milieurecht in het Vlaamse Gewest: enkele cijfers*, in LIBER AMICORUM MARC BOES 69–86 (David D'Hooge, Kurt Deketelaere & Anne Mie Draye eds., 2011).

remedies do exist, but administrative fines have so far not been used in environmental law.¹⁶⁹ In Spain, the introduction of administrative fines has still been opposed.¹⁷⁰ The experience of the Netherlands and Spain shows that although there are some indications in some Member States that a toolbox approach is followed, this is certainly not the case for all EU Member States and neither is it the case for the European Union under the EU Environmental Crime Directive.

VI. CONCLUSION

In this Article, I have sketched the ways in which treatment by the policymakers and legislators in Europe of environmental crime has changed over time in a rather revolutionary way. At the origin of modern environmental law, in the 1970s, environmental crime was not of significant interest to lawmakers. Rather, the main focus was on the administrative management of the environment. The goal of the criminal law was mainly to enforce administrative regimes. Critics found this way of treating environmental crime theoretically and empirically problematic. On one hand, over-inclusiveness increased the cost of channeling behavior that could be dealt with non-criminal remedies. On the other hand, criminal law itself was made too dependent upon the violation of administrative obligations, seriously limiting the capacity of the criminal law to award its protection to the environment. Various streams of literature between the 1980s and the early 2000s advocated a different way of dealing with criminal law. First, advocates supported a graduated punishment approach, arguing that an effective environmental criminal law system needs a combination of different types of provisions. At the same time, reformers introduced a toolbox approach, arguing that the criminal law should be reserved for the most serious infringements, whereas others could also be dealt with via other means such as civil or administrative penalties.

It seems that these voices have, at least implicitly, been heard by some policymakers. Several legal systems have implemented important changes towards a more independent criminalization of environmental harm and have introduced a toolbox approach to enforcement that allows the criminal law to be reserved for the most severe violations. Although not all of these changes were the direct result of doctrinal reform efforts, the influence is undeniable. In some instances, we can point to a specific

¹⁶⁹ For an argument in favour of the introduction of administrative fines also in environmental enforcement, see Oswald Jansen, *Op naar een algemene boetebevoegdheid in de Omgevingswet*, 4 TIJDSCHRIFT VOOR OMGEVINGSRECHT 165 (2015).

¹⁷⁰ See TERESA FAJARDO DEL CASTILLO ET AL., EUR. UNION ACTION TO FIGHT ENVTL. CRIME, FIGHTING ENVIRONMENTAL CRIME IN SPAIN: A COUNTRY REPORT (2015).

author and in others we see a strong correlation between doctrinal advice and policy change.¹⁷¹ These policy changes occurred in many Member States, but certainly not in all. And at the EU level, there is room for continued improvement by implementing a toolbox approach to enforcement.

The differences between the policy changes among EU Member States provides opportunity for comparison of policies and hence mutual learning may take place with respect to the relative effectiveness of different approaches. That, however, supposes that data collection challenges on the relative effectiveness of enforcement efforts may be overcome.¹⁷² The most important policy recommendation one may take away from the European experience is that a reliable system of data collection on enforcement efforts, preferably harmonized among EU Member States, should be developed. Only when such data becomes available is evaluation of the relative effectiveness of various enforcement systems between Member States possible. Only then can one expect to improve the enforcement of environmental law.

¹⁷¹ Of course, correlation does not prove causation.

¹⁷² Which is as such already a highly debated issue on how to precisely to measure this effectiveness.