



Research Note

Treating the Cause, not the Symptoms: Exploring the Possible Relationship between Environmental Administrative Law and Waste Crime in Italy

Giada Dalla Gasperina*

Abstract: Environmental administrative law regulates the process through which waste management is organised. These laws, however, are often vague, complex, and riddled with loopholes. This research note presents some results of a qualitative study carried out in Italy as part of a PhD thesis. The aim of this note is to explore the relationship between environmental administrative law and the problem of waste crime perpetrated by legitimate market players in Italy. Based on official documents retrieved from criminal files involving economic operators prosecuted or sentenced in Italy for the illegal trafficking of waste and interviews with public prosecutors and officials from environmental agencies, this research note offers a legal analysis of the process through which waste is diverted into illegal channels. The findings present insights into the problem of waste trafficking in Italy and identify directions for future research in this area.

Keywords: Environmental administrative law – administrative controls – waste crime – vulnerability studies – risk assessment – Italy

*Giada Dalla Gasperina holds a doctoral degree in International Studies from the School of International Studies, University of Trento, Italy. Since 2013, she has practised as a qualified lawyer providing legal counsel on Italian and European law, particularly on issues relating to pollution control and waste management.

Email: giada.dallagasperina@gmail.com.

Introduction

In Italy, environmental administrative law, which is part of public law regulating environmental matters, has not received sufficient consideration regardless of its importance in preventing and controlling pollution, safeguarding public health, and improving ecological stewardship (Camboni, 1913)¹. Affected by an exceedingly complex maze of legal provisions, environmental administrative law in Italy has suffered from fragmentation, vagueness and ambiguity (Della Cananea, 2009).

Environmental administrative law that governs waste management is a complex and often overlapping set of rules that leave to companies the challenge of reconciling legislative deficiencies and inefficiencies. This intricate and burdensome web of rules and authorisation requirements, which control collection, transport, and disposal or recovery of waste, despite repeated amendments has still left some areas unregulated. The ineffectiveness of these legal provisions has raised some serious concerns about the capacity of the State to provide an adequate response to the problem of waste management in Italy (Foderico, 2007).

However, despite such evidence, there has been an incomprehensible tendency to underestimate the extent to which the inadequacy of environmental administrative law may facilitate profit-driven economic operators' involvement in crime. Interestingly, this has happened in a country where environmental criminal law sanctions (either misdemeanours or felonies) are generally reliant, unlike with conventional crimes, on administrative law. In order to define an act that pollutes a criminal offence, standards or obligations contained in administrative law provisions have to be violated. Also, in Italy, criminal environmental sanctions are mainly enforced after failure to comply with administrative law obligations (Catenacci, 1996; Faure and Visser, 1995).

Notwithstanding the dependence of criminal sanctions on environmental administrative law, no attention has been given to its ineffectiveness, and the possible influence exerted by crime. This research note presents part of the results of a PhD study, which investigated the crime sanctioned under article 260 of the Italian environmental code and its potential correlation with shortcomings in environmental administrative law regulating waste management and administrative controls. To that end, the note describes some of the problems encountered during the research process and suggests directions for future inquiry.

¹ In Italy, the environmental legal framework protecting, for instance, water, air, or soil, comprises civil, criminal, and administrative law. The principal mechanisms for regulating economic activities that affect the environment, such as air pollution, water pollution, and waste management are found in administrative law. In particular, administrative law governing environmental matters (therein after "environmental administrative law") regulates, through permits, standards, and other regulatory instruments, activities that could cause environmental harm.

Background and methodology

Existing shortcomings within Italian environmental administrative law and their possible linkage with waste crimes cannot easily be assessed in practice. Since a prerequisite for conducting this research was to understand the influence of criminal activity, this study first explored the dynamic process through which waste is diverted into illegal channels. This enabled us to unravel the mechanisms that lie behind waste crime. Whereas the first research question focused on a broad area such as how is waste crime perpetrated, the second research question aimed at understanding whether shortcomings in environmental administrative law could encourage or facilitate waste crime. These two major research questions guided the data gathering and analysis during the PhD project. To that end, the research focused on a specific criminal offence, which is sanctioned in Italy under the provisions of article 260 of the Italian environmental code: “organised activity for the illegal traffic of waste”².

The scope of the investigation was narrowed down to this specific crime to avoid criminal diversity, to focus on criminal cases with overall similarities and to facilitate the qualitative data collection and analysis. Second, attention was directed to a criminal offence charged as a felony rather than a misdemeanour to avoid controversies and confusion regarding the definition of crime across the disciplines. Thirdly, criminal cases brought under article 260 of the Italian environmental code could yield information about different illegal waste diversion activities taking place in waste management. Indeed, the crime of organised activity for the illegal trafficking of waste can be enforced against any activity performed at any stage of the waste management process. Moreover, data extracted from these criminal cases could offer valuable insights into the illegal entrepreneurial activities carried out by apparently legitimate economic operators³. Indeed, hidden behind a façade of apparent lawfulness, their involvement may affect the likelihood of organised crime infiltration in the legitimate economy and create distortion of competition (Vander Beken and Balcaen, 2006).

To increase validity through triangulation of data sources and ensure a mutual validation of the results, the qualitative data came from two sources: (1) investigation reports, pre-trial decisions and sentencing decisions, and (2) transcripts from semi-structured interviews with public prosecutors and with officials from the State Forestry Corps and the regional environmental agencies (Maxwell, 2005). On the one hand, data

² Article 260 of the Italian Environmental Code, entitled “organized activity for the illegal traffic of waste” is as follows: “anybody who, for the purposes of gaining unlawful profits, with more operations and by setting up means and continuous organized activities, gives, receives, transports, exports and imports, or in any case unlawfully or without authorizations manages large quantities of waste, is imprisoned from one to six years” (Decreto Legislativo 3 aprile 2006 n. 152 “Norme in Materia Ambientale” GU n. 88 del 14.04.2006).

³ Consistent with the examined literature, the Ph.D. research was given an offence-specific focus, that is, attention to the offence and the specific circumstances rather than to the offender.

from official documents could give details about the dynamic characteristics of waste crime as patterned within the waste management process. Official judicial data are indeed pivotal in providing in-depth information about a criminal offence (Levi, 1981; Wilczynski, 1995; Brookman, 1999; Noaks and Wincup, 2004). Furthermore, written sources could help to overcome the limitations of the interview method applied to crimes committed within the context of legitimate economic activities (Benson and Simpson, 2009). On the other hand, data extracted from interviews could offer a comprehensive picture of the crime problem and supplemented textual data by supporting or rebutting themes, which emerged during the analysis of written sources (Vito et al., 2008).

In order to deal with the complexity of illegal waste management activities and answer the first research question, the research organised and examined the data using a framework developed through the analysis of Italian legal literature. The framework comprises the following activities and economic operators of the waste management process: waste generation, brokerage, chemical analysis, transport, recovery, and disposal. To further explore the features of this crime, attention was first given to the “who” are the economic operators involved (among generators, brokers, chemical analysis, transport, recovery and disposal operators). Second, the research investigated “how” the crimes are commissioned (this identifies the illegal techniques used to divert waste to illegal channels). Third, the focus was on “where” does waste end its life cycle, (that is, what is the most probable final destination for the waste managed illegally) (Adler, 1996: 41).

Then, the study moved onto the second research question, which was mainly informed by the criminological literature on crime vulnerabilities. It should be emphasized that the issue of focusing on the law and evaluating its potential vulnerabilities to prevent a crime problem is not new in the literature (Albrecht and Kilchling, 2002). In general, however, scholars have concentrated on other aspects of the crime problem (Block and Bernard, 1988; Rebovich, 1992; Carter, 1996; van de Bunt and Huisman, 2007). The tendency to focus on the appropriateness and severity of criminal sanctions has, moreover, obscured the important dimensions of the legislative mandate in trying to thwart environmental misconduct (Collins, 2010).

Over the last fifteen years, two theoretical perspectives have explored and further developed the idea that crimes can be anticipated by assessing the legislation in force or in forthcoming legislation: crime risk assessment and vulnerability studies (Albrecht, 2001; Vander Beken, 2005; Savona, 2006). Designed to explore economic sector and potential vulnerabilities to organised crime infiltration in the legitimate economy, crime vulnerability studies, in particular, have pinpointed that loopholes and inherent complexities of environmental law have left room for criminal misuse (Dorn et al., 2007; Van Daele et al., 2007). Drawing from this literature, this research intended to identify legislative loopholes—that is, laws that leave parts unregulated (labelled as low quantity in the law)—and ambiguous and complex legal rules (labelled as low quality in

the law)—that is, legal provisions that lack clarity, cause bewilderment and confusion and could, ultimately, encourage or facilitate the underlying crime (Vander Beken, 2007).

As the data gathering process developed, it soon became apparent that the research design would need to be modified in order to also explore the possible linkages between waste crime and administrative controls. This was necessary because it was discovered that if controls were ineffective, administrative law would lose its force and, consequently, its role in preventing law violations (Vander Beken, 2007). Indeed, during the interview process participants naturally and repeatedly identified a causal linkage between administrative controls and waste crime. To that end, the research examined quality and quantity of administrative controls carried out by officials from provinces and regional public agencies for environmental protection, who were specifically entitled to conduct inspections at waste management facilities to monitor compliance with permits and legal requirements.

Some findings and discussion

The crime of “organised activity for the illegal trafficking of waste” was sanctioned under article 260 of the Italian environmental code, and its dynamics and structure presents unique characteristics that necessitate closer scrutiny in order to understand the process through which waste is diverted into illegal channels. To address this issue, the research explored the techniques used (the “how” question) to commit the crime, including practices and methods of illegally handling of waste. Then, the study focused on the identified critical activities (generation, brokerage, chemical analysis, transport, recovery, disposal) and related economic operators (the “who” question), which were divided into economic operators that faced (i.e., directly involved in the crime commission) or not faced (i.e., present but not directly involved) criminal prosecution. Finally, the research examined the end-of-life-cycle, that is, the final destination for the waste managed illegally (the “where” question). The study of these crime characteristics revealed a common pattern in the data, showing activities and operators that played a key role in the commission of the offence. Having explored the “how”, “who”, and “where” questions, the focus subsequently shifted to low quality and low quantity of environmental administrative law and administrative controls. This remainder of the research note summarises the findings and methodological limitations of this project.

Exploring waste crime and the crime commission process

As the data analysis proceeded, the research did not succeed in identifying a single crime commission process. The reason for this is that waste management and related operations—and operators involved from generation to final recovery or disposal of waste—differ significantly from one another depending on the waste stream. This is due

to the fact that each type of waste needs to be managed differently, depending on its composition and the technologies available to treat it. Notwithstanding the fact that the existing differences in waste streams and waste treatments affect the process through which waste is diverted into illegal channels, the data yielded fairly consistent results about a prevalent pattern in crime commission. Although not yet generalisable, this pattern showed common practices, activities and operators recurrently present in illegal waste management. Starting from waste generation to the final disposal or recovery, the pattern in crime commission was clustered into three main phases, each of them characterised by specific techniques, activities, and waste operators, as described in the following sub-sections.

Phase I

The first phase starts from waste generation, that is, from when a substance or product is discarded and is coded in order to ensure its proper and legally correct management⁴. The phase ends when waste exits waste generation premises. The *modus operandi* used in this phase can be described as follows: waste exits industrial premises with the correct code assigned by the waste producer but it is given to carriers who subsequently deliver it to unauthorised facilities or to facilities that are not allowed to treat the waste received. This phase is characterised by the presence of waste producers and brokers. Worthy of note is the role of waste brokers. These are people who suggest to waste producers the facilities that are willing to accept their waste and able to treat it at the lowest cost in the market.

Phase II

The second phase starts when waste exits waste premises and ends when waste reaches its final destination. This phase is characterised by the involvement of waste carriers and recovery operators and by the presence of brokers and chemical analysis laboratories. Though their direct involvement could not be ascertained, chemical analysis laboratories have provided substantial aid and comfort to illegal entrepreneurial activities by providing false chemical analysis certificates. False certificates were, indeed, used by carriers or recovery plants to deceive controls. Should controls be undertaken during transportation or at waste management facilities, thanks to these false certificates waste would appear suitable for the type of transportation or for the treatment facility of destination.

The research identified two main strategies used to divert waste into illegal channels: (1) physical and (2) documentary. Employed alternatively or simultaneously, both techniques have the purpose of downgrading waste from hazardous to non-

⁴ The system of waste codification in Italy follows the regime introduced by the European Union.

hazardous and allowing cheaper waste management options. The first was defined as documentary because it entailed the forging of official documents, such as waste identification documents and chemical analysis certificates⁵. This technique is mainly used to disguise controls that transporters and recovery or disposal plants are likely to encounter. Indeed, to conceal illegal haulage, carriers forge waste identification documents by changing the reported waste identification code or substituting the document with a false one. Thus, waste apparently corresponds to the type of haulage the destination plant could receive.

The second is labelled as physical as its main purpose is to alter the composition of waste. It is generally performed at waste recovery facilities where waste is illegally mixed or diluted with other materials or substances in order to diminish its hazardous contents and, subsequently, to allow false re-codification through the use of the documentary technique. After unlawful cocktailing or dilution, waste is accompanied by false waste identification documents.

In this phase, illegal activities take place as follows. After they have collected correctly codified waste at generation premises, carriers deliver it to complicit recovery facilities. Recovery facilities are used as an intermediate stop for two purposes. The first is to allow truck transit through facility premises and falsification of waste identification documents. In this case, waste that transits through recovery facilities is not subject to any treatment but identification documents are forged or illegally substituted through the so-called documentary technique. Subsequently, waste haulage exits recovery premises with a newly assigned (false) waste code. The second is to conduct illegal waste treatments, such as cocktailing or dilution, through the so-called physical technique. After illegal cocktailing, dilution or other treatments, waste exits recovery premises with a newly assigned waste identification document and is sent to an unauthorised destination (either final recovery or disposal).

Phase III

The third and final phase corresponds to the end of life cycle, that is, the final destination of the waste. At the end-of-life cycle, illegally handled waste may take three main final illegal destinations, depending on the waste stream and the available waste treatment options.

End-of-life cycle I

The first identified end-of-life cycle or final destination for the unlawfully handled waste is at recovery or disposal facilities, which were not authorised to receive the conferred waste. This phase is characterised by the involvement and complicity of carriers and recovery or disposal operators, who agree to accept illegal haulage. Data indicated, in

⁵ The waste identification document is a manifest that must always accompany waste transportation from when waste exits generation premises to where waste ends its life cycle.

particular, the involvement of recovery premises for land restoration or backfilling of quarries, which have been used for discharging and subsequently concealing waste that contained hazardous substances above the threshold level. Non-hazardous waste disposal plants are instead used to discharge the hazardous waste, because once there, waste could be disposed of at lower cost. Once discharged at recovery or disposal facilities, waste is immediately covered with a layer of materials or is mixed with other waste in order to conceal illegal conferrals and avoid detection.

End-of-life cycle II

The second possible end-of-life cycle or final destination is its transformation into secondary raw materials. This practice takes mainly place at recovery facilities that do not have the required appliances to treat waste according to the law or are not authorised to conduct the employed waste treatment operation. After waste is delivered to recovery premises, it is mixed, diluted or otherwise unlawfully treated in order to obtain secondary raw materials through the so-called physical technique.

Evidence shows that the unlawfully generated secondary raw materials contained hazardous substances above the threshold limit and were, therefore, not adapt for reuse. This is because the waste used was contaminated with hazardous substances or did not receive the necessary treatment before being transformed into secondary raw materials.

End-of-life cycle III

The third possible end-of-life cycle is its use as compost for cultivated fields. Used to enhance crops, compost is produced from certain types of waste through sorting and other specific treatment processes. After being treated, compost can be used on land for agricultural purposes. The accumulated evidence instead indicates that compost was obtained through illegal mixing, crushing or dilution of wastes, which contained hazardous substances above the threshold level. Subsequently, compost was spread on land with the complicity of transporters and the consent of farmers or landowners.

The three phases characterising the identified crime commission process revealed the key role played by recovery facilities and related operators. Even though the final destination for waste that reached its end-of-life cycle (i.e., discharge at disposal or recovery plants, transformation into raw materials, or spread on land as agricultural compost) can differ substantially, unlawfully handled waste virtually always passed through recovery premises that were not authorised to receive or treat the handled waste. It is at recovery facilities, indeed, where waste is unlawfully mixed, diluted, or otherwise treated and waste identification documents are subsequently forged. The following paragraph discusses the relationship between environmental administrative law, administrative controls, and waste crime, with special attention given recovery facilities.

Exploring the relationship between administrative law, administrative controls, and waste crime

Waste management is a complex and multi-staged process, which proceeds from generation to end-of-life cycle. This stepwise process involves interaction between different economic operators and activities. It is characterised by practices that may vary substantially depending on the waste stream being processed, the cost of waste disposal and the treatments required to recycle waste or respect disposal and recovery regulations.

In addition to these factors, environmental administrative law and controls are found to play a role in the crime. On the one hand, environmental administrative law has the task of regulating the legal environment in which waste management takes place. On the other, administrative controls have the capability of contributing to the proper functioning and implementation of rules and regulations. Should they be of low quality, environmental administrative law and controls may adversely affect the waste management process, thus fostering illegal waste diversion activities.

Before delving into this issue, it should be noted that the data obtained could not perfectly fit into the parameters—low quantity/ low quality—chosen to aggregate and analyse the data retrieved. The findings are however important in that they reveal crucial problems relating to Italian environmental administrative law provisions governing the waste management sector.

Shortcomings in environmental administrative law

The results obtained from this research support the idea that existing environmental administrative law provisions are ambiguous and complex (i.e., low quality). Ambiguity and complexity could however not be associated with specific environmental administrative law provisions but referred to the legislative framework that governs waste management.

Complexity is caused by the fact that environmental administrative law governing waste management has developed by gradually being applied across different laws, regulations, and articles. This has caused discomfort and confusion among operators, who cannot rely on a single comprehensive and coherent legal framework. Ambiguity is first caused by the fact that environmental administrative law has been subjected to puzzling amendments. Secondly, supplementary regulations implementing environmental administrative law have been issued years after the specific law was promulgated.

Our research has thus revealed that ambiguity and complexity in environmental administrative law may lead to unintentional law breaking. This appears to be particularly the case for small operators, who cannot afford external consultancy services. Large companies seem to be less negatively affected by the ambiguity and

complexity of environmental administrative law because they can afford the costs of legal and technical advice and, consequently, avoid accidental violations.

Specific shortcomings were instead identified within the provisions introducing the exemption from permit requirements⁶. Before proceeding further, it should be specified that plants or installations where one or more waste management activities were carried out, should submit a permit application to the competent region before starting to operate. The permit is granted after written controls and on-site inspections are performed. If certain requirements are met, recovery or disposal facilities, however, become exempt from permit requirements and subject to a simplified permit procedure that relies on self-certification of conformance to the law. According to this, these plants can start operating ninety days after they have submitted the required self-certification documents to the competent province. This lighter touch regulation does not require the province to perform on-site inspections before an installation or plant starts to operate, but only verifies the submitted documents.

This research has revealed that this regime of exemptions has brought about undesired and unintended consequences at the domestic level that must be taken into account. The accumulated data revealed, in particular, that recovery installations or plants exempted from permit requirements were regularly involved in the crime under investigation. The research specifically highlighted that several waste recovery operators subject to permit exemptions submitted false self-certification statements in order to start operating. Because of the absence of on-site inspections and their cross-comparison with the submitted documents, public authorities were not able to detect violations.

Shortcomings in Administrative Controls

The research proved the necessity to design a study that would also investigate potential shortcomings within the administrative controls. Before proceeding, it should be indicated what constitute administrative controls and which types of administrative controls were taken into account. The study examined administrative controls exercised on waste treatment installations or plants over the fulfilment of legal and technical requirements. The environmental monitoring process is carried out provincial and regional environmental protection agencies. These officials can control waste treatment facilities on-site or, as previously mentioned, can examine the documents submitted with the application requesting a permit (documentary controls). On-site inspections can be conducted before a waste management facility starts to operate (*ex ante* on-site controls) or during its operational life (*ex post* controls).

⁶ Introduced by the EU Waste Framework Directive, the provisions on the exemption from permit requirements provide for a lighter regulation for waste disposal and recovery operations that are considered less harmful to the environment.

The available evidence indicated that both *ex ante* and *ex post* on-site inspections suffer from serious inadequacies, which affected strength and effectiveness and, ultimately, contributed to worsen the quality level of controls (low quality). The reason behind such low quality in controls is mainly threefold. First, administrative officers entitled to conduct on-site inspections, were often not adequately skilled and, therefore, unable to properly fulfil their task. Second, administrative controls were not consistent and were subject to arbitrariness and subjectivity. This was exacerbated by the fact that controls varied substantially from region to region and from district office to district office, thus causing uncertainty among economic operators. Third, public officers seem to accept bribes for not reporting violations or not conducting on-site inspections. Besides, controls were low in number to be insufficient to monitor existent waste treatment facilities (i.e., low quantity). Inspections carried out at recovery or disposal plants during their operational life (*ex post* controls), were insufficient in number and, additionally, not carried out at regular intervals.

At this juncture, it should be emphasised that on-site inspections are usually conducted also before a facility is authorised to operate (*ex ante* controls). As previously mentioned, however, the simplified permit procedure does not require *ex ante* on-site inspections. This, coupled with the low quantity of *ex post* on-site inspections, accounted for the absence of controls of recovery plants operating under the simplified permit procedure for years. The problem with the lack of on-site inspections was also exacerbated by the ineffectiveness of controls carried out on the documents submitted with the application for a permit to operate. Indeed, the results proved that recovery facilities submitted documents with false self-certification statements or manifestly incomplete. The study, however, was unable to assess whether documents were not inspected (low quantity of controls) or controls were inadequate (low quality of controls). Nonetheless, evidence so far accumulated suggests that the dearth and inadequacy of administrative controls, in particular of, waste recovery facilities subject to the simplified permit procedure, play a crucial role in facilitating or encouraging the involvement of waste recovery operators in the crime under investigation.

Lessons to be learned

Exploring waste crime and the relationship with environmental administrative law and controls is a difficult task. This becomes even more challenging when data is almost non-existent and retrieving it may be very difficult or, sometimes, impossible. Moreover, proceeding without a corroborated methodology into unexplored areas can expose researchers to the risk of not obtaining the desired results. Nevertheless, there is a strong need for more evidence-based research that explores and nurtures data on the quality of environmental administrative law and its impact on legitimate economic operators.

To support and further develop such research, an exploratory qualitative study, for which data were collected through semi-structured interviews and official documentary sources, was undertaken. The study first attempted to contribute to the understanding of the complex nature of a specific criminal offence, which is sanctioned in Italy under the provisions of article 260 of the Italian environmental code: the so-called crime of organised activity for the illegal traffic of waste. The research additionally identified shortcomings within environmental administrative law and controls in the waste management sector. Despite the potential contributions of the study, there are, however, limitations that should be addressed and considered in future research endeavours.

First, the results obtained from this research have showed that the process through which the crime takes place is complex and composited, and it may vary substantially depending on the waste stream and available waste treatment options. To provide more in-depth knowledge of the crime commission process, future studies should therefore focus on a single waste management process (e.g., land reclamation within recovery, landfilling within disposal, etc.) or consider only one type of waste (e.g., waste from electrical and electronic equipment, biodegradable waste, etc.) (Tompson and Chainey, 2011). Such an approach seems even more appropriate in helping develop a clearer understanding of the regulatory differences that exist in environmental administrative law governing waste management.

Second, to develop research into the issue of non-compliance within the law that governs waste management, the size of the company should be taken into account—that is, potential differences in compliance between small, medium, and large enterprises. Such differentiation seems necessary as small companies appear more likely to engage in unintentional rule-breaking behaviour because they are unable to afford or secure adequate legal counsel and, therefore, potentially more influenced by shortcomings of the legal framework.

Third, despite the importance of retrieving data from primary sources, drawing evidence from them presents some drawbacks that should be addressed before conducting research in some countries. With reference to documentary sources, access to investigation reports, pre-trial decisions, and sentencing decisions can be difficult if there are no databases available to the public that can be used to gather and select relevant criminal cases (with except to Supreme Criminal Court decisions) or other facilitations to access judicial files.

In Italy, to access criminal files it is necessary to extract them after authorisation is granted from district courts' archives. Accessing archival data and selecting relevant cases from judicial archives is, however, extremely time consuming and sometimes unfeasible. The reason is that criminal files in each district court are accessible but often not all judicial documents are available, documents are not available in an electronic format, and criminal files concerning waste-related crimes can be recorded and archived under the headings of other crimes (such as fraud, corruption, or forgery of public

deeds). With reference to interviews, there are other problems that should be addressed here. Though semi-structured interviews represent a well-suited data collection method when the settings or subjects would not otherwise be accessible, identifying respondents with the required knowledge and obtaining interviews and valuable information from participants can prove to be extremely difficult. Responses tend to be rather general and vague, probably due to the sensitive nature of the topic and the complexity of the crime, which is difficult to remember and describe. To overcome these problems and provide details of how the crime is commissioned, it seems more appropriate to use a structured interview process with guided questions and specific references to some examples of low quality or quantity environmental administrative law and controls.

Despite these limitations and some unanswered questions, it is important to take a step back and assess the policy implications of this research. Even if the results were not as expected, this study has still generated some important and interesting findings. Firstly, the research has attempted to address the problem of crimes involving waste and hazardous waste, which are now emerging as a major challenge for environmental protection and human and ecological welfare. Secondly, it has specifically uncovered that waste recovery was recurrently present in the crime under investigation and that the regime of exemption from permit requirements may facilitate illegal waste diversion activities.

Thirdly, this research has shown that a study of the shortcomings of Italian environmental administrative law cannot run separately from an investigation into the potential shortcomings of administrative controls. The reason is that, as discussed previously, administrative controls may either increase or compromise the effectiveness of the legal framework. Complying with a maze of controls or being subjected to poor or no controls can, indeed, adversely affect the quality of the law or generate avoidable legal rules. A method that takes into consideration both environmental administrative law and controls may not only increase the accuracy of the results obtained but may also be able to identify whether one or the other is likely to facilitate or encourage law-breaking behaviour. These methodological limitations should guide future research on environmental administrative law and crime and, possibly, advance prevention efforts and enhance environmental protection in Italy.

Acknowledgments

I am very grateful to the anonymous reviewers for their useful comments.

References

Adler F (1996) Offender-Specific vs. Offense-Specific Approaches to the Study of Environmental Crime. In Edwards SM, Edwards T D and Fields C B (eds.),

- Environmental Crime and Criminality. Theoretical and Practical Issue*. New York: Garland Publishing Inc..
- Albrecht HJ and Kilchling M (2002) Crime Risk Assessment, Legislation, and the Prevention of Serious Crime-Comparative Perspectives. *European Journal of Crime, Criminal Law and Criminal Justice* 10(1): 23- 28.
- Benson ML and Simpson SS (2009) *White-Collar Crime. An Opportunity Perspective.*, New York: Routledge.
- Block AA and Bernard TJ (1988) Crime in the Waste Oil Industry, *Deviant Behaviour* 9: 113-.
- Brookman F (1999) Accessing and Analysing Police Murder Files. In Brookman F, Noaks L and Wincup E (eds.), *Qualitative Research in Criminology*. Aldershot: Ashgate.
- Camboni L (1913) *Della Correlazione fra Alcuni Fenomeni Economici e Sociali e La Criminalità. Un Decennio di Vita Sarda*. Cagliari: Società Tipografia Sarda.
- Carter T S (1996/97) The Failure of Environmental Regulation in New York. *Crime, Law and Social Change* 26(1): 27- 52.
- Catenacci M (1996) *La tutela Penale dell'Ambiente: Contributo all'Analisi delle Norme Penali a Struttura «Sanzionatoria»*. Padova: Cedam.
- Collins C (2010) *Toxic Loopholes. Failure and Future Prospects for Environmental Law*. Cambridge: Cambridge University Press.
- Della Cananea G (2009) Extra Europam Nulla Salus. In Pilade Chiti M and Ursi R (eds.), *Studi sul Codice dell'Ambiente*. Torino: Giappichelli.
- Dorn N, Van Daele S and Vander Beken T (2007) Reducing Vulnerabilities to Crime of the European Waste Management Industry: the Research Base and the Prospects for Policy. *European Journal of Crime Criminal Law and Criminal Justice* 15(1): 23- 36.
- European Union Network for the Implementation and Enforcement of Environmental Law –IMPEL (2003) *Effective Enforcement Needs a Good Legal Base: Final Report of the IMPEL Better Legislation Project*. Retrieved from http://impel.eu/wp-content/uploads/2010/01/IMPEL-better_legislation_report.pdf (accessed on 11 September 2009).
- Faure M and Visser M (1995) How to Punish Environmental Pollution? Some Reflections on Various Models of Criminalization of Environmental Harm. *European Journal of Crime, Criminal Law and Criminal Justice* 4: 316- 368.
- Foderico F (2007) L'Evoluzione della Legislazione Ambientale. *Riv. Giur. Edilizia* 3: 97.
- Levi M (1981) *The Phantom Capitalists: The Organization and Control of Long-Firm Fraud* London: Heineman.
- Maxwell JA (2005) *Qualitative Research Design. An Interactive Approach*. Thousand Oaks: Sage Publications Inc..

- Noaks L and Wincup E (2004) *Criminological Research. Understanding Qualitative Methods*. London: Sage Publications Ltd.
- Rebovich DJ (1992) *Dangerous Ground: the World of Hazardous Waste Crime*. New Brunswick: Transaction Publications.
- Savona EU (2006) Initial Methodology for the Crime Proofing of New or Amended Legislation at the EU Level. *European Journal on Criminal Policy and Research* 12: 221- 228.
- Tompson L and Chainey S (2011) Profiling Illegal Waste Activity: Using Crime Scripts as a Data Collection and Analytical Strategy. *European Journal on Criminal Policy and Research* 17: 179- 201.
- Van Daele S, Vander Beken T and Dorn N (2007) Waste Management and Crime. Regulatory, Business and Product Vulnerabilities. *Environmental Policy and Law* 37(1): 34- 38.
- Van de Bunt H and Huisman W (2007) Organizational Crime in the Netherlands. *Crime and Justice* 35(1): 217- 260.
- Vander Beken T (2005) (ed.) *Organised Crime and Vulnerability of Economic Sectors: The European Transport and Music Sector*. Antwerp: Maklu.
- Vander Beken T (2007) (ed) *The European Waste Industry and Crime Vulnerabilities*. Antwerp: Maklu Publishers.
- Vander Beken T and Balcaen A (2006) Crime Opportunities Provided by Legislation in Market Sectors: Mobile Phones, Waste Disposal, Banking, Pharmaceuticals. *European Journal on Criminal Policy and Research* 12(3): 299- 323.
- Wilczynski A (1995) Child Killing By Parents: A Motivational Model. *Child Abuse Review* 4: 365- 370.