

# Illegal waste management activity in the process of bunker fuel production

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## SUMMARY

This book articulates the findings and reflections of doctoral research carried out over several years. It is both empirical and theoretical in nature with novel sources of data forming the basis of a multi-level criminological analysis of several facets of an important societal problem. The core phenomenon that is explored in this research is the fraudulent manipulation of industrial substances and the documents that accompany them. These substances derive from and are connected to the process of petroleum refining. Specifically, the book focuses on the improper management of waste oils that are generated at every stage of (re-) use of petroleum-based substances. This improper management violates the applicable national (Dutch), European, and international rules that govern the waste management services sector. Often, the violations amount to criminal activities and they involve the intentional misrepresentation of the true nature of the substances being handled. In fact, the phenomenon on which this book focuses is two-sided: the mismanagement of wastes is improper and, at the same time, those wastes are illegally used in the process of generating bunker fuel. Bunker fuel is the substance that powers the movement of large sea-faring vessels. Indeed, bunker fuel's main application is as the powering force behind global cargo and container shipping.

Chapters 1 and 2 set up the book. In Chapter 1, the societal and academic relevance of the research are articulated as well as the research questions. Furthermore, the theoretical framework of the book is explained and the literature on both the phenomenon as well as the conceptual approach are outlined. Chapter 2 delves into the methodological details of how the research was carried out. It includes epistemological and ontological considerations as well as making the research strategy clear from design through to collection and analysis.

Chapter 3 of the book traces the physical, economic, and regulatory features of both the bunker fuel and waste oil management industries. It also delves into the connected processes of petroleum extraction and refining and of globalised trade in the form of cargo shipping. In this Chapter, the author brings the incentives, pressures and definitions that characterise each industry to the fore. These incentives, pressures and definitions populate the imagination of the actors who operate in the two industries. The materiality of substances and how they may be used is matched to their significance in normative and economic terms. In this

way, Chapter 3 is the interpretative key that opens up the presumed perspective of individuals working for companies that carry out the tasks of waste oil collection, transport, management and treatment or of firms that handle petroleum-based substances as well as blending bunker fuel.

Chapter 4 shows how the abovementioned companies or firms operate *illegally*. It begins by setting out the clear boundaries that Dutch (criminal) law imposes on the handling of substances in the waste oil and bunker fuel sectors. It also connects these boundaries to the agencies and tools for enforcement that exist in the Netherlands. Two representative criminal cases are analysed to unveil the *modus operandi* that is characteristic of the phenomenon central to the book. The sources of data are criminal investigation files of the Dutch police. These files have not previously been seen by anyone other than the law enforcement agents themselves. At the time when the files were first shown to the author, the two cases had not been tried in court yet. The analysis is performed using the crime-script tool as well as the conceptual framework of situational crime prevention. Through the dissection of the cases into acts and scenes as well as reflection on conditions of both offending and enforcement, the author identifies the risks, efforts, rewards, provocations, and excuses that characterise the situations in which the two criminal events took place.

Chapter 5 connects the situational characteristics uncovered in Chapter 4 to their structural sources by looking at how the bunker fuel production and waste oil industries are set up. The criminogenic symbioses within in each industry, and especially at their overlap, create a crime-facilitative system. The field of organisational criminology – to which the concept of a crime-facilitative system belongs – is drawn on for numerous theoretical concepts and tools that are used to pry the two industries apart and then piece them back together in a way that explains the attractiveness of criminal activities like those described in Chapter 4. While incentives for goal attainment in favour of profit and to the detriment of environmental protection are shown to be high, risks of being caught are structurally low. Complexity and ambiguity in the applicable rules as well as asymmetries in enforcement make it inherently challenging for guardians to operate effectively. The discourse on waste and product and the underlying battle between environmental preservation and efficient economic output create a definitional quagmire within which it is difficult to draw clear moral lines, thus further facilitating wrongdoing and constraining interventions by state authorities.

Chapter 6 uses a wealth of empirical evidence from in-depth interviews and participant observation to reflect on the issue of guardianship and responses in the face of the criminal activities explored in Chapter 4. The story of the Andante team – a temporarily set up specialised team of Dutch police agents that explored cases like those in Chapter 4 for several years – is told and examined. The notions of problem-oriented policing and responsive regulation are used to make sense of the Andante experience. The categories of situational crime prevention –

already used in Chapter 4 to break down the criminal events – furnish a means of understanding Andante *vis-à-vis* the criminal phenomenon under study.

Chapter 7 rounds the book off by summarising the main findings of the research and providing explicit overarching answers to the research questions. Based on those answers, a series of recommendations and policy implications are drawn out. Five pinch-points for intervention are identified at different levels of analysis and each is elaborated on to provide initial guidance for implementation in the two industries. Finally, the question of enforcement is discussed in more detail by using the green criminology concept of 'Treadmill of Law', which explains why current rules to protect the environment are not effective as well as helping to identify how these challenges may be overcome. Further recommendations to improve enforcement are provided based on both the theoretical and empirical findings of the research. The book ends by calling all members of society who act as individuals, but also as members of communities and institutions, to take steps towards protecting the environment in ways that are equitable and respectful for all mankind.