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# Environmental crime in a welfare state - a case study on the prosecution of environmental crimes in Finland 2015-2020

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## ABSTRACT

This article aims to analyse environmental crime charges in Finland from 2015 through 2020. At first glance, it would seem as though Finland has a lot of environmental crime compared to several other western countries, despite the strong role of environmental administration in environmental law enforcement. However, most Finnish environmental crimes, hunting crimes and offenders are private individuals. These crimes are not classified as environmental crimes in several other countries. The majority of other environmental crimes that are committed are related to business. However, private individuals have a major role in these crimes, as also significant amounts of littering is considered an environmental crime. This study expands the previous literature on environmental crimes to a new geographic area and provides information on the role of economic motives in environmental crimes.

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## 1. Introduction

Since ecological problems are a global issue, environmental crimes are also a globally interesting phenomenon (White, 2010, pp. 3–4). Environmental crime is an issue that is addressed at the international level, for example, in UNEP (Coppens, 2013). INTERPOL sees environmental crime as a growing issue that is encouraged by enormous profits and relatively low risks (INTERPOL, 2020). Environmental crime is growing and becoming more and more professional (Coppens, 2013).

A few studies analyse environmental crime based on criminal charges and judgements. This field is called *green criminology* (Lynch, 2019; Lynch et al., 2019; Stretesky et al., 2014). This study addresses some local environmental issues without transnational or global impact. There might be some national studies that explore these fields. However, there are a few studies that use empirical methods, and only some use quantitative methods (Lynch, 2019). This study aims to expand the previous literature by providing information on environmental crime charges in Finland, which is a geographic region that has not been discussed in the international criminology literature on environmental crime before. There are currently no national studies where a case study about these prosecutions was conducted. Only some relatively old studies based on public statistics exist (Leppänen, 2008). Even the legislator has stated that there is a need for a deeper analysis of environmental crime, which could be used to develop criminal codes related to environmental crimes (Government bill HE 55/2015vp, pp. 5–7). This study intends to close that research gap by answering two research questions:

- (1) What kind of environmental crimes are committed and prosecuted in Finland?

## (2) What are the special features of environmental crime in Finland?

This study aims to answer these research questions by three different methods. The first one is a literature review on green criminology that includes Finland and other countries. This integrative and descriptive literature review is conducted in section 2 and aims to define what environmental crimes are and why they are committed (Torraco, 2005). In section 3, the Finnish environmental crimes are described using the practical legal dogmatics method, which describes legislation without further systematising or analysing it (Aarnio, 2011, pp. 104–105). In section 4, a case study on environmental crime charges is conducted. The method of this case study is further explained in section 4. Section 5 includes the results. Section 6 includes conclusions and discussion.

## 2. Environmental crime – a subsection of economic crime?

### 2.1. Environmental crime

It is widely accepted that environmental regulation is enforced more efficiently when backed up with criminal sanctions (Almer & Goeschl, 2015). For example, the reasoning behind the EU Environmental Crime Directive (2008/99/EC)<sup>1</sup> is that it increases the effectiveness of the EU environmental law due to increased enforcement (Meeus, 2010). The definition of environmental crime – or green crime – is not clear, and it is under discussion, but it includes the dimensions of violating the law and causing environmental harm (Lynch, Long et al., 2017, p. 12). Similarly, with several other concepts linked to social sciences, the definition of “green crime” has become more and more blurred as new dimensions are being added to it (Lynch & Stretsky, 2003). One viewpoint to the discussion is whether the definition of environmental crime should be tied to the act being legally defined as criminal, or should it be tied to harming the environment (Barclay & Bartel, 2015). Some note that environmental crimes should be an integral part of international law as several environmental crimes have transnational effects, or because some environmental offences that affect other countries are not defined as illegal in the country where they are committed (Al-Damkhi et al., 2009). Due to this, the EU has begun harmonising environmental crimes in the member states, as weak environmental sanctions in one member state would diminish the effectiveness of the environmental law enforcement in other member states (Lennan, 2021). As the definition of green crime is unclear, the crimes included in this study are based on the Criminal Code of Finland (39/1889), which has separate sections for economic crimes.

This discussion on criminalisation is also relevant in Finland, where several minor, but still illegal, offences against the environment are handled in the administrative procedure without ever applying criminal law (Kuusiniemi et al., 2005). This is a common approach to environmental enforcement, where administrative enforcement is supported by civil sanctions, and criminal sanctions are applied only to non-compliance and most severe cases (Lennan, 2021). The reason for this is that the legislator has taken the approach that it is more effective to monitor and control environmental actions, and if necessary, to impose sanctions in this control process than to apply the whole criminal proceedings to criminal offences (Government bill HE 107/2014vp, p. 67). This is a part of the current trend in Finland, in which the criminal offences are either transferred to lighter processes by cutting down possible penalties or transferred to an administrative procedure (Paukku, 2021). Due to the lack of publicity in the administrative proceedings, the case study in this article is limited to offences included in the Criminal Code of Finland. A part of the international discussion on environmental crime is tied to the discussion of whether certain actions should be criminalised or not (Al-Damkhi et al., 2009).

According to UNEP, there are five areas of global concern when it comes to environmental crime: 1) illegal trade in wildlife; 2) illegal logging and related timber trade; 3) illegal, unreported and unregulated (IUU) fishing; 4) illegal trade in controlled chemicals, and 5) illegal disposal of hazardous waste. (Coppens, 2013) However, the Finnish law enforcement

authorities do not consider the first three groups to be major threats, as Finland is a stable welfare state, whose geographic factors reduce the risk of crimes related to natural resources (Suomen kansallinen ympäristörikosseurantaryhmä, 2020, pp. 11–13).<sup>2</sup> Law enforcement did not engage with the fact that Finnish consumption might fund these crimes being committed elsewhere, as the analysis was strictly limited to criminal offences. Natural resource crimes are a major source of income for organised crime, and it is an area that is becoming increasingly organised and operated through traditional criminal organisations (van Uhm & Nijman, 2020).

There are also other ways to categorise environmental crime. For example, White (2020) has created the following categorisation: 1) biodiversity-related crimes, such as illegal trade in endangered species of flora and fauna; 2) crimes related to natural resources; 3) illegal shipment and disposal of hazardous waste; and 4) crimes on prohibited substances, such as illegal trade in ozone-depleting substances. This is quite similar to the classification used by UNEP, and it includes the same key elements. Especially crimes related to hazardous waste and waste-related crimes generally have received more attention in several European and EU countries (Turkeshi, 2014). Article 3 of the EU Environmental Crime Directive classifies almost all such acts as criminal offences in the EU, although the article does not include natural resource-related crime. Some EU regulation also requires member states to set penalties for natural resource-related offences, such as illegal logging and trading illegally logged wood (Regulation (EU) No 995/2010, 2010, pp. 23–34). These penalties are enforced in Finland by combining administrative and criminal sanctions (Government bill HE 97/2013vp).

Especially waste-related crimes are often linked to criminal organisations that have a long history. Mafia is one example. (D’Amato & Zoli, 2012) Illegal waste flows are moving from developed countries to developing countries, and the motive for the crime is to avoid paying the cost of disposing of waste that are caused by the legal standards in developed countries (Andreatta & Favarin, 2020). In addition to international waste crimes, local waste management is also often controlled or influenced by organisational crime, which disposes of waste without complying with environmental regulations (D’Amato & Zoli, 2012).

Environmental crimes are also often classified by how they are committed. They can be divided into two groups: 1) withdrawal crimes, where something is withdrawn from the environment; and 2) pollution crimes, where something is put into the environment (Stretesky et al., 2014, pp. 67–69). In Finland, this distinction exists in the Criminal Code. Chapter 48 of the Criminal Code is titled “environmental offences,” which includes mostly pollution crimes and withdrawal crimes, which are mostly related to soil and animals. Chapter 48 a of the Criminal Code is titled “natural resources offences,” which mainly includes withdrawal crimes and some crimes that support withdrawal crimes, such as the offences mentioned in section 4, which are called “concealing of poached game.” In addition to these, also some other crimes might be related to the environment, as there is also health and safety crimes in chapter 44, but they are only indirectly linked to the environment, for example, due to the production of food or the use of nuclear energy. These are not analysed in this study, even though these crimes are sometimes discussed in Finland together with the actual environmental crimes (Suomen kansallinen ympäristörikosseurantaryhmä, 2020).

## **2.2. Enforcement of environmental policy through criminal law**

In general, environmental policy and environmental regulation are highly dependent on enforcement (Almer & Goeschl, 2015). The risk of getting caught correlates strongly with the probability of committing environmental crimes (Vollaard, 2017). Organisations with conflicting interests often influence the enforcement, especially at the policy level (D’Amato & Zoli, 2012). Several structural and political factors affect whether or not environmental crimes are reported and prosecuted (Vollaard, 2017).

It has traditionally been assumed that harsher sentences reduce environmental crime (Cohen, 1992). This has been the basic assumption in environmental criminalisation in Finland (Government bill HE 55/2015vp, p. 12). However, it is also understood in the Finnish environmental law enforcement that environmental criminalisation and harsher penalties do not significantly reduce crime if enforcement is not effective and the risk of getting caught is low (Government bill HE 221/2010vp, p. 10). On the other hand, criminalisation is also justified based on the public disapproval it shows, even if civil and administrative penalties would lead to similar sanctions for the perpetrator (Directive 2008/99/EC, pp. 28–7, paragraph 3). Due to public disapproval of environmental offences, most economic actors consider environmental regulation to be legitimate and therefore comply with it, even if non-compliance would be economically more rational behaviour when considering the risk of getting caught and the damages caused by getting caught (Emery & Watson, 2004). Negative publicity caused by the criminal proceedings is assumed to be one of the main reasons why environmental actors comply with environmental regulation (Almer & Goeschl, 2010). However, compliance-based strategies are not suitable to be used as the only approach to prevent environmental crimes, as some economic actors commit environmental crimes as long as it is economically profitable and legislation does not prevent them from reoffending (Hubanova et al., 2017). There have been some findings in the US that deterrence might be weak as the likelihood of being prosecuted for an environmental crime is extremely low (Lynch et al., 2016).

A significant proportion of punishment strategies chosen in the legislation are not based on empirical evidence, or they are based on old studies that are not based on extensive empirical data (Lynch, 2021). Finland has also adopted a punishment strategy based on the financial gain from the crime. (Government bill HE 55/2015vp, p. 12). Several studies from other countries criticise the low penalties for environmental crimes compared to the damage they cause (Lynch, 2021). In Finland, the sanctions for environmental crimes are being tried to be imposed to be as severe as for other crimes that are considered as serious as environmental crimes (Government bill HE 94/1993vp, pp. 178–179).

### **2.3. Environmental crime – a subsection of economic crime?**

The Finnish legislator has traditionally considered that economic motives are the driving forces behind environmental crime, and law enforcement, legislation and punishments should be based on this assumption (Government bill HE 55/2015vp, p. 12). There is no publicly accepted definition of financial crime in Finland (Alvesalo, 2006, p. 2). This kind of definition also does not exist in the international literature on criminal law (Delem, 2011, p. 61). In Finland, it has been discussed whether all crimes committed in the business should be classified as financial crimes (Määttä & Hirvonen, 2018, pp. 249–250). The overall discussion is moving in the direction that financial crimes should not be defined by the crimes mentioned in the Criminal Code of Finland, but they should be based on the actual motives, ways and means of committing the crime (Alvesalo, 2006).

It is often assumed that an environmental crime is committed for fiscal reasons (Eurojust, 2021). This assumption is based on the hypothesis of the “rational polluter.” According to the hypothesis, the economic actors comply with environmental regulation if the expected economic benefit is greater than what is expected from non-compliance (Anthony & Watson, 2004). This would lead to a situation where severe and foreseeable penalties would encourage compliance with environmental regulation (White, 2018, p. 35). Nevertheless, the penalties for environmental crimes are considered to be quite lenient, at least when compared to other crimes (Lynch et al., 2019). It is possible that regulation also reflects other than public interests due to the strong private and public interests associated with environmental regulation (Markus & Paukku, 2021). The consequences of environmental crime may also reflect society’s attitude towards environmental issues as a whole (Lynch et al., 2019).

The rational polluter hypothesis includes the expected value of negative consequences. One key factor for this is the risk of getting caught. The risk of getting caught is considered too low in Finland (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, pp. 10–11). This problem is also quite common in other countries (Lynch et al., 2019). There is empirical evidence that when economic actors estimate the risk of getting caught to be temporarily or permanently lower, they are more likely to commit an environmental crime (Vollaard, 2017). However, economic actors are not good at estimating this probability, and they tend to overestimate it (Hjalmarsson, 2009). This leads to a lower expected value of non-compliance and thus increases compliance.

There are indicators that the most severe environmental crimes in the EU are classified as economic crimes and prosecuted and sentenced as such (Perilongo & Corn, 2017). Environmental crime is also expected to grow as a “business” due to the increasing scarcity of resources (Van Uhm & Nijman, 2020). Counterintuitively, another cause of environmental crime is our increasing knowledge of the environment. Developing environmental regulation requires the criminalisation of new activities, which creates a market for environmental crimes (White, 2018, p. 35). Environmental crimes are a form of “dark economy” in several states, meaning that they or the damages they cause can make up a significant percentage of GDP (Hubanova et al., 2017).

Due to the economic motives behind environmental crimes, sanctions for environmental crimes were traditionally proposed to be developed to prevent gaining economic benefit from the crime (Cohen, 1992). This view has since been criticised from several perspectives. First of all, some empirical evidence suggests that fiscal penalties are quite ineffective in preventing environmental crimes (Almer & Goeschl, 2010). In addition, environmental crime regulation and punishments do not significantly affect how much environmental damage is done or how much resources are overused (Stretesky et al., 2014, pp. 27–30). There is also some contrary evidence regarding the rational polluter hypothesis. It is common for economic actors to choose to comply with environmental regulation, even if it would be beneficial to breach it. Thus it is assumed that environmental regulation is considered legitimate by the economic actors (Emery & Watson, 2004). However, this view of legitimacy can be criticised, as it seems that the number of environmental crimes will increase if the supervisory authority does not apply criminal sanctions (White, 2018, p. 129). This can be explained by the negative publicity associated with environmental crime charges (Almer & Goeschl, 2010). On the harsher side, penalties and administrative procedures that prevent reoffending are considered to be effective in preventing new environmental crimes (Hubanova et al., 2017). For this reason, imprisonment is found to be effective in preventing environmental crime (Almer & Goeschl, 2010).

All in all, it can be summarised that although the concept of environmental crime may have been quite clear in the previous literature, there is no commonly agreed definition of environmental crime. Most definitions cover similar actions, such as pollution and withdrawing natural resources, but then the definitions expand. Some definitions are based on national law. These definitions depend on criminal law and environmental law and on the distinction between criminal and administrative procedures used to handle environmental offences. Other definitions are not dependent on criminal law, and they are linked to environmental damage. These definitions that are not bound to environmental regulation may be more reasonable when combating ineffective environmental enforcement or legislation in some countries, but it lacks certain clarity. Due to these differences, it is hard to compare environmental crimes between different countries. Perhaps the most difficult part is understanding the role of environmental administration and how it is used to enforce environmental regulation. In some countries, most environmental offences are handled in criminal proceedings, while in others, the administrative procedure plays a much more significant role (Lynch et al., 2019).

### 3. Environmental crimes in Finland – legislation

In Finland, environmental crime, as many other areas of legislation, cannot be discussed without mentioning the EU. After the CJEU case C-176/03,<sup>3</sup> the EU has been able to obligate member states to criminalise certain environmental offences, if necessary, to ensure the effective enforcement of EU legislation (Spinellis, 2006). The Environmental Crime Directive sets minimum standards, but member states can implement stricter measures (Directive 2008/99/EC, reasoning chapter 12). This did not lead to major changes in Finland due to the tradition of using criminal law to strengthen the enforcement of environmental law. Only infringements of ozone regulation<sup>4</sup> and CITES<sup>5</sup> regulation<sup>6</sup> had to be added to the Criminal Code (Government bill HE 157/2010vp). The criminalisation of the infringement of ozone regulation has never been used in Finland. Still, there were ten cases about breaching the CITES regulation in the case material for this research; the cases mostly concerned the import of endangered species.

The environmental crimes mentioned in the Criminal Code cannot be interpreted without substantial environmental regulation, as every provision of the Criminal Code refers to environmental laws or regulations of the EU (Tolvanen, 2018, pp. 1084–1085). This causes some issues regarding the legality principle, as interpreting the provisions is not always straightforward, as it is not always clear to what certain provisions of the EU regulation the Criminal Code refers to. (Government bill HE 55/2015vp, pp. 8–9). Due to the complexity and specific nature of environmental regulation, prohibited actions cannot be exhaustively defined in the Criminal Code (Government bill HE 94/1993vp, p. 181). However, in the early 1990s, the Finnish legislator decided that all provisions concerning imprisonment must be transferred to the criminal law, and thus all crimes defined in specific environmental laws must be transferred to the criminal law (p. 1). Consequently, current environmental crimes are defined in such a way that the action itself, for example, “to produce, convey, transport, use, handle, store, introduce, emit or dispose of” is defined in the Criminal Code followed by “violation of the [specified or unspecified environmental law].” However, there are still several dozen of different offences in other laws, but the maximum penalty for those offences is fiscal. These offences are not addressed in this study because they are not crimes as defined in criminal law. Several of them are also very rare, and several provisions in the law have never been used. (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 54)

Due to the references to other environmental laws, the applicability of certain provisions of the Criminal Code cannot be certain without reviewing the applicability of environmental laws first. Some environmental laws only apply to industrial or similar actions; others also apply to private individuals. For example, the Waste Act section 2 defines the scope of application: “*This Act shall apply to waste, waste management and littering, as well as to products and activities generating waste.*” Due to the wide scope of the Waste Act, all littering crimes in the Criminal Code that refer to the Waste Act have a similar wide scope.

Chapters 48, 48 a of the Criminal Code mention 15 different environmental crimes. However, six of these are aggravated or minor forms of some offences defined in the same chapters. These chapters define 56 different ways to commit a crime. The EU has influenced only to 18 different types of crimes or aggravation criteria, which means that most definitions of the abovementioned crimes are based on national choices. However, the EU Environmental Crime Directive would have had a greater impact on the definitions of the crimes of these chapters, if the environmental crime legislation had not been fairly strict before the Environmental Crime Directive (Government bill HE 157/2010vp).

*Impairment of environment* (48:1 § of the Criminal Code) can be described as the most basic form of environmental crime. It can be violated in 32 different ways, and it includes several forms of pollution, transportation, handling of substances, and making changes to the environment. Due to its wide scope, about one-third of environmental crimes in Finland are covered by this criminalisation.

The first part of this criminalisation covers most pollution crimes. Its purpose is to prevent emissions that cause negative changes to air, water, earth, fauna, or flora (Tolvanen, 2018, pp. 1094–1094). This criminalisation is defined widely:

*“introduces, emits or disposes into the environment an object, a substance, radiation or something similar in violation of the law, a provision based on law, a general or a specific order, or without a permit required by law or in violation of permit conditions.”*

The second part of this criminalisation covers violations of 26 different environmental laws or EU regulations, but it does not require actual pollution, only actions that breach those laws, which are typically actions that cause danger to the environment. The last part of this criminalisation involves changing the environment in ways that are sanctioned in five different regulations. One key provision which is included in impairment of the environment is the breach of Regulation 1013/2006<sup>7</sup> on waste transportation, as more thoroughly explained in section 4.2 of this article.

One important thing to note is that the criminalisation of impairment of the environment does not require causing actual damages to the environment for the action to be illegal. This is stated in the section in the following way: “[the acts against specific law mentioned in a list above] so that the act is conducive to causing contamination of the environment, other corresponding environmental despoliation or littering or a health hazard.” This is called *abstract danger*, which means that the act typically has negative consequences for the environment, but not necessarily in all cases (Tolvanen, 2018, pp. 1093–1094).

Another important criminalisation in chapter 48 is [section 5](#), *nature conservation offence*. The purpose of this section is to prevent the destruction, sale and transfer of protected areas, animals, plants, or other natural objects. This criminalisation also includes several other, more specific offences. The first one concerns breaching EU regulation 338/97 on the protection of species of wild fauna and flora. The second concerns using a Finnish vessel for whaling or defying the ban of the import of whale products. The last concerns damaging the organisms native to Antarctica. The last two are based on international treaties and have never been used in practice (Government bill HE 79/1996vp; Government bill HE 101/1996vp).

Section 6 of chapter 48 includes *building protection offence*, which is applied if one destroys, impairs, or covers a protected building heritage, archaeological vessel or wreck, or a historical place or relic. Chapter 48 a includes *hunting offences* (48 a:1 §), which can be committed by breaching the hunting act by using a forbidden hunting method, hunting protected game, or endangering or damaging people or property while hunting. Section 2 of chapter 48 a includes a *fishing offence*, which can be committed using prohibited fishing methods, such as explosions, significantly breaching the fishing act, or unlawfully introducing a species of fish or crayfish to a water area that were previously not found in the said area and the act is conducive to endangering or harming the stock of fish or the piscary. Section 3 of chapter 48 includes *forestry offence*. Forestry offence is committed when a provision of the Forest Act relating to a protected area or a particularly important forest habitat is violated. Section 3(a) includes *unlawful exploitation of mineral resources in the Antarctic*. This crime had to be added to the criminal law due to international treaties, but it has not been used so far (Government bill HE 56/2010vp). Section 3(b) includes *timber offence*, a crime that is committed by breaching EU regulation 995/2010. Section 4 includes *concealing of poached game*, which is committed by hiding, obtaining, transporting, conveying, or marketing game that has been obtained via other crime according to the Criminal Code.

The actions referred to in sections 48:1, 48:2, 48:3, 48:5, 48:5a, 48:6, 48a:1, 48a:1a, 48a:2, 48a:3 and 48a:3a are punishable if they are committed with intention or gross negligence, or with negligence when it comes to section 48:4. In cases of crimes mentioned in sections 48:1, 48:2, 48:5, 48:5a, 48:6, and 48a:2, already the attempt to commit an intentional offence is punishable. Sanctions for these crimes range from fines to six years in prison. Only aggravated crimes, with the exception of aggravated concealing of poached game, shall always be punishable by a prison



sentence. When it comes to the other crimes, it is possible to get away with fines. Fines are based on monthly income. In addition to this, the proceeds of crime are forfeited to the state according to the 10:2 § of the Criminal Code. In cases of environmental crime, the amount of proceeds of crime is difficult to define, which has caused some difficulties in criminal cases (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 10).

There are four aggravated environmental crimes in Chapters 48, 48a:

- Aggravated impairment of the environment (48:2 §)
- Aggravated nature conservation offence (48:5 a §)
- Aggravated hunting offence (48a:1a §)
- Aggravated concealing of the poached game (48 a:4 a §)

There are two common criteria that make a crime aggravated: significant financial gain is sought, or the offence is committed in a particularly planned manner. These aggravation criteria are in the Criminal Code because the legislator has assumed that environmental crime is often an economic crime, and larger economic crimes should lead to more severe (Government bill HE 55/2015vp, pp. 9–10). In the first two crimes listed above, another aggravation criterion is the damage caused. There are other criteria in the last two crimes. Two common criteria are a large amount of game and the game being a wolverine, lynx, bear, deer, otter, or wolf. Latter criteria were added to the Criminal Code due to the EU Environmental Crime Directive (Government bill HE 221/2010vp).

In Finland, most environmental offences are handled in the administrative process (Kuusiniemi et al., 2005, chapter I.2). Violations of environmental regulation are primarily handled using administrative enforcement, which means that the supervisory official orders the breacher to stop violating the regulation and/or to repair the damages caused to the environment (Romppainen, 2008). The process depends on what law is applied. There are dozens of different environmental laws in Finland, most of which have their own sanction systems and administrative processes. Several different administrative branches have some supervisory roles and authority over environmental permit holders (Kuusiniemi et al., 2005, chapter VII.1). The most common supervisory authorities are ELY Centres<sup>8</sup> and municipal environmental supervisors, which have tasks that are defined in the Environmental Protection Act (527/2014; Ahonen, 2015). The most common administrative sanctions are in chapter 18 of the Environmental Protection Act. They are the following: suspension of operations, conditional fines, enforced compliance, and enforced suspension. In addition to this, according to section 93, it is possible to revoke the environmental permit based on environmental offences.

Actual penalties cannot be given in the administrative process. The supervisory authority can only order the violator to fix the damaged environment or order them to cease violating the environmental law. A conditional fine can also be used to enhance the effectiveness of these orders issued by the supervisory authority, but they are to be paid only if the regulation is still not complied with. A conditional fine is not a penal sanction, which means that it does not preclude the imposition of penal sanctions, such as a prison sentence if non-compliance continues (Määttä, 2017). Fiscal penalties are imposed in the criminal proceedings. The Criminal Code contains most criminal offences, but not all. Some environmental laws have their own penal provisions, such as the Building Heritage Protection Act (498/2010). Its 23 § includes the provision of a *building protection violation*, which can lead to fines. That provision is used in cases where the offence is not severe enough for it to be covered in the Criminal Code.

#### 4. Materials and methods

One of the limitations of the case study method is that it does not represent environmental crime as a whole (Lynch, 2019). It only takes into account cases that have been prosecuted, that is, cases that have been detected. This method does not adequately cover environmental crime, as it does not

cover offences that are handled in administrative processes. On the other hand, no serious permanent damage occurred in the offences where the administrative process was possible, and the violation was not continued after administrative guidance. This method thus represents in some way the most severe environmental crimes in Finland. It has to be noted that the representativeness of these case materials vary significantly between different types of crime. Regarding hunting offences, officials never discover most crimes due to remote locations, lack of witnesses, and overall difficulty of monitoring these actions (Government bill HE 221/2010vp, p. 10). A significantly larger proportion of environmental crimes are most likely to be discovered in the case of impairment of the environment, conducted in business under an environmental permit. All environmental offences in the criminal code are listed in [Table 1](#).

The case material includes all environmental crimes that have been prosecuted and where the judgement was given between the years 2015 and 2020. The number of cases and average sentences – imprisonment or fines – were publicly available information provided by the Finnish Legal Register centre. The judgements had to be read for more detailed information. All judgements for environmental crimes from 2015 to 2020 were ordered from the district courts and the Courts of Appeals. In total, there were 25 different courts. After this, the judgements were read through. The analysed variables were formed based on the judgements that were analysed in the first random sampling that covered 10% of all cases. These random cases were picked by taking every tenth case in alphabetic order based on the file name that the courts used. After the variables were formed, all judgements were analysed. All crimes that were prosecuted during this time are listed in [Table 2](#).

For offences committed exclusively or mainly by private individuals without financial motives and for offences based solely on national legislation, all relevant variables were available from public sources. This mainly covers hunting offences, which is a fairly homogeneous type of offence when comparing the motives and legislation that was violated. As

**Table 1.** Environmental offences in Finland.

Offence	Committed by
<b>Chapter 48 Environmental crimes</b>	
Impairment of the environment (48:1)	There are 32 different ways to commit this, the most common is polluting impairment of the environment with major damages or major economic profit sought
Aggravated impairment of the environment (48:2)	
Environmental infraction (48:3)	
Negligent impairment of the environment (48:4)	
Nature conservation offence (48:5)	Destroying or damaging natural areas, animals, plants or other natural objects. Violating CITES.
Aggravated nature conservation offence	Nature conservation offence with major damages or major economic profit sought
Building protection offence (48:6)	Damaging or destroying protected building.
<b>Chapter 48a natural resource offences</b>	
Hunting offence (48 a:1)	Poaching, using forbidden hunting methods
Aggravated hunting offence (48a:1a)	Hunting offence with brutality, a large amount of game, major economic offence, particularly planned offence or targeting wolverine, lynx, bear, deer, otter or wolf.
Fishing offence (48 a:2)	Explosive fishing, a major breach of the fishing act.
Forestry offence (48 a:3)	Destroying protected forest
Unlawful exploitation of mineral resources in the Antarctic (48 a:3a)	Breaching the Antarctic treaty
Timber offence (48 a:3b)	Violating Regulation EU 995/2010 by violating obligations for unlawfully harvested timber protection.
Concealing of poached game (48a:4)	Concealing poached game that is obtained through hunting or fishing offence
Aggravated concealing of poached game (48a:4a)	Concealing poached game with major damages or major economic profit sought targeting wolverine, lynx, bear, deer, otter or wolf.

**Table 2.** Environmental offences prosecuted during 2015–2020 in Finland (large sample).

Aggravated hunting offence (48a:1a)	34
Aggravated Impairment of the environment (48:2)	32
Attempted Impairment of the environment (48:1)	1
Building protection offence (48:6 §)	14
Building protection violation (Building heritage protection act (498/2010) 23 §)	6
Concealing of poached game (48a:4)	2
Environmental infraction (48:3)	39
Fishing offence (48 a:2)	8
Fishing violation (Fishing act (379/2015) 118 §)	35
Hunting offence (48 a:1)	203
Hunting violation (hunting act (615/1993) 74 §)	101
Impairment of the environment (48:1)	333
Infraction of the Act on Environmental Protection in Maritime Transport (Act on Environmental Protection in Maritime Transport (1672/2009) 13:4)	1
Nature conservation offence (48:5)	49
Nature conservation violation (Nature conservation act (1096/1996) 58 §)	14
Negligent impairment of the environment (48:4)	3
Total	861

examining the financial motives for environmental crimes is the main goal of this research and financial motives are not present in hunting offences, those crimes were excluded from this analysis.

However, aggravated hunting offence was included in the data analysis. It was interesting to see how many cases were based on environmental crime directives and how many were based on national legislation. Crime types with a sample size of less than 20 were also excluded from the analysis, as it is difficult or impossible to perform an analysis based on such a small sample size, especially when several environmental crimes are heterogeneous and there are several different ways to violate certain provisions: only two provisions included only one way to violate said provision, while all other provisions included several different ways to violate those provisions.

Due to the reasons described above, the analysis covered only the crimes that are listed in [Table 3](#) below:

In some cases, the only content of some judgements were along the lines of “the prosecuted disappeared before the trial and could not be found, so the charges are dismissed due to difficulty of finding the prosecuted,” or the right to prosecute was expired due to the disappearance. This was often the case when the perpetrator was a foreigner, and the crime was not severe enough to lead to a prison sentence.

Regarding impairment of the environment, nature conservation offence, and aggravated hunting offence, the data was divided based on different ways to commit a crime. In all three offences, some ways to commit a crime were based on the EU Environmental Crime Directive, so it was interesting to compare them to more national crime types. In the case of impairment of the environment, it was also necessary to divide the types of crime into different categories, as this offence involves a large variety of crime types.

**Table 3.** Crimes chosen for data-analysis (small sample).

Aggravated hunting offence (48a:1a)	34
Aggravated impairment of the environment (48:2)	32
Environmental infraction (48:3)	39
Fishing violation (Fishing act (379/2015) 118 §)	35
Impairment of the environment (48:1)	333
Nature conservation offence (48:5)	49
Nature conservation violation (Nature conservation act (1096/1996) 58 §)	14
Total	536

All personal data was removed from the variables in accordance with the provisions of the GDPR<sup>9</sup> due to the conditions that the courts stated in their research permits. The name of the crime, case number and year of the judgement were used as identification variables. The name of the court was also stored, although the geographical comparison was not made due to the small sample sizes. The outcome of each case was stored as a dummy variable depending on whether the offender was sentenced or not and as a numerical variable regarding fines and length of the prison sentence. For some types of crime, a specification of the type of crime was also included as described above. In addition to these, the proceeds of crime forfeited to the state were also documented, as well as the proceeds that the prosecutor demanded to be forfeited to the state.

The motive of the crime was also added to the data if it was evident from the facts of each case. This motive framework was based on analysing the motives with a 10% small sample analysis. In this analysis, the motives were interpreted by examining the case explanations in the judgements. Then all distinctive motives were specified and categorised for five different groups. The motive was known in about two-thirds of the cases. Five different motives stood out:

- (1) Earning. In these types of crimes, the perpetrator was doing business without an environmental permit or doing completely illegal business where the goal was to earn by violating environmental regulation.
- (2) Saving. The purpose of these crimes was to save money by violating environmental regulation. Both companies and natural persons were involved.
- (3) Negligence. These crimes resulted in causing damage or danger to the environment without financial motives.
- (4) Indifference. Causing environmental damage by taking economic or non-economic action regardless of environmental regulation.
- (5) Intention. The act was intended to damage the environment.

In addition to what is described above, some data of the offender was collected. The offenders were divided into two groups based on whether the crime was committed in a business. Aggravated hunting crimes were classified on their own as they were not comparable with crimes committed by companies. There were five different categories for that:

- Companies
- A natural person in business
- A natural person in a profession
- A natural person without earning-related motives and non-profit organisations (“natural person”)
- Aggravated hunting crimes

After collecting the data, it was processed using statistical methods, and the results are presented in tables presented in chapter 4.2.

## 5. Results

### 5.1. *The number of environmental crimes*

The number of environmental crimes was quite similar to other countries according to similar studies. In Finland, an average of 180,75 offences were processed in the courts, which means 3,2 offences per 100000 persons per year. For comparison: in previous studies, the rate has been 5,5 in Fulton County, Georgia (Lynch, 2019), 0,3 in Ireland (Lynch et al., 2019), and 0,019 in Germany (Almer & Goeschl, 2010). However, these rates cannot be directly compared. The rate for Fulton

includes the administrative process, which is not included in the rates for Ireland, Germany, or Finland. Also, the rate for Ireland mostly includes companies that operate under environmental permits and control.

On the other hand, there was no administrative control in Ireland during the period the data covers (Lynch et al., 2019). For the rates to be comparable, the rates for Finland and Germany should include the cases that were handled in the administrative process. In Germany, the administrative process plays a similar role as in Finland, namely reducing the number of cases handled in the criminal proceedings (Almer & Goeschl, 2010). The data from Germany or Ireland did not include offences committed by private individuals, which were of a significant number in Finland. If the acts of private individuals had been excluded, the data would have changed quite significantly:

Most cases analysed concerned private individuals who hunted or killed wild animals. In addition to this, several cases also concerned private persons who committed fly-tipping, for example, by leaving used cars or spilling several thousand litres of oil into the environment. When these cases were excluded from the data, there were a total of 500 crimes committed in the business. This led to a rate of 1,1 crimes per 100000 persons, which is still higher than the rates for Ireland and Germany. These differences can be explained by several factors. Naturally, differences in environmental legislation and the role of the administrative process make comparisons difficult. It should be noted that the differences between EU countries may be reduced thanks to the EU Environmental Crime Directive, which harmonised the sanctions for environmental offences. (Meeus, 2010).

One obvious factor is the risk of getting caught, as it is estimated that most environmental crimes may be “dark,” meaning that it remains hidden from officials and potential victims (Lynch, 2019). In Finland, too, the risk of getting caught is estimated to be very low (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 11). With regard to natural resource and hunting crimes committed by private individuals, only a small proportion of environmental crimes are revealed. (Government bill HE 221/2010vp, p. 10). One reason for the low risk of getting caught for hunting-related crimes is that local people and other hunters tend to protect offenders by keeping quiet about the crimes they are aware of (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 44).

This risk of getting caught is greatly affected by the effectiveness of the enforcement and control of environmental law. (Lynch et al., 2019). Another significant factor is people’s willingness to report environmental crimes, which is influenced by cultural and political factors as well as the general attitude towards environmental crimes (Almer & Goeschl, 2010). If all these factors could be estimated, the remaining difference would be the difference between total environmental criminality.

## 5.2. *The reasons behind environmental crimes*

Environmental crimes related to businesses are listed in Table 4. One interesting finding was that none of the environmental crimes were prosecuted as a part of organised crime. The vast majority of the cases had no sign of organised or professional environmental crime. Only in cases of infringement of Regulation 1013/2006 on waste transportation, there were signs of organised and

**Table 4.** Environmental offences related to businesses (economic-environmental sample).

Aggravated impairment of the environment (48:2)	23
Environmental infraction (48:3)	45
Fishing violation (Fishing act (379/2015) 118 §)	29
Impairment of the environment (48:1)	226
Nature conservation offence (48:5)	16
Nature conservation violation (Nature conservation act (1096/1996) 58 §)	8
Total	347

professional crime. However, the courts did not consider these crimes to be committed as a part of organised or professional crime because there was not enough evidence of that. Only 3% of the cases analysed involved breaching this regulation, and only individual criminals were convicted. Based on this, no criminal organisations were identified in these cases, although there had to be some organisation behind the complex supply chain. Most of the cases involved smuggling car batteries or other hazardous waste to Eastern Europe or Africa. There were a total of 8 cases of those, as shown in [Table 5](#) below.

Another issue that emerged from the case materials was the role of non-compliance. It could not be analysed quantitatively, as some of the cases had only slightly indicated non-compliance, but in some cases, that was directly stated. However, in several cases of littering, it was stated that the environmental administration had first ordered the property to be cleaned up, and the criminal proceedings started after the order had not been complied with. In several cases, the property was cleaned up after the criminal proceedings had started, which led to lower sanctions.

Since impairment of environment can be committed in several different ways, further classification of the crime types is needed. These are shown above in [Table 5](#).

When analysing the motives for environmental crimes, we can see that a large proportion of environmental crime is based on financial motives. More than half of environmental crimes were committed for financial reasons. Given that the motives were unknown in one-tenth of the cases, the share of financial motives in the known motives is even higher. Based on these findings, it could be said that environmental crime is a financial crime in Finland. Motives for environmental crimes are stated in the [table 6](#) below.

However, when comparing the number of cases with financial motives to the number of all environmental crimes – 861 cases – the crimes with financial motives cover only 28% of all environmental crimes. Based on this, it could also be said that environmental crime in Finland is not a financial crime because most of the environmental crime cases involve hunting offences or other crimes without financial motives. However, based on these findings, it is clear that one speciality of Finnish environmental crime is a large number of hunting-related offences due to the popularity of hunting in Finland. When compared to other European countries, hunting in Finland is extremely popular, as about 6% of the population hunts. If the hunting offences were not counted, environmental crime in Finland would look quite different. Norway is another Nordic country that classifies hunting crimes as environmental crimes. They also have a significant number of hunting crimes, about one-third of all environmental crimes, probably due to the popularity of hunting (Statistisk sentralbyrå, 2021). In Finland, the hunting offences were actual poaching, meaning hunting forbidden game, but also using prohibited hunting methods, for example, using a motor vehicle or certain baits (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, pp. 43–44). Aggravated hunting offences are mostly related to hunting forbidden game, especially bears and wolves. (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 44).

When analysing other environmental crimes, some trends can be observed regarding financial motives. First of all, almost half of the environmental crimes were committed by companies, or to be specific, by people acting on behalf of a company. When the number of natural persons engaged in business is added to this number, business-related actors committed two-thirds of all environmental crimes if hunting crimes are left out. Cases without business motives were usually quite small. They mostly involved littering or avoiding waste bills by burying or burning waste.

In addition to this, all aggravated impairments of the environment were committed as a part of the business. There were a total of 23 of those cases, 22 of which were committed by companies and one by a natural person in the business. This one case can be compared to a business as the case was about a large-scale fur farm with thousands of animals. Agriculture is often operated without a company in Finland, so cases related to agriculture were classified as “natural person in business” in this research. Although not specifically documented or analysed, agriculture-related crimes were

Table 5. Crime types in impairment of the environment and aggravated impairment of the environment.

Number	Crime	Act	Specification 1	Specification 2	Number of cases
1	Impairment of the environment	Pollution			215
2	Impairment of the environment	Changing environment against	Land Extraction Act		17
3	Impairment of the environment	Changing environment against	Water Act		13
4	Impairment of the environment	Changing environment against	Land Use and Building Act		5
5	Impairment of the environment	Using or handling subjects against	Waste Act		31
6	Impairment of the environment	Using or handling subjects against	Chemical Act		4
7	Impairment of the environment	Causes environmental damage by negligence			2
8	Impairment of the environment	Transporting waste against regulation EU 1013/2006			14
9	Impairment of the environment	neglecting the duty to organize waste management, as provided for in the Waste Act			4
10	Impairment of the environment	Using or handling subjects against	Specific regulation based on some other regulation in the Criminal Code		3
11	Aggravated impairment of the environment	Causing significant damage or potential damage to the environment	Pollution		14
12	Aggravated impairment of the environment	Causing significant damage or potential damage to the environment	Using or handling subjects against		3
13	Aggravated impairment of the environment	Pollution	Acting against a direct order from supervisory official		1
14	Aggravated impairment of the environment	Causing significant damage or potential damage to the environment	Changing environment against	Land Extraction Act	3
15	Aggravated impairment of the environment	Causing significant damage or potential damage to the environment	Changing environment against	Water Act	1

**Table 6.** Motivations in environmental crimes (small sample).

Motive	Cases	%
Earning	111	29%
Saving	126	33%
Negligence	64	17%
Indifference	50	13%
Intentional	14	4%
Aggravated hunting crimes	32	8%
Total	380	100%

**Table 7.** Perpetrators in environmental crimes (small sample).

Perpetrator	Case	%
Company	181	48%
Natural person in business	84	22%
Natural person	78	21%
Natural person in profession	1	0%
Other	4	1%
Aggravated hunting crimes	32	8%
Total	406	100%

**Table 8.** Motives based on perpetrator, cases (small sample without hunting offences).

Cases	Companies	Natural person in business	Natural person	Natural person in profession	Other
Earning	64	38	8	0	1
Saving	78	30	18	0	0
Negligence	35	7	17	1	1
Indifference	10	11	27	0	1
Intentional	0	0	13	0	0

**Table 9.** Motives based on perpetrator, % (small sample without hunting offences).

	Earning	Saving	Negligence	Indifference	Intentional
Companies, % of all cases	18%	22%	10%	3%	0%
Companies, % of company cases	34%	42%	19%	5%	0%
Natural person in business, % of all cases	11%	8%	2%	3%	0%
Natural person in business, % of Natural person in business cases	44%	35%	8%	13%	0%
Natural person, % of all cases	2%	5%	5%	8%	4%
Natural person, % of all natural person cases	10%	22%	20%	33%	16%
Natural person in profession, % of all cases	0%	0%	0%	0%	0%
Natural person in profession, % of Natural person in profession cases	0%	0%	100%	0%	0%
Other, % of all cases	0%	0%	0%	0%	0%
Other, % of other cases	33%	0%	33%	33%	0%

a significant group in the data. Especially crimes involving manure were common in agriculture. This is quite logical given the scale of the environmental damage or financial motive needed to commit aggravated impairment of the environment. Perpetrators are shown in Table 7.

When analysing further the data on motives and perpetrators in Table 8 and 9, we can see that financial motives were quite distinct in several groups. In companies, financial motives were behind the crime in almost 80% of the cases. When negligence is added to these numbers, these cases covered more than 95% of cases. Findings were similar when analysing natural persons in business, financial motives were the cause of crime in 80% of the cases. When it comes to the natural persons as a whole, the role of indifference was more significant. This could also be seen as crimes committed by natural persons in business, where 13% of all crimes were committed with negligence. In the case of natural persons, the offence was motivated by financial motives in a third of the cases, and the rest mostly by indifference or negligence.



The role of earning as a motive was also interesting, as it was the motive in almost half of the cases. Previous Finnish literature and official documents have suggested that saving money was the most common motive for environmental crime, and on the other hand, making money by breaching environmental regulation was not a common motive for environmental crime (Nissinen, 2003; Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 9). However, these findings were not based on a quantitative analysis of judgements but instead on a more qualitative analysis of some judgements. This information about motives was new and might also apply to the national discussion on environmental legislation and control. One of the priorities in the crime control of environmental crime is to determine the financial profits of the crime, as forfeiting it to the state can prevent new offences in the future and discourage new environmental offences (Suomen kansallinen ympäristörikosseurantaryhmä, 2021, p. 65).

### 5.3. Sentencing

When analysing how the cases succeeded in courts, it was quite clear that the prosecutor succeeded quite often. As shown in Table 10, on average, 82% of the cases led to a conviction, which is quite a large number. On the other hand, it is close to the average rate in Finland, which is 85% (Tilastokeskus, 2021). However, as the total rate includes a large number of traffic crimes with a conviction rate of almost 100% (Tilastokeskus, 2021), the rate of convictions for environmental crime is quite high compared to other types of serious offences. This could be explained by the existence of the administrative process, as only the most serious cases with fairly strong evidence end up in criminal proceedings. On the other hand, when the suspected offender was a company, the conviction rate was lower than in other environmental crime cases. A qualitative analysis of the cases shows that the company cases required a considerable amount of expertise in technology and the environments, which also made it more difficult to prove the crime. In the case of natural persons in business, or natural persons in general, the cases were mainly littering. It was not difficult to say that an environmental crime was conducted in these cases. In most cases, the sentence was similar to what the prosecutor had demanded. Regarding natural persons, it was also more common to confess the offence, whereas, in the case of companies, it was far more likely to deny that a crime was committed.

The analysis of the types of penalties based on Table 11 and 12 showed that most cases led only to fines. 73% of the cases led to fines, and only 27% of the cases led to jail penalties. On average, 12% of the convictions in Finland led to jail penalties. (Tilastokeskus, 2021) This shows that environmental crimes are slightly more serious than crimes on average, and their grossness is quite close to more serious, although not aggravated crimes. For example, assaults led to prison sentences in 38% of the cases where the judgement was convicting. (Tilastokeskus, 2021) Another interesting finding was

**Table 10.** Sentenced and overturned cases (small sample).

	Companies	Natural person in business	Natural person	Natural person in profession	Aggravated hunting offences	Total
Convicted	131	69	61	1	28	308
%	78%	84%	85%	50%	87%	82%
Overturned	36	13	11	1	4	68
%	22%	16%	15%	50%	13%	18%

**Table 11.** Penalty types.

	Companies, % of convicted	A natural person in business, % of convicted	Natural person, % of convicted	A natural person in the profession, % of convicted	Aggravated hunting offences, % of convicted	All % of convicted
Fine	70%	82%	92%	0%	50%	73%
Jail	30%	18%	8%	100%	50%	27%

**Table 12.** Jail penalty rate in convictions (Small sample).

Jail %	Companies, % of convicted in a crime type	A natural person in business, % of convicted in a crime type	Natural person, % of convicted in a crime type	A natural person in the profession, % of convicted in a crime type	Other, % of convicted in a crime type
	100%	0%	0%	0%	0%
Aggravated impairment of the environment (48:2)	0%	0%	0%	0%	0%
Environmental infraction (48:3)	25%	16%	10%	100%	0%
Impairment of the environment (48:1)	0%	0%	0%	0%	0%
Nature conservation offence (48:5)	0%	0%	0%	0%	0%
Nature conservation violation (Nature conservation act (1096/1996) 58 §)	0%	0%	0%	0%	0%
Aggravated hunting offence (48a:1a)	0%	0%	0%	0%	90%

that prison sentences were significantly more common in cases related to companies than in cases where the perpetrator was a private individual. It has to be noted that the category of “natural person in profession” consisted only of two cases. The prison sentence cases in the “other” category consisted only of aggravated hunting crimes, for which the minimum penalty is normally a prison sentence.

When analysing the crimes further based on [Table 13](#), it can be observed that environmental crimes committed in business are more likely to result in prison sentences. This is understandable as the seriousness of the crime tends to increase as the damage to the environment or financial gain increases. Regarding crimes where the crime is committed through a company, the rate of prison sentences is significant. The reason for this is that aggravated impairment of the environment is almost always committed through a company, and it leads to a prison sentence virtually always. On the other hand, the cases inside the same crime type also varied, as can be seen in the cases of impairment of the environment, where crimes committed in business led to harsher sanctions.

One interesting finding was that company cases did not lead to the largest fines when analysing average penalties within a crime type. This may be explained by the fact that company cases more often led to prison sentences, which were significantly more severe in company cases than in other convicting sentences. This is visible in the data on prison sentences. As is visible in the previous tables, aggravated hunting crimes led to the most severe penalties. This finding may seem peculiar at first, but it is explained by the fact that in all other groups of perpetrators, there are also “less serious” offences in the data, but aggravated hunting crimes only include aggravated crimes, where the minimum penalty is normally a prison sentence.

The fines for environmental crimes were not severe, as 60 day fines equal roughly one’s monthly income according to the Criminal Code 2 a:2 §. In 75% of impairment of the environment cases, it was possible to get away with paying less than one’s monthly salary as fines. The average fine for companies was over 42000 euros, which is quite large. However, it was used in only 23 cases, and there were some exceptionally large fines for big companies. The median of these company fines was only 14000 euros.

When a prison term was sentenced, the average sentence was 163 days, which is quite a severe penalty in Finland, where prison sentences are rarely used, and they are often measured in days, not in months. However, only a few perpetrators did actually go to prison, as prison terms under two years are mostly conditional imprisonment according to the Criminal Code 6:9 §. According to the Criminal Code chapter 2(b), conditional imprisonment means that the convicted does not actually go to jail if the convicted does not commit other crime that leads to a jail punishment during a probation period of 1 to 3 years.

In the case material, there were only a few cases where the prison sentence was not conditional. All but one of those convicted in these cases were repeating offenders with financial motives. There was only one case where the prison term exceeded two years, and this case included several aggravated crimes, for example, leaving 1500 tons of dangerous chemicals in an illegal landfill. All other jail penalties were counted in days or months, which is slightly less than the average prison term in Finland, which is 11,2 months (Suomen virallinen tilasto [SVT], 2018).

**Table 13.** Average penalties.

	Companies	A natural person in business	Natural person	A natural person in profession	Aggravated hunting offence	All
Average fine (day fines)	5146808511	5314815	4532143	15	47,8	49,9607
Average jail penalty (days)	171	128,3333	88	0	190,4	163,6145
Average corporate fine	42 732,61					

**Table 14.** Economic forfeit of the cases.

	Companies	A natural person in business	Natural person
Claimed economic profit	275 534,23	16 643,89	2 027,50
Forfeited profit	55 968,59	8 075,10	609,81

Although the penalties were not severe, the financial profit sought was, on average, quite high. According to the prosecutor, the average financial profit sought was 275000 euros, which is quite large. Again, the finding was that major environmental crimes are being committed in business; the differences were much more significant when analysing financial profit than with other types of crime. However, it should be noted that financial profit was demanded to be forfeited only in one-third of the cases. In other cases, there was no financial benefit due to the obligation to clean up the property after the criminal proceedings began, or the crime itself had no financial motive, as in cases of negligence and indifference. These are shown on [Table 14](#).

#### 5.4. Other remarks

Although geographical factors are not discussed in-depth in this article, some remarks can be made. At first sight, it was interesting that the courts dealing with the most environmental criminal cases were from the least populated rural regions, such as Oulu, Kainuu, Lapland and North Karelia. However, when keeping in mind that the majority of environmental crimes were hunting offences, the numbers became more informative. As we can see, from [Table 15](#), without hunting-related crimes, most cases are from more industrialised areas with larger populations. There were also some other variations based on the location. For example, breaching waste transportation regulation (1013/2006) took place mostly in harbours or land border areas with other EEA countries. In more rural areas, environmental crimes were more related to littering and inappropriate waste management, such as burning waste. Still, in industrialised areas, environmental crimes were more based on breaching environmental permits or doing business without appropriate environmental permits,

**Table 15.** Cases based on district courts (large sample).

Court	Cases	Without hunting offences
District Court of Itä-Uusimaa	70	69
District Court of Oulu	68	31
District Court of Kainuu	53	5
District Court of Pirkanmaa	53	40
District Court of Lappi	50	22
District Court of Pohjois-Karjala	47	14
District Court of Pohjois-Savo	47	13
Rovaniemi Court of Appeal	45	15
District Court of Etelä-Savo	43	22
District Court of Varsinais-Suomi	39	33
District Court of Etelä-Pohjanmaa	36	30
District Court of Satakunta	32	22
District Court of Keski-Suomi	31	11
District Court of Länsi-Uusimaa	31	27
Turku Court of Appeal	30	26
Eastern Finland Court of Appeal	30	19
District Court of Pohjanmaa	27	21
Vaasa Court of Appeal	26	17
Helsinki Court of Appeal	25	24
District Court of Helsinki	22	21
District Court of Kymenlaakso	18	16
District Court of Päijät-Häme	13	9
District Court of Etelä-Karjala	13	8
District Court of Kanta-Häme	12	8
District Court of Åland	10	10

**Table 16.** Europeanisation of environmental crime.

Type	National/EU	Amount	Portion
Environmental crime total	National	809	94%
	EU	52	6%
	Total	861	100%
Environmental crime without hunting offences	National	512	96%
	EU	24	4%
	Total	536	100%
Environmental crime conducted in business	National	333	96%
	EU	14	4%
	Total	347	100%

for example, waste management activities. Generally, the most severe crimes are committed in these industrialised areas, at least based on financial forfeits and environmental damages. However, a few of the most severe cases were located in rural areas because they were related to the mining industry, for example, in the *Talvivaara mine* catastrophe. Cases based on their location are listed in [Table 15](#) below.

When evaluating how the EU has affected Finnish environmental crimes, we can extract the data based on which crimes are based on EU regulation and which on national legislation. As shown in [Table 16](#) below, the EU Environmental Crime Directive has not significantly affected environmental crimes in Finland. Only 3–4% of all environmental crimes in Finland which are committed are against regulation based on the EU regulation. All crimes that were committed in business concerned breaching regulation EU 1013/2006 on shipments of waste, which was related to organised environmental crime. Other groups also included aggravated hunting offences and nature conservation offences committed in breach of regulation EU 338/97 on the protection of species, practically transporting animal products.

## 6. Discussion and conclusions

There were two research questions in this study. The first question was “*What kind of environmental crimes are committed and prosecuted in Finland?*” and the second question was “*What are the special features of environmental crime in Finland?*” The case analysis method was used to answer to these questions. One key factor was the role of hunting crimes. Due to the popularity of hunting in Finland and classifying hunting crimes as environmental crimes, there are significantly more environmental crimes in Finland than in other countries. A large majority of aggravated environmental crimes were hunting crimes, and they often led to longer prison sentences than other environmental crimes.

As previously estimated, the most internationally significant crime types are rare or nonexistent in Finland. UNEP classifies environmental crimes into five different types:

- (1) Illegal trade in wildlife. This is quite rare in Finland, and there were only a few cases, including breaching regulation 338/97 by selling or buying animal products.
- (2) Illegal logging and timber trade associated with it. In the case material, there were no crimes related to this criminalisation.
- (3) Illegal, unreported and unregulated fishing. There were no cases of professional large-scale illegal fishing in the case material. However, there were some cases of illegal recreational fishing, which is mostly handled through the administrative process.
- (4) Illegal trade in controlled chemicals. There were no cases related to this in the case material.
- (5) Illegal disposal of hazardous waste. This was the most common environmental crime type in Finland if hunting crimes are not taken into account. Disposing of waste can lead to quite large savings, and the risk of getting caught is relatively low.

There were also some other crimes related to extracting natural resources, mostly related to breaching the land extraction act by extracting land without permission and thus causing permanent changes to the environment. There were some cases related to water and logging, where the environment was changed in order to make it look better from one's holiday apartment.

Another interesting point was how Europeanisation has affected prison sentences. Only two cases in aggravated hunting crimes did not involve the EU legislation; instead, they were aggravated since they were committed in a particularly planned manner or there was a large number of game in question. As aggravated hunting crime leads to a prison sentence in most cases, it can be stated that Europeanisation has led to several dozens of prison sentences in Finland in the last ten years. Regarding other types of environmental crime, Europeanisation has not affected penalties much, as these crimes were quite rare, mostly smuggling waste or animal products. A large part of Finnish environmental crime legislation has a long tradition, and the EU Environmental Crime Directive did not lead to changes due to the already high standards of environmental regulation in Finland. In most criminalisations that are based on EU legislation, the actual crimes committed are nonexistent, and there was no practical need to criminalise those actions in Finland. Still, the criminal law was harmonised in Europe due to some other countries' lack of environmental standards. EU environmental crimes related to ozone, fluorinated greenhouse gasses, organic pollutants, mercury, or timber were not present in Finland in the period covered in this study. This may be explained by the strong presence of administrative control or the lack of need to commit these types of crimes.

Need is an important factor in environmental crime as financial profit is often sought in these crimes – a significant percentage of cases involved financial motives, either directly by earning or avoiding costs. Economic actors, both companies and natural persons commit a substantial part of environmental crimes, and all of the crimes with a significant environmental impact. All aggravated infractions of the environment were committed by economic actors. Economic actors gained significantly larger financial profit from committing crimes than private individuals. Damaging the environment was practically a nonexistent motive in other crime types than aggravated hunting crimes, which consisted of crimes where lynxes and wolves were hunted just due to sheer hatred for them.

Waste smuggling was the only type of crime with indications of organised or professional environmental crime. Waste smuggling was detected in all borders that Finland has with EU countries. Waste was smuggled to Finland from Norway and Sweden and from Finland to Eastern Europe. In these cases, the convicted never revealed the names of the other parties of the waste smuggling organisation, but due to the complex nature of the supply chain, it was evident that there were organisations behind these crimes. The most common waste that was smuggled was car batteries, and most of the convicted people were not Finnish citizens. However, the situation in Finland seems to be decent compared to other countries. Organised environmental crime related to illegal substances and natural resources is virtually nonexistent, at least based on the court cases and official documents. Timber-related crime appears to be almost nonexistent, which is not the case in several other parts of the world.

If hunting crimes are not counted as environmental crimes, the rate of environmental crime is similar to rates from other EU countries and some states of the US. However, the Finnish rates were still higher than in Ireland or Germany. This difference cannot be explained by the lack of administrative process, as its role in Finland is quite strong. The majority of environmental offences are handled in an administrative process, where a typical action is ordering the perpetrator to clean up the damage caused to the environment. The criminal proceedings on environmental crime are usually started when the case is about non-compliance, permanent damage, or damage that is significant enough. The differences between countries may be due to different environmental crime laws or differences in the reporting of environmental crimes.

Another speciality of Finnish environmental criminal regulation is that private individuals have a major role in committing them, not just companies, as in many other countries. This might be one of the main reasons why environmental crimes are committed more often in Finland than in other countries. Even when hunting crimes are not taken into account, a significant percentage of minor environmental crimes are committed by private individuals. These cases were mostly littering, and they often involved used cars or construction waste, which were burned or left in the environment. These actions are often not classified as environmental crimes in other countries, at least according to how the term is understood in the international literature. In Finland, it could be stated that quite minor acts are classified as environmental crimes. This may indicate something about the high value of the environment, or the excessive use of criminal law, depending on the interpreter.

When analysing the sanctions, the high value of the environment is not easy to see. The sanctions are quite moderate, and most penalties were only fines. This is a part of Finland's long criminal policy tradition, which mainly consists of fairly moderate penalties and prison sentences are rarely used. However, crimes committed in business and crimes with financial motives led to more severe sanctions. This is one of the goals of Finland's criminal policy. Offences committed for financial reasons should be punished more severely because it is believed that the perpetrator evaluates the possible consequences of those crimes. This is called the *rational polluter* hypothesis. However, the criminal policy is not consistent in economic cases. The most serious pollution cases are punished more moderately than aggravated hunting crimes, which can be committed just by killing one protected animal for fun or hatred. Large-scale environmental crimes, including massive pollution and changes in the environment, can result in fines, but killing one wolf will most likely lead to a prison sentence. On the other hand, this criminal policy is in line with the rational polluter hypothesis if the risk of getting caught is taken into account. A large majority of the hunting crimes are left unsolved, but the risk of getting caught is significantly higher for business operators who have received environmental permits and who the authorities monitor. However, this policy would only be logical if it were assumed that hunters would be rational polluters, or rather rational potential criminals, who would evaluate the risk and reward. In the case of private individuals, this can be questioned.

This study expanded the previous literature in several different ways. First of all, it provided insights into environmental crime in an entire geographical area, with several special societal characteristics. There is very limited research on environmental crime prosecutions outside the US (Lynch et al., 2019). In the sparsely populated Nordic welfare state, environmental issues are quite different from those in the other countries that have been analysed earlier. In addition, this study provided new openings for the discussion of whether environmental crime is actually a subtype of economic crime. In a developed society like Finland, it seems that some part of environmental crime is indeed a financial crime, but there are also other significant types of motives. In addition, most of the globally threatening types of environmental crime do not exist in Finland. The last contribution was to provide Finnish policymakers insights on developing environmental crime control to reduce the damage caused by these crimes. It is well-known that green criminology lacks quantitative results (Lynch et al., 2017). According to previous Finnish studies, environmental crimes are financial crimes, but this study provides results that are partly controversial. There are some earlier studies about the role of companies in environmental crime in different countries (Lynch, 2019). For this discussion, this study provided new insights into the role of companies in environmental crime.

## Notes

1. 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 OJ L 328, 6.12.2008, 28–37.
2. This bureau (Suomen kansallinen ympäristörikosseurantaryhmä) roughly translates to “environmental crime monitoring team”, which is a national working party mentioned in Interpol resolution AGN/65/RES/25.

3. C-176/03 – Commission v Council ECLI:EU:C:2005:542.
4. Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer OJ L 244, 29.9.2000, p. 1–24.
5. Convention on International Trade in Endangered Species of Wild Fauna and Flora.
6. Council Regulation (EC) No 338/97 of 9 December 1996 on the protection of species of wild fauna and flora by regulating trade therein OJ L 61, 3.3.1997, p. 1–69.
7. Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste OJ L 190, 12.7.2006, 1–98.
8. In English *Centre for Economic Development, Transport and the Environment*.
9. Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) OJ L 119, 4.5.2016, 1–88.

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## Notes on contributor

Dr *Eelis Paukku* has a doctoral degree in law and a Master's degree both in economics and industrial engineering and management. Dr Eelis Paukku acts as a visiting research fellow at the University of Lapland.

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- Government bill HE 107/2014 vp. laiksi yhteisen kalastuspolitiikan seuraamusjärjestelmästä ja valvonnasta sekä eräiksi siihen liittyviksi laeiksi.
- Government bill HE 157/2010 vp. Hallituksen esitys eduskunnalle laeiksi rikoslain 44 ja 48 luvun, luonnonsuojelulain 58 §: Nsekä ympäristönsuojelulain 20 §: Nmuuttamisesta.
- Government bill HE 221/2010 vp. Hallituksen esitys eduskunnalle laeiksi rikoslain 48 a luvun, pakkokeinolain ja eräiden niihin liittyvien lakien muuttamisesta.
- Government bill HE 55/2015 vp. Hallituksen esitys eduskunnalle laiksi rikoslain 48 luvun muuttamisesta ja eräiksi siihen liittyviksi laeiksi.
- Government bill HE 56/2010 vp. Hallituksen esitys eduskunnalle Etelämannerta koskevaan sopimukseen liittyvän ympäristönsuojelupöytäkirjan liitteen II, liitteen VI ja toimenpiteen 4(2004) hyväksymisestä sekä laeiksi liitteiden ja toimenpiteen lainsäädännön alaan kuuluvien määräysten voimaansaattamisesta, laiksi Etelämantereen ympäristönsuojelusta annetun lain muuttamisesta ja laiksi rikoslain 48 a luvun muuttamisesta.
- Government bill HE 79/1996 vp. Hallituksen esitys eduskunnalle luonnonsuojelulainsäädännön uudistamiseksi.
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